

Morgan Stanley

Base Listing Document

relating to Non-collateralised Structured Products

Issuer

Morgan Stanley Asia Products Limited

(Incorporated in the Cayman Islands with limited liability)

Guarantor

Morgan Stanley

(Incorporated in the State of Delaware, United States of America)

Manager

Morgan Stanley Asia Limited

(Incorporated in Hong Kong)

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This document, for which we and the guarantor accept full responsibility, includes particulars given in compliance with the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited (“**Stock Exchange’s Listing Rules**”) for the purpose of giving information with regard to the issuer, the guarantor and the warrants, callable bull/bear contracts (“**CBBCs**”) and any other structured products (together, our structured products) referred to in this document. The issuer and the guarantor, having made all reasonable enquiries, confirm that to the best of their knowledge and belief the information contained in this document is accurate and complete in all material respects and not misleading or deceptive, and there are no other matters the omission of which would make any statement herein or this document misleading.

We, the issuer of our structured products, are publishing this base listing document in order to obtain a listing on the Stock Exchange of our structured products.

We will publish a launch announcement and supplemental listing document for each issue of our structured products to set out the terms specific to that issue. If at that point the information in this base listing document (and any applicable addendum) needs to be updated, we will either include the updated information in the relevant launch announcement and supplemental listing document or produce an addendum to this base listing document. You should read the relevant launch announcement and supplemental listing document together with this base listing document (including any addendum) before deciding whether to buy our structured products. Neither the delivery of this base listing document nor any sale of any structured products shall under any circumstances create any implication that there has been no change in the affairs of us, the guarantor or its affiliates since the date of this base listing document. You should ask the manager if any addendum to this base listing document or any later base listing document has been issued. Our addendum does not necessarily contain the most recent information since the date of such addendum. You should read the guarantor’s most recent Annual Report on Form 10-K, any quarterly reports on Form 10-Q and any current reports on Form 8-K filed with the U.S. Securities and Exchange Commission (“**SEC**”) in the website of SEC: www.sec.gov.

The Structured Products are complex products. You should exercise caution in relation to them. Investors are warned that the price of the structured products may fall in value as rapidly as it may rise and holders may sustain a total loss of their investment. Prospective purchasers should therefore ensure that they understand the nature of the structured products and carefully study the risk factors set out in this document and, where necessary, seek professional advice, before they invest in the structured products.

The structured products constitute general unsecured contractual obligations of the issuer and of no other person and the guarantee constitutes the general unsecured contractual obligations of the guarantor and of no other person and will rank equally among themselves and with all our and the guarantor’s other unsecured obligations (save for those obligations preferred by law) upon liquidation. If you purchase the structured products, you are relying upon the creditworthiness of the issuer and the guarantor, and have no rights under the structured products against (a) the company which has issued the underlying securities, (b) the fund which has issued the underlying securities or its trustee (if applicable) or manager (if applicable), or (c) the index sponsor of any underlying index or any other person. If the issuer becomes insolvent or default on its obligations under the structured products or the guarantor becomes insolvent or defaults on its obligations under the guarantee, you may not be able to recover all or even part of the amount due under the structured products (if any).

The structured products are not bank deposits or protected deposits for the purposes of the Deposit Protection Scheme in Hong Kong and are not insured or guaranteed by the United States Federal Deposit Insurance Corporation (“**FDIC**”), or any other governmental agency. The structured products are guaranteed by Morgan Stanley and the guarantee will rank *pari passu* with all other direct, unconditional, unsecured and unsubordinated indebtedness of Morgan Stanley.

The distribution of this base listing document, any launch announcement and supplemental listing document, any addendum and the offering, sale and delivery of structured products in certain jurisdictions may be restricted by law. You are required to inform yourselves about and to observe such restrictions. Please read Annex 3 “Purchase and Sale” in this base listing document. The structured products have not been approved or disapproved by the SEC or any state securities commission in the United States or regulatory authority, nor has the SEC or any state securities commission or any regulatory authority passed upon the accuracy or the adequacy of this base listing document. Any representation to the contrary is a criminal offence. **The structured products and the guarantee have not been and will not be registered under the United States Securities Act of 1933, as amended (“Securities Act”), and the structured products may not be offered or sold within the United States or to, or for the account or benefit of, U.S. Persons (as defined in Regulation S under the Securities Act).**

Dated 18 March 2025

IMPORTANT

If you are in doubt as to the contents of this base listing document, you should obtain independent professional advice.

Copies of this base listing document and the relevant launch announcement and supplemental listing document (together with a Chinese translation of each of these documents) and other documents listed under the section “Where can I read copies of the Issuer’s and Guarantor’s documentation?” in this base listing document are available on the website of the Stock Exchange at www.hkexnews.hk and the Issuer’s website at www.mswarrants.com.hk.

本基本上市文件及相關發行公佈及補充上市文件(及以上各份文件的英文本)連同本基本上市文件的「本人從何處可查閱發行人及擔保人的文件副本？」一節所列的其他文件，可於香港交易所披露易網站(www.hkexnews.hk)以及發行人網站 (www.mswarrants.com.hk)瀏覽。

We do not give you investment advice; you must decide for yourself, after reading the listing documents for the relevant structured products and, if necessary, seeking professional advice, whether our structured products meet your investment needs.

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SUMMARY OF OUR STRUCTURED PRODUCTS

The types of structured products that we may issue comprise of: cash-settled stock warrants, cash-settled warrants relating to the units or shares of a fund, index warrants, CBBCs relating to single stock, CBBCs relating to an index and CBBCs relating to the units or shares of a fund. Each type of our structured products will be subject to a separate set of master terms and conditions (Conditions) as set out in Annex 1 to this base listing document. For each issue of our structured products, we will publish a launch announcement and supplemental listing document setting out the specific terms. The specific terms set out in the relevant launch announcement and supplemental listing document supplement and amend the applicable set of master terms and conditions to form the legally binding terms and conditions of that issue of structured products.

We describe below the main features of the different types of our structured products.

General features of our structured products:

Issuer:	Morgan Stanley Asia Products Limited
Guarantor:	Morgan Stanley
Guarantor's current long-term credit ratings (as of the day immediately preceding the date of this base listing document):	<p>A- (stable outlook) by S&P Global Ratings (“S&P”)</p> <p>A1 (stable outlook) by Moody's Investors Service, Inc. (“Moody's”)</p> <p>The long-term credit ratings are only an assessment by the rating agencies of the guarantor's overall financial capacity to pay its debts. A- is among the top three major credit rating categories and is the seventh highest investment-grade ranking of the ten investment-grade ratings (including + or – sub-grades) assigned by S&P. A1 is the fifth highest investment-grade ranking of the ten investment-grade ratings (including 1, 2 and 3 sub-grades) assigned by Moody's. Please refer to the brief guide in Annex 4 to this base listing document to what such credit ratings mean.</p>
Status and ranking of our structured products:	<p>Our structured products constitute our direct, unconditional, unsecured and unsubordinated obligations ranking equally with all our other present and future direct, unconditional, unsecured and unsubordinated obligations.</p> <p>Our structured products are not bank deposits or protected deposits for the purposes of the Deposit Protection Scheme in Hong Kong and are not insured or guaranteed by the FDIC, or any other governmental agency. The structured products are guaranteed by Morgan Stanley and the guarantee will rank <i>pari passu</i> with all other direct, unconditional, unsecured and unsubordinated indebtedness of Morgan Stanley.</p>
Guarantee in respect of our structured products:	<p>The obligations of the guarantor under the guarantee are direct, unconditional, unsecured and unsubordinated, subject to the terms of the guarantee. You can find the form of the guarantee in Annex 2.</p>

Liquidity provider:	Morgan Stanley Hong Kong Securities Limited. We will describe in each launch announcement and supplemental listing document our obligations to provide liquidity in our structured products.
Form:	Our structured products will be issued in registered form, subject to and with the benefit of, deed polls made by us and the guarantor. Each issue will be represented by a global certificate registered in the name of HKSCC Nominees Limited (or its successors) as holder of our structured products and deposited within the Central Clearing and Settlement System (CCASS). We will not issue any definitive certificates for our structured products.
Use of proceeds:	We will use the net proceeds from the issue of our structured products for our general working capital or any other purposes permitted under our memorandum and articles of association.
Further issues:	We can issue further structured products to form a single series with an existing issue of our structured products.
Delisting of the company or fund underlying our structured products:	If the shares of the company or the units or shares of the fund underlying a particular issue of our structured products are delisted from the Stock Exchange, we may adjust the terms of that issue as further detailed in the relevant terms and conditions of our structured products.
Adjustments upon certain events affecting the company, fund, or the index underlying our structured products:	If certain events occur in connection with the company or fund underlying a particular issue of our structured products, or if certain events occur which materially modify the index underlying a particular issue of our structured products, we may in our discretion make adjustments to the terms of that issue to account for the effect of such events and/or determine in good faith the closing level or closing price of the underlying asset (as the case may be). Please see the relevant terms and conditions of our structured products for further details. These events and the possible adjustments we may make are set out in detail in the applicable terms and conditions.
Early termination for illegality or impracticability:	We may early terminate our structured products due to illegality or impracticability as further detailed in the relevant terms and conditions of our structured products.
Governing law:	Our structured products and the guarantee are governed by Hong Kong law.

SPECIFIC FEATURES OF OUR STRUCTURED PRODUCTS

The structured products are structured financial products, the value of which is derived from the price or value of another asset. The underlying asset may be shares of a company, units or shares in funds, an index, or other asset or combination of such assets. Please refer to the “Risk Factors” section in this base listing document and the relevant launch announcement and supplemental listing document for a description of some of the risks of investing or dealing in our structured products. Below is only a descriptive explanation of some terms of our structured products; you should refer to the actual terms and conditions of the relevant structured products for the legally binding terms.

SPECIFIC FEATURES OF OUR WARRANTS

- **Cash-settled stock warrants:** The underlying asset of stock warrants is shares of a company.

Our cash-settled stock warrants provide for cash settlement only, which means that physical delivery of the underlying shares will not be available as a method of settlement; instead, upon the exercise of each board lot of warrants, we will pay the warrant holder a cash amount equal to (1) the product of (a) the entitlement, (b) the difference between the average price of underlying share and the exercise price (in the case of call warrants) or the exercise price and the average price of underlying share (in the case of put warrants), and (c) one board lot, and divided by (2) the number of warrants per entitlement, and in each case less any exercise expenses, converted into the settlement currency of our warrants if necessary, so long as such amount is greater than zero. Please see the terms and conditions of our warrants for further details.

The average price of an underlying share is determined by reference to market closing price on each valuation date. Please see the terms and conditions of our warrants for further details.
- **Index warrants:** The underlying asset of index warrants is an index published by an index sponsor.

Our index call warrant gives its holders a right upon exercise of each board lot of warrants, to receive from us a cash amount equal to (1) the product of (a) difference between the closing level of an index on the date of exercise of the index call warrant and the predetermined strike level, (b) one board lot, and (c) the index currency amount and divided by (2) the divisor, converting such amount in the trading currency of the constituent stocks of the index into the settlement currency of our warrants if necessary, and less any exercise expenses, so long as such amount is greater than zero.

Our index put warrant gives its holders a right upon exercise of each board lot of warrants, to receive from us a cash amount equal to (1) the product of (a) the difference between the predetermined strike level and the closing level of the index on the date of exercise of the index put warrant, (b) one board lot, and (c) the index currency amount and divided by (2) the divisor, converting such amount in the trading currency of the constituent stocks of the index into the settlement currency of our warrants if necessary, and less any exercise expenses, so long as such amount is greater than zero.

The closing level of the index on the date of exercise may be determined by reference to the official settlement price of an exchange traded contract relating to the index or some other means. Please see the terms and conditions of our warrants for further details.

- Cash-settled warrants relating to the units or shares of a fund:

The underlying asset of warrants relating to the units or shares of a fund is units or shares of the fund. The units or shares may be listed in Hong Kong or overseas.

Our cash-settled warrants relating to the units or shares of a fund provide for cash settlement only, which means that physical delivery of the underlying units or shares will not be available as a method of settlement; instead, upon the exercise of each board lot of warrants, we will pay the warrant holder a cash amount equal to (1) the product of (a) the entitlement, (b) the difference between the average price of the underlying unit or share and the exercise price (in the case of call warrants) or the exercise price and the average price of underlying unit or share (in the case of put warrants), and (c) one board lot, and divided by (2) the number of warrants per entitlement, and in each case less any exercise expenses, so long as such amount is greater than zero. Please see the terms and conditions of our warrants for further details.

The launch announcement and supplemental listing document will set out, without limitation, the following terms specific to our warrants to supplement the applicable set of master terms and conditions in this base listing document:

Board lot	Minimum number at which our warrants trade
Shares of the company	Name of underlying share (for our stock warrants only)
Company	Name of the company which issues the underlying shares (for our stock warrants only)
Fund	Name of the underlying fund (for our warrants relating to the units or shares of a fund only)
Index	Name of the underlying index (for our index warrants only)
Index sponsor	Name of the company that maintains the index and calculates and publishes the index levels (for our index warrants only)
Exercise price	Predetermined exercise price of the underlying asset on expiry date (for our stock warrants and warrants relating to the units or shares of a fund only)
Strike level	Predetermined level of the underlying index (for our index warrants only)
Closing level	The level of the underlying index for the calculation of the cash settlement amount payable upon the exercise of a board lot of our warrants (for our index warrants only)
Divisor	A predetermined amount which is used in the calculation of the cash settlement amount payable upon the exercise of a board lot of our warrants (for our index warrants only)

Expiry date	Date on which our warrants expire
Valuation date(s)	Date(s) on which the closing price, closing level or spot price (as the case may be) of the underlying asset is determined for the calculation of the cash settlement amount upon exercise of our warrants
Entitlement	Number of shares/units to which a specified number of warrants relates (for our stock warrants and warrants relating to the units or shares of a fund only)
Number of warrants per entitlement	Number of warrants to which one entitlement relates (for our stock warrants and warrants relating to the units or shares of a fund only)
Index currency amount	An amount denominated in the currency in which the constituent stocks of the underlying index are traded, which is used in the calculation of the cash settlement amount payable upon the exercise of a board lot of our warrants (for our index warrants only)
European style	European style warrants which can only be exercised on the expiry date
Listing date	The date on which our warrants commence trading on the Stock Exchange

SPECIFIC FEATURES OF OUR CBBCS

- CBBCs relating to single stock:

The underlying asset of CBBCs relating to single stock is shares of a company. The shares may be listed in Hong Kong or overseas.

CBBCs relating to single stock are issued either as Bull CBBCs or Bear CBBCs:

Bull CBBCs relating to single stock

Generally for a series of Bull CBBCs relating to single stock, when the spot price of the underlying share as reported by the relevant exchange is at or below the predetermined call price during the observation period of the CBBCs, a mandatory call event occurs and the CBBCs will terminate. If no mandatory call event occurs during the observation period, upon expiry, for each board lot of CBBCs, we will pay the holder of such CBBCs an amount equal to (1) the product of (a) the entitlement, (b) the difference between the closing price of the underlying share and the strike price, and (c) one board lot, and divided by (2) the number of CBBCs per entitlement, and less any exercise expenses, so long as such amount is greater than zero.

If a mandatory call event has occurred, whether the holder of our CBBCs may receive a residual value depends on whether the CBBCs are Category N Bull CBBCs or Category R Bull CBBCs.

For Category N Bull CBBCs (where the call price is equal to the strike price), the holder of the CBBCs will not receive any cash payment from us upon the occurrence of the mandatory call event.

For Category R Bull CBBCs (where the call price is above the strike price), the holder of each board lot of CBBCs will receive from us a residual value, which will be (1) the product of (a) the entitlement, (b) the difference between the lowest spot price to which the underlying share has traded on the exchange during the MCE valuation period and the strike price, and (c) one board lot, and divided by (2) the number of CBBCs per entitlement, and less any exercise expenses. However, if this residual value is a negative number then the cash settlement amount shall be zero.

Please note that during the life of a Bull CBBC relating to a share, a given percentage change in the underlying share price may not result in the same percentage change (in the same direction) in the theoretical value of the CBBC. The percentage change in theoretical value of the CBBC may be greater or smaller, in the same or opposite direction. The theoretical value of the CBBC may be different from the prices available in the market. You should be aware that you may be subject to, among other risks, a significant portion or the entire loss of your investment in our CBBCs, which will be proportionately greater than the amount of loss you would sustain from investing in the same amount directly in the underlying share, for a given change in the underlying share price. Please refer to the “Risk Factors” section of this base listing document and that of the relevant launch announcement and supplemental listing document.

Bear CBBCs relating to single stock

Generally for a series of Bear CBBCs relating to single stock, when the spot price of the underlying share as reported by the relevant exchange is at or above the predetermined call price during the observation period of the CBBCs, a mandatory call event occurs and the CBBCs will terminate. If no mandatory call event occurs during the observation period, upon expiry, for each board lot of CBBCs, we will pay the holder of such CBBCs an amount equal to (1) the product of (a) the entitlement, (b) the difference between the strike price and the closing price of the underlying share, and (c) one board lot, and divided by (2) the number of CBBCs per entitlement, and less any exercise expenses, so long as such amount is greater than zero.

If a mandatory call event has occurred, whether the holder of our CBBCs may receive a residual value depends on whether the CBBCs are Category N Bear CBBCs or Category R Bear CBBCs.

For Category N Bear CBBCs (where the call price is equal to the strike price), the holder of the CBBCs will not receive any cash payment from us upon the occurrence of the mandatory call event.

For Category R Bear CBBCs (where the call price is below the strike price), the holder of each board lot of CBBCs will receive from us a residual value, which will be (1) the product of (a) the entitlement, (b) the difference between the strike price and the highest spot price to which the underlying share has traded on the exchange during the MCE valuation period, and (c) one board lot, and divided by (2) the number of CBBCs per entitlement, and less any exercise expenses. However, if this residual value is a negative number then the cash settlement amount shall be zero.

Please note that during the life of a Bear CBBC relating to a share, a given percentage change in the underlying share price may not result in the same percentage change (in the opposite direction) in the theoretical value of the CBBC. The percentage change in theoretical value of the CBBC may be greater or smaller, in the same or opposite direction. The theoretical value of the CBBC may be different from the prices available in the market. You should be aware that you may be subject to, among other risks, a significant portion or the entire loss of your investment in our CBBCs, which will be proportionately greater than the amount of loss you would sustain from investing in the same amount directly in the underlying share, for a given change in the underlying share price. Please refer to the “Risk Factors” section of this base listing document and that of the relevant launch announcement and supplemental listing document.

For both our Bull CBBCs and Bear CBBCs relating to single stock, the closing price of an underlying share will be determined by reference to the market closing price on the valuation date, please see the terms and conditions of our CBBCs for further details.

- CBBCs relating to an index:

The underlying asset of CBBCs relating to an index is an index published by an index sponsor.

CBBCs relating to an index are issued either as Bull CBBCs or Bear CBBCs:

Bull CBBCs relating to an index

Generally for a series of Bull CBBCs relating to an index, when the level of the underlying index as published by the index sponsor is at or below the predetermined call level during the observation period of the CBBCs, a mandatory call event occurs and the CBBCs will terminate. If no mandatory call event occurs during the observation period, upon the expiry of a CBBC, for each board lot of CBBCs, we will pay the holder of such CBBC an amount equal to (1) the product of (a) the difference between the closing level of the underlying index and the strike level, (b) one board lot, and (c) the index currency amount, and divided by (2) the divisor, and less any exercise expenses, so long as such amount is greater than zero.

If a mandatory call event has occurred, whether the holder of our CBBCs may receive a residual value depends on whether the CBBCs are Category N Bull CBBCs or Category R Bull CBBCs.

For Category N Bull CBBCs (where the call level is equal to the strike level), the holder of the CBBCs will not receive any cash payment from us upon the occurrence of the mandatory call event.

For Category R Bull CBBCs (where the call level is above the strike level), the holder of each board lot of CBBCs will receive from us a residual value, which will be an amount equal to (1) the product of (a) the difference between the lowest spot level of the underlying index as published by the index sponsor during the MCE valuation period and the strike level, (b) one board lot, and (c) the index currency amount, and divided by (2) the divisor, and less any exercise expenses. However, if this residual value is a negative number then the cash settlement amount shall be zero.

Please note that during the life of a Bull CBBC relating to an index, a given percentage change in the underlying index level may not result in the same percentage change (in the same direction) in the theoretical value of the CBBC. The percentage change in theoretical value of the CBBC may be greater or smaller, in the same or opposite direction. The theoretical value of the CBBC may be different from the prices available in the market. You should be aware that you may be subject to, among other risks, a significant portion or the entire loss of your investment in our CBBCs, which will be proportionately greater than the amount of loss you would sustain from investing in the same amount directly in the Index, for a given change in the Index level. Please refer to the “Risk Factors” section of this base listing document and that of the relevant launch announcement and supplemental listing document.

Bear CBBCs relating to an index

Generally for a series of Bear CBBCs relating to an index, when the level of the underlying index as published by the index sponsor is at or above the predetermined call level during the observation period of the CBBCs, a mandatory call event occurs and the CBBCs will terminate. If no mandatory call event occurs during the observation period, upon the expiry of a CBBC, for each board lot of CBBCs, we will pay the holder of such CBBC an amount equal to (1) the product of (a) the difference between the strike level and the closing level of the underlying index, (b) one board, and (c) the index currency amount, and divided by (2) the divisor, and less any exercise expenses, so long as such amount is greater than zero.

If a mandatory call event has occurred, whether the holder of our CBBCs may receive a residual value depends on whether the CBBCs are Category N Bear CBBCs or Category R Bear CBBCs.

For Category N Bear CBBCs (where the call level is equal to the strike level), the holder of the CBBCs will not receive any cash payment from us upon the occurrence of the mandatory call event.

For Category R Bear CBBCs (where the call level is below the strike level), the holder of each board lot of CBBCs will receive from us a residual value, which will be an amount equal to (1) the product of (a) the difference between the strike level and the highest spot level of the underlying index as published by the index sponsor during the MCE valuation period, (b) one board lot, and (c) the index currency amount, and divided by (2) the divisor, and less any exercise expenses. However, if this residual value is a negative number then the cash settlement amount shall be zero.

Please note that during the life of a Bear CBBC relating to an index, a given percentage change in the underlying index level may not result in the same percentage change (in the opposite direction) in the theoretical value of the CBBC. The percentage change in theoretical value of the CBBC may be greater or smaller, in the same or opposite direction. The theoretical value of the CBBC may be different from the prices available in the market. You should be aware that you may be subject to, among other risks, a significant portion or the entire loss of your investment in our CBBCs, which will be proportionately greater than the amount of loss you would sustain from investing in the same amount directly in the Index, for a given change in the Index level. Please refer to the “Risk Factors” section of this base listing document and that of the relevant launch announcement and supplemental listing document.

For both our Bull CBBCs and Bear CBBCs relating to an index, the closing level of the index will be determined by reference to the index level calculated for the purpose of final settlement of the applicable futures contract specified in the relevant launch announcement and supplemental listing document, please see the terms and conditions of our CBBCs for further details.

- CBBCs relating to the units or shares of a fund

The underlying asset of CBBCs relating to the units or shares of a fund is units or shares of the fund (as the case may be).

CBBCs relating to the units or shares of a fund are issued as either Bull CBBCs or Bear CBBCs:

Bull CBBCs relating to the units or shares of a fund

Generally for a series of Bull CBBCs relating to the units or shares of a fund, when the spot price of the underlying unit or share as reported by the relevant exchange is at or below the predetermined call price during the observation period of the CBBCs, a mandatory call event occurs and the CBBCs will terminate. If no mandatory call event occurs during the observation period, upon expiry, for each board lot of CBBCs, we will pay the holder of such CBBCs an amount equal to (1) the product of (a) the entitlement, (b) the difference between the closing price of the underlying unit or share and the strike price, and (c) one board lot, and divided by (2) the number of CBBCs per entitlement, and less any exercise expenses, so long as such amount is greater than zero.

If a mandatory call event has occurred, whether the holder of our CBBCs may receive a residual value depends on whether the CBBCs are Category N Bull CBBCs or Category R Bull CBBCs.

For Category N Bull CBBCs (where the call price is equal to the strike price), the holder of the CBBCs will not receive any cash payment from us upon the occurrence of the mandatory call event.

For Category R Bull CBBCs (where the call price is above the strike price), the holder of each board lot of CBBCs will receive from us a residual value, which will be (1) the product of (a) the entitlement, (b) the difference between the lowest spot price to which the underlying unit or share has traded on the exchange during the MCE valuation period and the strike price, and (c) one board lot, and divided by (2) the number of CBBCs per entitlement, and less any exercise expenses. However, if this residual value is a negative number then the cash settlement amount shall be zero.

Please note that during the life of a Bull CBBC relating to the units or shares of a fund, a given percentage change in the underlying unit or share price may not result in the same percentage change (in the same direction) in the theoretical value of the CBBC. The percentage change in theoretical value of the CBBC may be greater or smaller, in the same or opposite direction. The theoretical value of the CBBC may be different from the prices available in the market. You should be aware that you may be subject to, among other risks, a significant portion or the entire loss of your investment in our CBBCs, which will be proportionately greater than the amount of loss you would sustain from investing in the same amount directly in the underlying unit or share, for a given change in the underlying unit or share price. Please refer to the “Risk Factors” section of this base listing document and the relevant launch announcement and supplemental listing document.

Bear CBBCs relating to the units or shares of a fund

Generally for a series of Bear CBBCs relating to the units or shares of a fund, when the spot price of the underlying unit or share as reported by the relevant exchange is at or above the predetermined call price during the observation period of the CBBCs, a mandatory call event occurs and the CBBCs will terminate. If no mandatory call event occurs during the observation period, upon expiry, for each board lot of CBBCs, we will pay the holder of such CBBCs an amount equal to (1) the product of (a) the entitlement, (b) the difference between the strike price and the closing price of the underlying unit or share, and (c) one board lot, and divided by (2) the number of CBBCs per entitlement, and less any exercise expenses, so long as such amount is greater than zero.

If a mandatory call event has occurred, whether the holder of our CBBCs may receive a residual value depends on whether the CBBCs are Category N Bear CBBCs or Category R Bear CBBCs.

For Category N Bear CBBCs (where the call price is equal to the strike price), the holder of the CBBCs will not receive any cash payment from us upon the occurrence of the mandatory call event.

For Category R Bear CBBCs (where the call price is below the strike price), the holder of each board lot of CBBCs will receive from us a residual value, which will be (1) the product of (a) the entitlement, (b) the difference between the strike price and the highest spot price to which the underlying unit or share has traded on the exchange during the MCE valuation period, and (c) one board lot, and divided by (2) the number of CBBCs per entitlement, and less any exercise expenses. However, if this residual value is a negative number then the cash settlement amount shall be zero.

Please note that during the life of a Bear CBBC relating to the units or shares of a fund, a given percentage change in the underlying unit or share price may not result in the same percentage change (in the opposite direction) in the theoretical value of the CBBC. The percentage change in theoretical value of the CBBC may be greater or smaller, in the same or opposite direction. The theoretical value of the CBBC may be different from the prices available in the market. You should be aware that you may be subject to, among other risks, a significant portion or the entire loss of your investment in our CBBCs, which will be proportionately greater than the amount of loss you would sustain from investing in the same amount directly in the underlying unit or share, for a given change in the underlying unit or share price. Please refer to the “Risk Factors” section of this base listing document and the relevant launch announcement and supplemental listing document.

For both our Bull CBBCs and Bear CBBCs relating to the units or shares of a fund, the closing price of an underlying unit or share will be determined by reference to the market closing price on the valuation date, please see the terms and conditions of our CBBCs for further details.

The launch announcement and supplemental listing document will set out the following terms specific to our CBBCs to supplement the applicable set of master terms and conditions in this base listing document:

Category	The category of our CBBCs: Category N or Category R, Bull or Bear
Board lot	Minimum number at which our CBBCs trade
Shares of the company	Name of the underlying share (for our CBBCs relating to single stock only)
Company	Name of the company which issues the underlying shares (for our CBBCs relating to single stock only)
Fund	Name of the underlying fund (for our CBBCs relating to the units or shares of a fund only)

Index	Name of the underlying index (for our CBBCs relating to an index only)
Index sponsor	Name of the company that maintains the index and calculates and publishes the index levels (for our CBBCs relating to an index only)
Call price	Predetermined call price of the underlying share (for our CBBCs relating to single stock and our CBBCs relating to the units or shares of a fund only)
Strike price	Predetermined strike price of the underlying share (for our CBBCs relating to single stock and our CBBCs relating to the units or shares of a fund only)
Call level	Predetermined call level of the underlying index (for our CBBCs relating to an index only)
Strike level	Predetermined strike level of the underlying index (for our CBBCs relating to an index only)
Divisor	A predetermined amount which is used in the calculation of the cash settlement amount (if any) payable upon the occurrence of a mandatory call event or automatic exercise on expiry (for our CBBCs relating to an index only)
Expiry date	Date on which our CBBCs expires
Valuation date	Date on which the closing price or the closing level of the underlying asset is determined for calculation of the cash settlement amount upon automatic exercise on expiry
Entitlement	Number of shares/units to which a specified number of CBBCs relates (for our CBBCs relating to single stock and our CBBCs relating to the units or shares of a fund only)
Number of CBBC(s) per Entitlement	Number of CBBCs to which one entitlement relates (for our CBBCs relating to single stock and our CBBCs relating to the units or shares of a fund only)
Index currency amount	An amount denominated in the currency in which the constituent stocks of the underlying index are traded, which is used in the calculation of the cash settlement amount (if any) payable upon the occurrence of a mandatory call event or automatic exercise on expiry (for our CBBCs relating to an index only)
Observation commencement date	The date on which the observation period commences
Observation period	The period commencing from the observation commencement date to the trading day immediately before the expiry date (both dates inclusive)
Listing date	The date on which our CBBCs commence trading on the Stock Exchange

MORE INFORMATION ABOUT OUR STRUCTURED PRODUCTS AND OUR LISTING DOCUMENTS

WHO IS RESPONSIBLE FOR THIS BASE LISTING DOCUMENT?

We and the guarantor accept full responsibility for the accuracy of the information contained in this base listing document.

We have included references to websites to guide you to sources of freely available information. The information on these websites does not form part of our listing documents. Neither we nor the guarantor accept any responsibility for the information on those websites. Such information has not been prepared for the purposes of our structured products. You should conduct your own web searches and consult publicly available information to ensure that you are viewing the most up-to-date information.

This base listing document is accurate at the date stated on the cover. You must not assume, however, that information in this base listing document is accurate at any time after the date of this base listing document.

This base listing document has not been reviewed by the Securities and Futures Commission. You are advised to exercise caution in relation to the offer of the structured products.

The manager and the liquidity provider are not responsible in any way for ensuring the accuracy of our listing documents.

IS THERE ANY GUARANTEE OR COLLATERAL FOR THE STRUCTURED PRODUCTS?

Our obligations under the structured products are unconditionally and irrevocably guaranteed by the guarantor. If we become insolvent or default on our obligations under the structured products and the guarantor becomes insolvent or defaults on its obligations under the guarantee, you can only claim as an unsecured creditor of us, as the issuer, and the guarantor. In such event, you may not be able to recover all or even part of the amount due under the structured products (if any).

WHAT ARE OUR GUARANTOR'S CREDIT RATINGS?

The guarantor's long-term credit ratings (as of the day immediately preceding the date of this base listing document) are as set out on page 1 of this base listing document.

You may visit <https://www.morganstanley.com/about-us-ir/creditor-presentations> to obtain information about the guarantor's credit ratings.

Rating agencies usually receive a fee from the companies that they rate. When evaluating the guarantor's creditworthiness, you should not solely rely on the guarantor's credit ratings because:

- (a) a credit rating is not a recommendation to buy, sell or hold the structured products;
- (b) ratings of companies may involve difficult-to-quantify factors such as market competition, the success or failure of new products and markets and managerial competence;
- (c) a high credit rating is not necessarily indicative of low risk. The guarantor's credit ratings as of the day immediately preceding the date of this base listing document are for reference only. Any downgrading of the guarantor's credit ratings could result in a reduction in the value(s) of the structured product(s);
- (d) a credit rating is not an indication of the liquidity or volatility of the structured products; and
- (e) a credit rating may be downgraded if the credit quality of the guarantor declines.

The guarantor's credit ratings are subject to change or withdrawal at any time within each rating agency's sole discretion. You should conduct your own research using publicly available sources to obtain the latest information with respect to the guarantor's ratings from time to time.

THE STRUCTURED PRODUCTS ARE NOT RATED.

IS THE ISSUER OR GUARANTOR REGULATED BY THE HONG KONG MONETARY AUTHORITY REFERRED TO IN RULE 15A.13(2) OR THE SECURITIES AND FUTURES COMMISSION OF HONG KONG (SFC) REFERRED TO IN RULE 15A.13(3)?

Neither we nor the guarantor are regulated by any of the bodies referred to in Rule 15A.13(2) or (3) of the Stock Exchange's Listing Rules. The guarantor is a corporation organised under the laws of the State of Delaware, and is a financial holding company regulated by the Board of Governors of the Federal Reserve System ("Federal Reserve"), and many of its subsidiaries are regulated by various regulatory bodies throughout the world, including broker dealer and investment advisor subsidiaries registered with the SEC and subsidiaries regulated by the U.S. Commodity Futures Trading Commission with respect to certain futures-related activities.

WHERE CAN I FIND MORE INFORMATION ABOUT THE ISSUER, THE GUARANTOR AND THE STRUCTURED PRODUCTS?

Information about us, the guarantor and our structured products is described in this base listing document, the relevant launch announcement and supplemental listing document and the relevant addenda to these documents (if any).

Additional and more up-to-date information regarding the guarantor may be available on the website www.sec.gov. You are cautioned that this information (if available) will be of a general nature and cannot be relied upon as being accurate and/or correct and will not have been prepared exclusively for the purposes of our structured products.

We have not authorised anyone to give you any information about us, the guarantor, our structured products other than the information in this base listing document, the relevant launch announcement and supplemental listing document and the relevant addendum (if any).

WHEN WERE THE STRUCTURED PRODUCTS AUTHORISED?

The issue of our warrants and CBBCs were authorised by resolutions of our board of directors on 3 April 2019. The giving of the guarantee was authorised by various resolutions of the board of directors of the guarantor.

WHERE CAN I READ COPIES OF THE ISSUER'S AND GUARANTOR'S DOCUMENTATION?

You can read copies of the documents set out below on the website of the HKEX at www.hkexnews.hk and our website at www.mswarrants.com.hk:

- this base listing document and any addenda to this document, which include the latest audited financial statements and interim or quarterly financial statements (if any) of the issuer and the guarantor;
- the launch announcement and supplemental listing document as long as the relevant series of the structured products is listed on the Stock Exchange;
- our base listing document dated 18 March 2024 ("2024 BLD") which contains the guarantor's consolidated financial statements as of 31 December 2023 and 2022 and for each of the three years in the period ended 31 December 2023 and the audit report on such consolidated financial statements;
- the first addendum to the 2024 BLD dated 18 April 2024 which contains the issuer's financial statements as of 31 December 2023 and 2022 and for each of the two years in the period ended 31 December 2023 and the audit report on such financial statements; and
- the consent letter(s) from our auditor and the guarantor's auditor.

Since we are not obliged to update the listing document of any particular issue of structured products after dealing in the structured products has commenced on the Stock Exchange, you

should read the annual report(s), quarterly report(s) and current report(s) of the guarantor that are available as described above or on the website www.sec.gov.

TRANSFER OF STRUCTURED PRODUCTS

Where a transfer of structured products takes place on the Stock Exchange, currently settlement must be made not later than two CCASS settlement days after such transfer. Securities executed on the Stock Exchange would normally be settled under the continuous net settlement system in CCASS.

Dealings in the structured products will take place in relevant board lots in the relevant settlement currency. For further details on transfers of structured products and their exercise, termination pursuant to mandatory call event or settlement, see the terms and conditions of the relevant issue of structured products.

DO I HAVE TO PAY STAMP DUTY OR OTHER LEVIES ON THE STRUCTURED PRODUCTS?

There is no Hong Kong stamp duty payable on issue or transfer of our cash-settled structured products. Further, the levy for the investor compensation fund is currently suspended.

However, for each transaction effected on the Stock Exchange, the following trading fees and levies calculated on the value of the consideration for the structured products will be payable by each of the seller and the buyer:

- (i) a transaction levy of 0.0027 per cent. charged by the SFC;
- (ii) a transaction levy of 0.00015 per cent. charged by the Accounting and Financial Reporting Council; and
- (iii) a trading fee of 0.00565 per cent. charged by the Stock Exchange.

Your broker may charge commission or other fees. You should check with your broker what fees will be chargeable.

You should be aware that you may be required to pay taxes including stamp taxes or other documentary charges in accordance with the laws and practices of the country where the structured products are transferred, or where the issuer of the underlying asset is organised or resident. If you are in any doubt as to your tax position, you should consult your own independent tax advisers. You should also be aware that tax regulations and their application by the relevant taxation authorities change from time to time.

CHANGE IN TAX LAW

Tax law and practice is subject to change, possibly with retrospective effect and this could adversely affect the value of our structured products to the holder and/or the market value of our structured products. Any such change may (i) cause the tax treatment of the relevant structured products to change from what the investor understood the position to be at the time of purchase; (ii) render the statements in this base listing document concerning relevant tax law and practice in relation to our structured products to be inaccurate or to be inapplicable in some or all respect to certain structured products or to not include material tax considerations in relation to certain structured products; or (iii) give us the right to terminate the structured products if such change has the effect that our performance under the structured products is unlawful or impracticable.

HOW DO I HOLD MY STRUCTURED PRODUCTS?

Our structured products will be issued in global registered form, represented by a global certificate registered in the name of HKSCC Nominees Limited (or its successors).

We have made all necessary arrangements to enable our structured products to be admitted for deposit, clearing and settlement in CCASS. We will not issue any definitive certificates for our structured products. Our structured products will be deposited within CCASS.

If you are a CCASS investor participant, you may hold your structured products in your account with CCASS. If you do not have a CCASS account, your broker or agent (as a CCASS participant) will arrange to hold your structured products for you in an account at CCASS. We or the guarantor will make all payments on our structured products to CCASS: you will have to check your CCASS account or rely on your broker to ensure that payments on your structured products are credited to your account with your broker. Once we have made the relevant payments in this way to CCASS, we will have no further obligations for that payment, even if CCASS or your broker fails to transmit to you your share of the payment or if it was transmitted late. Any notices we or the guarantor give in relation to our structured products will be given in the same way: you will have to rely on CCASS and/or your broker to ensure that those notices reach you.

RISK FACTORS

You should carefully consider the following information together with the other information contained in this base listing document and in the applicable launch announcement and supplemental listing document before purchasing our structured products.

This section highlights only some of the risks of dealing in the structured products but their inclusion in this document does not mean these are the only significant or relevant risks of dealing in our structured products.

Non-collateralised structured products; you must rely on our and the guarantor's creditworthiness; you may lose all or substantially all of your investment if we and/or the guarantor become insolvent

Our structured products are not secured on any of our or the guarantor's assets or any collateral. Our structured products represent our general contractual obligations and will rank equally with our other general unsecured obligations. The number of structured products outstanding at any given time may be substantial. When purchasing our structured products, you will be relying upon our and the guarantor's creditworthiness and of no one else. There is no assurance of protection against a default by us in respect of our obligations under our structured products or a default by the guarantor in respect of its obligations under the guarantee. If we become insolvent or default on our obligations under the structured products or the guarantor becomes insolvent or defaults on its obligations under the guarantee, you can only claim as our or the guarantor's unsecured creditor regardless of the performance of the underlying asset and you may not be able to recover all or even part of the amount due under the structured products (if any).

Our obligations are not deposit liability or debt obligations

We do not intend to create upon ourselves a deposit liability or a debt obligation by issue of any structured products.

Our structured products are not bank deposits or protected deposits for the purposes of the Deposit Protection Scheme in Hong Kong and are not insured or guaranteed by the United States Federal Deposit Insurance Corporation, or any other governmental agency. The structured products are guaranteed by Morgan Stanley and the guarantee will rank *pari passu* with all other direct, unconditional, unsecured and unsubordinated indebtedness of Morgan Stanley.

There are risks associated with investing in our structured products; our structured products are volatile instruments

Our structured products are structured financial instruments, their value may fall as rapidly as they may rise and you may sustain a total loss in your investment. Your investment in our structured products involves risks. Before investing in any of our structured products, you should consider whether our structured products are suitable for you in light of your own financial circumstances and investment objectives. Not all of these risks are described in this base listing document or the relevant launch announcement and supplemental listing document. You should consider taking independent professional advice prior to making an investment in our structured products.

Structured products are complex and volatile instruments

Your investment in our structured products will be worthless if you are holding our structured products when they expire out-of-the-money — meaning that the closing price or level of the underlying asset, determined in accordance with the terms and conditions of our structured products, is greater (for our put warrants or our bear CBBCs) or less (for our call warrants or our bull CBBCs) than the exercise price, strike price or strike level (as the case may be) of our structured products.

Our structured products are complex instruments and their values at any time prior to expiry are governed by a number of factors, including but not limited to the time left till expiry, the price or level of the underlying asset compared with the strike price/level and call price/level (in the case of our CBBCs) of our structured products, the value and volatility of price or level of the underlying asset, market interest rate movements, our and the guarantor's financial condition and the market's view of our and the guarantor's credit quality. The values of our structured products may rise or fall rapidly over a short time due to changes in one or more factors. The interplay of these different factors also means that the effect on the value of our structured products from the change in one factor may offset or accentuate the effect from the change in another factor. The value or level of the underlying assets (and some of the other relevant factors) can also be unpredictable: it may change suddenly and in large magnitude or not change at all. You may risk losing your entire investment if the price or level of the underlying assets do not move in your anticipated direction. You should also note that, assuming all other factors are held constant, the value of structured products will decline over time.

The cash settlement amount of our structured products if calculated at any time prior to expiry may typically be less than the market price of such structured products at that time. The difference will reflect, among other things, a "time value" for the structured products which depends on a number of interrelated factors including those specified above.

Your ability to realise your investment in our structured products is dependent on the trading market for our structured products

Our structured products are not exercisable prior to the expiry date, therefore the only way you may be able to realise the value of your investment in our structured products is to dispose of them either in the on-exchange market or over-the-counter market. If you dispose of your investment in our structured products before expiry in this way, the amount you will receive will depend on the price you are able to obtain from the market for our structured products. That price may depend on the quantity of our structured products you are trying to sell. The market price of our structured products may not be equal to the value of our structured products, and changes in the price of our structured products may not correspond (in direction and/or magnitude) with changes in the value of our structured products.

The liquidity provider appointed for our structured products will upon request provide bid and/or ask prices for our structured products on the Stock Exchange and may (but is not obliged to) provide such prices at other times too, but under certain circumstances it may not provide bid and/or ask prices even if requested. You should refer to the section regarding liquidity provider in the relevant launch announcement and supplemental listing document for further details. The prices provided by our liquidity provider are influenced by, among other things, the supply and demand of our structured products for a particular series in the market, and may not correspond with the values of such structured products or changes in such values.

You should note that the prices available in the market for our structured products may also come from other participants in the market, although we cannot predict if and to what extent a secondary market may develop for our structured products or whether that market will be liquid or illiquid. The fact that a particular series of structured products is listed does not necessarily lead to greater liquidity. In addition, no assurance can be given that the listing of any particular series of our structured products will be maintained. If our structured products of a particular series cease to be listed, they may not be transacted through the Stock Exchange or at all, and they may even be terminated early. Off-exchange transactions may involve greater risks than on-exchange transactions. You may be unable to find any buyer for your holdings of our structured products on the Stock Exchange if the value of the structured products falls below HK\$0.01.

Only the liquidity provider appointed for our structured products is obliged to provide bid and/or ask prices for our structured products upon request (subject to the terms set out in the relevant launch announcement and supplemental listing document), and at times it may be the only source of bid and/or ask prices for our structured products.

The liquidity of any series of our structured products may also be affected by restrictions on offers and sales of our structured products in some jurisdiction including the restrictions described in Annex 3 “Purchase and Sale” to this base listing document.

In view of the limited trading market of our structured products, you may need to hold our structured products until expiry.

Suspension of trading of the structured products

If trading or dealing in the underlying asset on the market on which such underlying asset is listed or dealt in (including the Stock Exchange) is suspended for any reasons, trading in our structured products may also be suspended for a similar period.

If an underlying asset is an index of Hang Seng family (including but not limited to Hang Seng Index, Hang Seng China Enterprises Index or Hang Seng TECH Index) (each a “**Hang Seng Family Index**”), you should note that:

- (a) in the event that there is a disruption to normal index level dissemination by the index sponsor, being Hang Seng Indexes Company Limited and that, upon the index level dissemination disruption, there is a failure by the index sponsor to provide a periodic publication of index level with respect to the index on its website under its contingency mode (“**Index Disruption Event**”) and the index sponsor publishes a notice (“**Disruption Notice**”) regarding the occurrence of such Index Disruption Event, trading of the structured products linked to the index will be suspended as soon as practicable after the publication of such Disruption Notice (“**Index Disruption Trading Halt**”); and
- (b) trading of the relevant structured products will be resumed as soon as practicable after the publication of index notice by the index sponsor regarding the resumption of normal index level dissemination of the relevant index (“**Index Disruption Trading Resumption**”).

In addition, if an underlying asset is an index (other than Hang Seng Family Indices) and the calculation and/or publication of the index level by the index sponsor is suspended for whatever reasons, trading in the relevant series of structured products may be suspended for a similar period.

If suspension of the underlying asset is prolonged, our structured products may also be suspended for a prolonged period, which may in turn adversely impact the value of the relevant structured products as their time value may dissipate. Upon the resumption of trading of our structured products after a prolonged period of suspension, the price of our structured products may fluctuate significantly because of the significant impact of such prolonged period of suspension. This may adversely affect your investment in the structured products.

In addition, in the case of CBBCs, a mandatory call event may occur upon the resumption of index level dissemination by the index sponsor, regardless of the time interval of index level dissemination or whether the trading of the affected CBBCs on the Stock Exchange has been resumed or not. This may also adversely affect your investment in the relevant structured products.

You should also note that all unmatched orders of the affected structured products will remain in place during the Index Disruption Trading Halt and will not be automatically cancelled. Automatic order matching of the affected structured products will be resumed on the Stock Exchange upon the Index Disruption Trading Resumption. You should contact your broker or agent as soon as possible before the Index Disruption Trading Resumption if you wish to cancel any unmatched order of the affected structured products.

Risks relating to the trading arrangements in the event of the occurrence of an Index Disruption Event in respect of any Hang Seng Family Index

In the event of the occurrence of an Index Disruption Event in respect of any Hang Seng Family Index, the Stock Exchange will implement the following trading arrangements in respect of the relevant series of structured products:

- (a) the Index Disruption Trading Halt; and
- (b) following the Index Disruption Trading Halt, the Index Disruption Trading Resumption after publication of a notice by the index sponsor regarding resumption of normal index level dissemination of the relevant index.

You should note that there are potential risks (including without limitation, any delay, failure, mistake or error) associated with the Stock Exchange's observation of the Index Disruption Event and/or the Stock Exchange's implementation of these trading arrangements, which may adversely affect your investment in the relevant structured products.

The Stock Exchange, the HKEX and their affiliates will not incur any liability (whether based on contract, tort, including, without limitation, negligence, or any other legal or equitable grounds and without regard to the circumstances giving rise to any purported claim except in the case of willful misconduct on the part of the Stock Exchange, HKEX and/or their affiliates) for, any direct, consequential, special, indirect, economic, punitive, exemplary or any other loss or damage suffered or incurred by us or any other party arising from or in connection with the Index Disruption Event, Index Disruption Trading Halt and/or Index Disruption Trading Resumption, including without limitation, any delay, failure, mistake or error in the Stock Exchange effecting the trading arrangements.

We and our affiliates shall not have any liability to the holders of the relevant series of structured products (whether based on contract, tort, including, without limitation, negligence, or any other legal or equitable grounds and without regard to the circumstances giving rise to any purported claim except in the case of willful misconduct on the part of us and/or our affiliates) for, any direct, consequential, special, indirect, economic, punitive, exemplary or any other loss or damage suffered or incurred by you or any other party arising from or in connection with the Index Disruption Event, Index Disruption Trading Halt and/or Index Disruption Trading Resumption, including without limitation, any delay, failure, mistake or error in the Stock Exchange effecting the trading arrangements.

You have no rights in the underlying assets and the market price for our structured products may fluctuate differently from that of the underlying assets

Our structured products are financial instruments issued by us and are separate from the underlying assets. You have no rights under our structured products against (i) any company or fund which issues shares or units comprising the underlying assets of the relevant issue of structured products, (ii) the trustee (if applicable) or the manager (if applicable) of any underlying asset that is a fund, or (iii) the sponsor of any underlying asset that is an index. In addition, buying our structured products is not the same as buying the underlying assets or having a direct investment in the underlying assets or shares comprising any underlying asset that is an index. You will not be entitled to have voting rights, rights to receive dividends or distributions or any other rights under the underlying asset or shares comprising any underlying asset that is an index. As mentioned, there are many factors influencing the value and/or market price of structured products, which are leveraged instruments. For example, increases in the price or level of the underlying assets may not lead to an increase in the value and/or market price of our call warrants or bull CBBCs by a proportionate amount or even any increase at all; however, a decrease in the price or level of the underlying assets

may lead to a greater than proportionate decrease in the value and/or market price of our call warrants or bull CBBCs. There is no assurance that a change in value and/or market price of our structured products will correspond in direction and/or magnitude with the change in price or level of the underlying assets. You should recognise the complexities of utilising our structured products to hedge against the market risk associated with investing in an underlying asset or shares comprising any underlying asset that is an index.

The issuer, the trustee (if applicable), the manager (if applicable) and the sponsor of the underlying assets (as the case may be) will have no involvement in the offer and sale of our structured products and no obligation to you as investors in our structured products. The decisions made by them on corporate actions, such as a merger or sale of assets, or adjustment of the method for calculation of an index may also have an adverse impact on the value and/or market price of our structured products.

We, the guarantor and its subsidiaries and affiliates and the manager have no responsibility to inform the holders of our structured products of any disclosure on any company which issues shares or units comprising the underlying assets of any of our structured products.

There could be conflicts of interest arising out of our other activities which may affect our structured products

We, the guarantor and its subsidiaries and affiliates may engage in transactions (whether for their proprietary accounts, including hedging, or trading for accounts under management or otherwise) involving, as well as provide investment banking and other services to, any company, or any trustee (if applicable) or manager (if applicable) of a fund underlying our structured products or their securities and may enter into transactions with the substantial shareholders of the underlying company. Those transactions may have a positive or negative impact on the price or level of the underlying asset and in turn the value and/or market price of our structured products. For example, in the case of CBBCs, these transactions may result in the price or level of the underlying asset moving closer to, or even reaching or going beyond the call price or call level of our CBBCs thus causing a mandatory call event. These transactions may also influence the price or level of the underlying asset after the occurrence of the mandatory call event and adversely impact on the residual value payable (if any, for a Category R CBBC). The mandatory call event may be triggered by a single trade in the underlying asset, regardless of the size of the trade. In addition, the unwinding of hedges at any time or after the occurrence of a mandatory call event may affect the price or level of the underlying asset and consequently affect the cash settlement amount of our CBBCs.

We, the guarantor and its subsidiaries and affiliates may have officers who serve as directors of any of the companies underlying our structured products. Our principal trading activities (which include hedging of our structured products) in the underlying securities or related structured products may affect the value and/or market price of our structured products. We, the guarantor or its subsidiaries and affiliates may issue other competing financial products which may affect the value and/or market price of our structured products. You should also note that potential conflicts of interest may arise from the different roles played by us, the guarantor and its subsidiaries and affiliates in connection with our structured products and the economic interests in each role may be adverse to your interests in our structured products. We and the guarantor owe no duty to you to avoid such conflicts.

Certain of our affiliates and certain affiliates of the guarantor may from time to time, by virtue of their status as underwriter, advisor or otherwise, possess or have access to information relating to the underlying assets and any derivative instruments referencing them. Such affiliates will not be obliged to disclose any such information to a purchaser of our structured products.

Certain of our affiliates and certain affiliates of the guarantor may be the counterparty to the hedge of our and the guarantor's obligations under an issue of our structured products. Accordingly, certain conflict of interest may arise both among these affiliates and between the interests of these affiliates and the interests of purchasers of our structured products.

Potential conflicts of interest may exist between the issuer and the holders of our structured products, including with respect to the exercise of the discretionary powers of the issuer. For instance, in the case of stock warrants, the issuer has the authority to determine if a market disruption event has occurred on any valuation date, and, in the event that the occurrence of a market disruption event results in a valuation date being postponed such that the valuation date will fall on or after the expiry date, then the valuation date will be the business day immediately preceding the expiry date and the issuer will determine the closing price of the shares on the basis of its good faith estimate of the price that would have prevailed on that day but for the market disruption event. Any such discretion exercised by the issuer shall be binding on us and the holders of the structured products.

Morgan Stanley Hong Kong Securities Limited, the liquidity provider for our structured products, is our affiliate and affiliate of the guarantor and may therefore trade or hold our structured products and enter into hedging transactions in respect of our structured products from time to time.

We may early terminate our structured products due to illegality or impracticability

We are entitled to terminate the structured products if we determine in good faith and in a commercially reasonable manner that, for reasons beyond our control, it has become or it will become illegal or impracticable (i) for us to perform our obligations under the structured products, or for the guarantor to perform its obligations under the guarantee, in whole or in part as a result of (a) the adoption of, or any change in, any relevant law or regulation (including any tax law) or (b) the promulgation of, or any change in, the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law) (each of (a) and (b), a "**Change in Law Event**"); or for us or any of our affiliates to maintain our hedging arrangements with respect to the structured products due to a Change in Law Event. If this happens, we or the guarantor will, if and to the extent permitted by the applicable law or regulation, pay to each holder of those structured products a cash amount that the issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each structured product held by such holder immediately prior to such termination (ignoring such illegality or impracticability) less our cost of unwinding any related hedging arrangement as determined by us in our sole and absolute discretion. Such fair market value of the structured products may be substantially less than your initial investment and may be zero. In rare cases where we are prohibited by law to pay such amount, we will not be able to do so.

Please refer to the relevant terms and conditions of our structured products for further details about our early termination rights.

The President of the United States issued Executive Order 13959 on 12 November 2020 and amended it by Executive Order 13974 of 13 January 2021; Executive Order 14032 of 3 June 2021 then revoked Executive Order 13974 and further amended Executive Order 13959 (collectively, the "**Executive Orders**"). The Executive Orders created what is currently known as the Chinese Military Industrial Complex Company sanctions program, which is primarily administered by the U.S. Department of the Treasury's Office of Foreign Assets Control ("**OFAC**"). OFAC has published certain General Licenses and responses to Frequently Asked Questions related to the Executive Orders on its website at <https://home.treasury.gov/policy-issues/financial-sanctions/sanctions-programs-and-country-information/chinese-military-companies-sanctions>.

The Executive Orders apply to our group. We believe that the Executive Orders and relevant guidance from OFAC do not presently restrict our ability to issue the structured products or comply with our obligations in relation to the structured products. In the event of any amendments to the

Executive Orders, revised guidance from OFAC, or the issuance of additional economic sanctions by the U.S. government, this view may be revised and may constitute a Change in Law Event. We will monitor the developments with respect to the Executive Orders and will publish further announcements to inform investors if our obligations under the structured products become restricted pursuant to the Executive Orders.

On 28 October 2024, the U.S. Department of the Treasury issued final regulations (“**OIR Final Rule**”) implementing Executive Order 14105, “Addressing United States Investments in Certain National Security Technologies and Products in Countries of Concern” (“**OIR Executive Order**”). The OIR Final Rule became effective on 2 January 2025 and prohibit or requires notification for, certain transactions between US Persons and certain non US Persons that have a qualifying nexus to certain countries of concern as set out in the OIR Executive Order and deal in specified technologies. The OIR Final Rule is currently being reviewed by the President Donald J. Trump administration and the set of industries and technologies covered by the OIR Final Rule may be further expanded. The U.S. Department of the Treasury has published responses to Frequently Asked Questions related to the OIR Executive Order on its website at <https://home.treasury.gov/policy-issues/international/outbound-investment-program/frequently-asked-questions>.

The OIR Executive Order applies to our group. We believe that the OIR Executive Order does not presently restrict our ability to issue the structured products or comply with our obligations in relation to the structured products. In the event of any amendments to the OIR Final Rule, the OIR Executive Order, revised guidance from the U.S. Department of the Treasury, or the issuance of additional U.S. legislation, this view may be revised and may constitute a Change in Law Event. We will monitor the developments with respect to the OIR Final Rule and will publish further announcements to inform investors if our obligations under the structured products become restricted pursuant to the OIR Final Rule.

Structured products relating to an index involve valuation risks

You should note that, in the case of structured products relating to an index, an investment involves valuation risks in relation to the index. The level of the index may vary over time and may increase or decrease due to various factors including changes in the formula for or the method of calculating the index. In addition, a level for the index may be published by the index sponsor at a time when one or more securities comprising the index are not trading. If this occurs on the expiry date and there is no market disruption event called under the terms of the relevant structured products, then the value of such securities used in calculating the closing level of the index will not be their up-to-date market price. Certain (but not all) events relating to the index underlying our structured products require or, as the case may be, permit us to make certain adjustments or amendments to the conditions (including, but not limited to, determining the level of the index). However, we are not required to make an adjustment for every event that can affect the index. If an event occurs that does not require us to adjust the Conditions, the market price of our structured products and the cash settlement amount upon mandatory call event or expiry of our structured products may be affected.

Risks associated with our structured products relating to the units or shares of a fund

General risks

For our structured products relating to the units or shares of a fund, neither we nor any of our affiliates have the ability to control or predict the actions of the trustee (if applicable) or the manager (if applicable) of the fund. Neither the trustee (if applicable) nor the manager (if applicable) of the fund (i) is involved in the offer of any structured products in any way, or (ii) has any obligation to consider the interest of the holders of any structured products in taking any corporate actions that might affect the value of any structured products. We have no role in the fund. The trustee (if applicable) or the manager (if applicable) of the fund is responsible for making investment and other trading decisions with respect to the management of the fund consistent with its investment objectives

and in compliance with the investment restrictions as set out in the constitutive documents of the fund. The manner in which the fund is managed and the timing of actions may have a significant impact on the performance of the units or shares. Hence, the price which is used to calculate the performance of the units or shares is also subject to these risks.

For any fund which is not managed like a corporation or an active investment vehicle and no manager has been appointed, the trading price of the units or shares in the fund may be adversely affected by losses sustained by the fund that, if the fund had been actively managed, might have been possible to avoid.

You should note that our structured products relating to the units or shares of a fund reference the units or shares of the fund and the cash settlement amount payable upon exercise will be calculated using the official closing prices of the units or shares on the stock exchange on the valuation dates. If the fund is designed to track the performance of an index, you should note that our structured products do not reference the index tracked by the fund. Changes in the price of the units or shares on the Stock Exchange may not correspond with changes in the level of such index, and such price at any given time may differ from the net asset value per unit or share of the fund. In addition, the components which comprise such index may change from time to time. The price of the units or shares of the fund may rise or fall as a result of such changes. The composition of such index may also change if one of the constituent companies were to delist its shares or if a new eligible company were to list its shares and be added to such index.

Exchange traded funds

In the case of our structured products linked to units or shares of an exchange traded fund (“ETF”), you should note that an ETF is exposed to the political, economic, currency and other risks related to the underlying asset pool or index that the ETF is designed to track. There may also be disparity between the performance of the ETF and the performance of the underlying asset pool or index that the ETF is designed to track as a result of, for example, failure of the tracking strategy, currency differences, fees and expenses. In addition, where the index or market that the ETF tracks is subject to restricted access, the efficiency in the unit or share creation or redemption to keep the price of the fund in line with its net asset value may be disrupted, causing the ETF to trade at a higher premium or discount to its net asset value. Such risks may have a negative impact on the performance of the ETF and the price of the units or shares of the ETF may fall.

Synthetic exchange traded funds

If an ETF adopts a synthetic replication investment strategy to achieve its investment objectives by investing in financial derivative instruments linked to the performance of an underlying asset pool or index that the ETF is designed to track, you should also note that:

- (a) investments in financial derivative instruments will expose the ETF to the credit, potential contagion and concentration risks of the counterparties who issued such financial derivative instruments. If the ETF has collateral to reduce the counterparty risk, there may still be a risk that the market value of the collateral has fallen substantially when the ETF seeks to realise the collateral; and
- (b) the ETF may be exposed to higher liquidity risk if the ETF invests in financial derivative instruments which do not have an active secondary market.

You should read the offering document of the ETF for further information about the risks applicable to the ETF.

Real estate investment trusts

If our structured products are linked to units of a real estate investment trust (“**REIT**”), you should note that the primary investment objective of REIT is to invest in a real estate portfolio. A REIT is exposed to risks relating to investments in real estate, including but not limited to (a) adverse changes in political or economic conditions; (b) changes in interest rates and the availability of debt or equity financing, which may result in an inability by the REIT to maintain or improve the real estate portfolio and finance future acquisitions; (c) changes in environmental, zoning and other governmental rules; (d) changes in market rents; (e) any required repair and maintenance of the portfolio properties; (f) breach of any property laws or regulations; (g) the relative illiquidity of real estate investment; (h) real estate taxes; (i) any hidden interests in the portfolio properties; (j) any increase in insurance premiums and (k) any uninsurable losses.

There may also be disparity between the market price of the units of a REIT and the net asset value per unit. This is because the market price of the units of a REIT also depends on many factors, including but not limited to (a) the market value and perceived prospects of the real estate portfolio; (b) changes in economic or market conditions; (c) changes in market valuations of similar companies; (d) changes in interest rates; (e) the perceived attractiveness of the units of the REIT against those of other equity securities; (f) the future size and liquidity of the market for the units and the REIT market generally; (g) any future changes to the regulatory system, including the tax system and (h) the ability of the REIT to implement its investment and growth strategies and to retain its key personnel.

The above risks may have a significant impact on the performance of the units and the price of our structured products.

ETFs investing through the QFI regimes and/or China Connect

If our structured products are linked to units or shares of an ETF (“**China ETF**”) issued and traded outside Chinese Mainland with direct investment in the Chinese Mainland securities markets through the Qualified Foreign Institutional Investor regime and Renminbi Qualified Foreign Institutional Investor regime (collectively, “**QFI regimes**”) and/or the Shanghai-Hong Kong Stock Connect and Shenzhen-Hong Kong Stock Connect (collectively, “**China Connect**”), you should note that, amongst others:

- (a) the policy and rules for the QFI regimes and China Connect prescribed by the PRC central government are subject to change, and there may be uncertainty to their implementation. The uncertainty and change of the laws and regulations in Chinese Mainland may adversely impact on the performance of China ETFs and the trading price of the units or shares;
- (b) a China ETF primarily invests in securities traded in the Chinese Mainland securities markets and is subject to concentration risk. Investment in the Chinese Mainland securities markets (which are inherently stock markets with restricted access) involves certain risks and special considerations as compared with investment in more developed economies or markets, such as greater political, tax, economic, foreign exchange, liquidity and regulatory risks. The operation of a China ETF may also be affected by interventions by the applicable government(s) and regulators in the financial markets;
- (c) trading of securities invested by a China ETF under China Connect will be subject to a daily quota which is utilised on a first-come-first-serve basis under China Connect. In the event that the daily quota under China Connect is reached, the manager may need to suspend creation of further units or shares of such China ETF, and therefore may affect the liquidity in unit or share trading of such China ETF. In such event, the trading price of a

unit or share of such China ETF is likely to be at a significant premium to its net asset value, and may be highly volatile. The People's Bank of China and the State Administration of Foreign Exchange have jointly published the detailed implementation rules removing the investment quota under the QFI regimes with effect from 6 June 2020; and

- (d) there are risks and uncertainties associated with the current Chinese Mainland tax laws applicable to a China ETF investing in Chinese Mainland through the QFI regimes and/or China Connect. Although such China ETF may have made a tax provision in respect of potential tax liability, the provision may be excessive or inadequate. Any shortfall between the provisions and actual tax liabilities may be covered by the assets of such China ETF and may therefore adversely affect the net asset value of such China ETF and the market value and/or potential payout of our structured products.

The above risks may have a significant impact on the performance of the units or shares and the price of our structured products. Please read the offering documents of the China ETF to understand its key features and risks.

Risk specific to underlying asset adopting the multiple counters model

If our structured products are linked to underlying asset that adopts the multiple counters model for trading its units or shares on the Stock Exchange in Hong Kong dollars (“**HKD**”) and one or more foreign currencies (such as Renminbi and/or United States Dollars) (each a “**Foreign Currency**”) separately, you need to consider the following additional risks:

- (a) our structured products may be linked to the units or shares traded in HKD or Foreign Currency. If the underlying asset is the units or shares traded in one currency counter, movements in the trading prices of the units or shares traded in another currency counter should not directly affect the price of our structured products;
- (b) if there is a suspension of inter-counter transfer of such units or shares between different currency counters for any reason, such units or shares will only be able to be traded in the relevant currency counter on the Stock Exchange, which may affect the demand and supply of such units or shares and have an adverse effect on the price of our structured products; and
- (c) the trading price on the Stock Exchange of units or shares traded in one currency counter may deviate significantly from the trading price on the Stock Exchange of units or shares traded in another currency counter due to different factors, such as market liquidity, foreign exchange conversion risk, supply and demand in each counter and exchange rate fluctuation. Changes in the trading price of the underlying asset in the relevant currency counter may adversely affect the price of our structured products.

Commodity market risk

Where the underlying asset comprises the units or shares of an ETF whose value relates directly to the value of a commodity, you should note that fluctuations in the price of the commodity could materially adversely affect the value of the underlying units or shares. Commodity market is generally subject to greater risks than other markets. The price of a commodity is highly volatile. Price movement of a commodity is influenced by, among other things, interest rates, changing market supply and demand relationships, trade, fiscal, monetary and exchange control programmes and policies of governments, and international political and economic events and policies.

Liquidation of underlying company or termination of underlying fund

In the event of liquidation, dissolution or winding up of the company that issues the underlying shares, or termination of a fund that issues the underlying units or shares or the appointment of a receiver or administrator or analogous person, to the company or fund, the relevant structured products shall lapse and shall cease to be valid for any purpose (except that in the case of put warrants or bear CBBCs, we may pay to you the residual value (if any) less our costs of unwinding any related hedging arrangements as determined by us, which may be substantially less than your initial investment and may be zero), and the holders of the relevant structured products will sustain a total loss in their investment.

Time lag between the time of exercise or the occurrence of a mandatory call event (in the case of CBBCs) and the time of determination of the settlement amount may affect the settlement amount

There may be a time lag between the time or date (i) when our structured products are automatically exercised or (ii) (in the case of our CBBCs only) when a mandatory call event occurs and the time of determination of the settlement amount. Such delay could be significantly longer in the case of a market disruption event, delisting of the company that issues the underlying assets or shares comprising any underlying asset that is an index, termination of the fund that issues the underlying units or shares or other adjustment events. The settlement amount may change significantly during any such period and may result in such settlement amount being zero.

We may adjust the terms and conditions of our structured products upon the occurrence of certain corporate events or extraordinary events affecting the underlying assets

We may determine that certain corporate events or extraordinary events affecting the underlying assets have occurred and may make corresponding adjustments to the terms and conditions of our structured products, including adjustments to the value or level of the underlying assets or changing the composition of the underlying assets. Such events and/or adjustments (if any) may have adverse impact on the value and/or market price of our structured products. We may also in our sole discretion adjust the entitlement of our structured products for dilution events such as stock splits and stock dividends.

However, we have no obligation to make an adjustment for every event that can affect the underlying asset. The value and/or market price of our structured products may be adversely affected by such events in the absence of an adjustment by us. If adjustments were made, we do not assure that such adjustments can negate any adverse impact of such events on the value and/or market price of our structured products.

We may modify the terms and conditions of our structured products

Under the terms and conditions, we may, without your consent, effect any modification of the terms and conditions of our structured products which, in our opinion, is:

- (i) not materially prejudicial to your interests generally (without considering the circumstances of any individual holder of the structured products or the tax or other consequences of such modification in any particular jurisdiction);
- (ii) of a formal, minor or technical nature;
- (iii) made to correct a manifest error; or
- (iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong.

Our determination of the occurrence of a market or settlement disruption event may affect the value and/or market price of our structured products

We may determine that a market or settlement disruption event has occurred. Such determination may affect the value and/or market price of our structured products, and may delay settlement in respect of our structured products.

If the issuer determines that a market disruption event exists, the valuation of the underlying assets for the purpose of calculating the cash settlement amount of our structured products will be postponed. If such market disruption event exists for a continuous period of time as specified in the terms of our structured products, we may determine the good faith estimate of the value or level of the underlying assets that would have prevailed on the relevant postponed valuation date but for such market disruption event.

The implied volatility of our structured products may not reflect the actual volatility of the underlying asset

The market price of our structured products is determined among other factors by the supply and demand of the structured products. This price “implies” a level of volatility in the underlying asset in the sense that such level of volatility would give a theoretical value for the structured products which is equal to that price; but such level of volatility may not be equal to the actual level of volatility of the underlying asset in the past or future.

Investment in our structured products may involve exchange rate risks and interest rate risks

An investment in our structured products may involve exchange rate risks. For example, the underlying asset may be denominated in a currency other than that of our structured products, our structured products may be denominated in a currency other than the currency of your home jurisdiction and our structured products may settle in a currency other than the currency in which you wish to receive funds. Changes in the exchange rate(s) between the currency of the underlying asset, the currency in which our structured products settle and/or the currency of your home jurisdiction may adversely affect the return of your investment in our structured products. We cannot assure you that current exchange rates at the issue date of our structured products will be representative of the future exchange rates used in computing the value of our structured products. Fluctuations in exchange rates may therefore affect the value of our structured products.

An investment in our structured products may also involve interest rate risk as the intrinsic value of a structured product may be sensitive to fluctuations in interest rates. Fluctuations in the short term or long term interest rates of the currency in which our structured products are settled or the currency in which the underlying asset is denominated may affect the value and/or market price of our structured products.

Change in tax law

Tax law and practice is subject to change, possibly with retrospective effect and this could adversely affect the value of our structured products to the holder and/or the market value of our structured products. Any such change may (i) cause the tax treatment of the relevant structured products to change from what the investor understood the position to be at the time of purchase; (ii) render the statements in this base listing document concerning relevant tax law and practice in relation to our structured products to be inaccurate or to be inapplicable in some or all respect to certain structured products or to not include material tax considerations in relation to certain structured products; or (iii) give us the right to terminate the structured products if such change has the effect that our performance under the structured products is unlawful or impracticable.

Please consult your tax advisers if you are in any doubt of your tax position

You may be required to pay taxes including stamp taxes or other documentary charges in accordance with the laws and practices of the country where our structured products are transferred or where the issuer of the underlying asset is organised or resident and such laws and practices may change from time to time. If you are in any doubt of your tax position, you should consult your own independent tax advisers.

Our structured products are issued in global registered form; you have to rely on your brokers to evidence title to your investment and to receive notices and the cash settlement amount

Our structured products are issued in global registered form and held on your behalf within a clearing system. This means that evidence of title to your interests, as well as the efficiency of ultimate delivery of the cash settlement amount, will be governed by the CCASS Rules.

Our structured products in global registered form will be registered in the name of HKSCC Nominees Limited (or its successors), which shall be treated by us as the holder of our structured products for all purposes. This means that you will not receive definitive certificates and the register will record at all times that our structured products are being held by HKSCC Nominees Limited (or its successors). You will have to rely solely upon your brokers and the statements received from your brokers to evidence title to your investments. You will also have to rely on your brokers to effectively inform you of any notices, announcements and/or meetings issued or called by us (upon receipt by those brokers as CCASS participants of the same from CCASS and ultimately from us). The Stock Exchange's Listing Rules also provide that our obligations to deliver notices, announcements and/or meetings will be complied with by a posting on the Stock Exchange's website. Our obligations to deliver any cash settlement amount to you will be duly performed by the delivery of any such amount to HKSCC Nominees Limited (or its successors) as the holder of our structured products. You will therefore have to rely on your brokers for the ultimate delivery of any cash settlement amount to you as the investor.

We and our guarantor do not give you any advice or credit analysis

Neither we nor the guarantor is responsible for the lawfulness of your acquisition of our structured products. We and the guarantor are not giving you any advice or credit analysis of the underlying assets. You shall be deemed to have made a representation as to the lawfulness of your acquisition of our structured products for each purchase of our structured products of any series.

The application of regulatory requirements and strategies in the U.S. or other jurisdictions to facilitate the orderly resolution of large financial institutions may pose a greater risk of loss for the guarantor's *security holders* and subject the guarantor to *other restrictions*

The guarantor is required to submit once every two years to the Federal Reserve and the FDIC a resolution plan that describes its strategy for a rapid and orderly resolution under the U.S. Bankruptcy Code in the event of material financial distress or failure. If the Federal Reserve and the FDIC were to jointly determine that the guarantor's resolution plan submission was not credible or would not facilitate an orderly resolution, and if the guarantor were unsuccessful in addressing any deficiencies identified by the regulators, the guarantor or any of the guarantor's subsidiaries may be subject to more stringent capital, leverage, or liquidity requirements or restrictions on the guarantor's growth, activities or operations, or after a two-year period, the guarantor may be required to divest assets or operations.

In addition, provided that certain procedures are met, the guarantor can be subject to a resolution proceeding under the orderly liquidation authority under Title II of the Dodd-Frank Act with the FDIC being appointed as receiver instead of being resolved under the U.S. Bankruptcy Code. The FDIC's power under the orderly liquidation authority to disregard the priority of creditor claims and treat similarly situated creditors differently in certain circumstances, subject to certain limitations, could adversely impact holders of the guarantor's unsecured debt.

Further, because both the guarantor's resolution plan contemplates a single point of entry (an "SPOE") strategy under the U.S. Bankruptcy Code and the FDIC has indicated that it expects to use an SPOE strategy through which it may apply its orderly liquidation authority powers for U.S. global systemically important banks ("G-SIBs"), the guarantor believes that the application of an SPOE strategy is the reasonably likely outcome if either the guarantor's resolution plan were implemented or a resolution proceeding were commenced under the orderly liquidation authority. An SPOE strategy generally contemplates the provision of adequate capital and liquidity by the guarantor to certain of its subsidiaries so that such subsidiaries have the resources necessary to implement the resolution strategy, and the guarantor has entered into a secured amended and restated support agreement with such entities, pursuant to which it would provide such capital and liquidity to such entities.

In addition, a wholly owned, direct subsidiary of the guarantor, Morgan Stanley Holdings LLC ("Funding IHC"), serves as a resolution funding vehicle. The guarantor has transferred, and has agreed to transfer on an ongoing basis, certain assets to the Funding IHC. In the event of a resolution scenario, the guarantor would be obligated to contribute all of its material assets that can be contributed under the terms of the amended and restated support agreement (other than shares in subsidiaries of the guarantor and certain other assets), to the Funding IHC. The Funding IHC would be obligated to provide capital and liquidity, as applicable, to certain supported subsidiaries, pursuant to the terms of the secured amended and restated support agreement.

The obligations of the guarantor and of the Funding IHC, respectively, under the amended and restated support agreement are in most cases secured on a senior basis by the assets of the guarantor (other than shares in subsidiaries of the guarantor and certain other assets), and the assets of the Funding IHC, as applicable. As a result, claims of certain supported subsidiaries, including the Funding IHC, against the assets of the guarantor with respect to such secured assets are effectively senior to unsecured obligations of the guarantor.

Although an SPOE strategy, whether applied pursuant to the guarantor's resolution plan or in a resolution proceeding under the orderly liquidation authority, is intended to result in better outcomes for creditors overall, there is no guarantee that the application of an SPOE strategy, including the provision of support to the guarantor's supported subsidiaries pursuant to the secured amended and restated support agreement, will not result in greater losses for holders of the guarantor's securities compared with a different resolution strategy for us.

Regulators have taken and proposed various actions to facilitate an SPOE strategy under the U.S. Bankruptcy Code, the orderly liquidation authority and other resolution regimes. For example, the Federal Reserve requires top-tier bank holding companies of U.S. G-SIBs, including the guarantor, to maintain adequate total loss-absorbing capacity ("TLAC"), including equity and eligible long-term debt, in order to ensure that such institutions have enough loss-absorbing resources at the point of failure to be recapitalized through the conversion of debt to equity or otherwise by imposing losses on eligible TLAC where the SPOE strategy is used. The combined implication of the SPOE resolution strategy and the TLAC requirement is that the guarantor's losses will be imposed on the holders of eligible long-term debt and other forms of eligible TLAC issued by the guarantor before any losses are imposed on the creditors of the guarantor's supported subsidiaries without requiring taxpayer or government financial support.

In addition, certain jurisdictions, including the U.K. and E.U. jurisdictions, have implemented changes to resolution regimes to provide resolution authorities with the ability to recapitalize a failing entity organized in such jurisdiction by writing down certain unsecured liabilities or converting

certain unsecured liabilities into equity. Such “bail-in” powers are intended to enable the recapitalization of a failing institution by allocating losses to its shareholders and unsecured creditors. This may increase the overall level of capital and liquidity required by the guarantor on a consolidated basis and may result in limitations on the guarantor’s ability to efficiently distribute capital and liquidity among its affiliated entities, including in times of stress. Non-U.S. regulators are also considering requirements that certain subsidiaries of large financial institutions maintain minimum amounts of TLAC that would pass losses up from the subsidiaries to the guarantor and, ultimately, to security holders of the guarantor in the event of failure.

Other risks relating to the guarantor

Please refer to the section headed “Risk Factors” in the guarantor’s Annual Report on Form 10-K for the year ended 31 December 2024 as filed with the SEC on 21 February 2025, which is reproduced in Annex 6 to this document for a description of additional risks relating to the guarantor.

Risks associated with our CBBCs

You may lose all or substantially all your investment at expiry

If you hold your CBBCs until expiry and no mandatory call event occurs during the observation period, the cash settlement amount payable upon exercise at expiry will depend on how much the closing price or level of the underlying asset is above (in the case of bull CBBCs) or below (in the case of bear CBBCs) the strike price or level. The cash settlement amount may be substantially less than your initial investment in the CBBCs, and may even be zero.

You may lose all or substantially all of your investment upon the occurrence of a mandatory call event

You may lose all or substantially all of your investment in our CBBCs if a mandatory call event occurs during the observation period of our CBBCs - meaning that the price or level of the underlying asset is at or below (for our bull CBBCs) or at or above (for our bear CBBCs) the predetermined call price or call level at any time during the observation period. The mandatory call event may be triggered by a single, small trade in the underlying asset (such as shares of a company, units or shares of a fund or security comprised in the underlying index) regardless of the size of the trade. The trade that triggers the mandatory call event may only be the result of a temporary fall (or rise, as the case may be) in the price or level of the underlying asset caused by a number of factors. Subsequent to the occurrence of the mandatory call event, the price or level of the underlying asset may recover to above (or below, as the case may be) the call price or call level.

Upon the occurrence of a mandatory call event, a Category N CBBC will become worthless while a Category R CBBC will be settled by the payment of a residual value (if any) by us. Such residual value is determined by reference to the amount by which the minimum trade price or index level of the underlying asset during the MCE valuation period exceeds the strike price or strike level (for our Category R bull CBBCs) or the amount by which the strike price or strike level exceeds the maximum trade price or index level of the underlying asset during the MCE valuation period (for our Category R bear CBBCs). This residual value may be as low as zero.

Where a mandatory call event occurs in a continuous trading session of the Stock Exchange, all trades in the CBBCs concluded via auto-matching or manually after the time of the occurrence of the mandatory call event will be cancelled. Where the mandatory call event occurs during a pre-opening session or a closing auction session (if applicable) of the Stock Exchange, all auction trades in the CBBCs concluded in such session and all manual trades concluded after the end of the pre-order matching period in such session will be cancelled. We will announce the occurrence of the mandatory call event in accordance with the requirements of the Stock Exchange but the announcement of the

same can be delayed by among other reasons, technical errors or system failures beyond our control. Your gain or loss from a trade that is subsequently cancelled will be reversed. If in the meantime you have entered into transactions with our CBBCs as a hedge, then upon cancellation of trades in our CBBCs, you will need to find a replacement hedge and may incur losses in doing so.

Revocation of mandatory call event

Termination of our CBBCs and cancellation of trades following the occurrence of a mandatory call event is irrevocable unless the mandatory call event is triggered by (i) system malfunction or other technical errors of Hong Kong Exchanges and Clearing Limited (e.g. the setting up of wrong call price or call level and other parameters) and such event is reported by the Stock Exchange to us and the Stock Exchange and we mutually agree that such mandatory call event is to be revoked, or (ii) manifest errors caused by the relevant third party price sources (e.g. any miscalculation of the index level by the index sponsor) and such event is reported by us to the Stock Exchange and the Stock Exchange and we mutually agree that such mandatory call event is to be revoked. In each of the above cases, such mutual agreement must be reached no later than 30 minutes before the commencement of trading (including the pre-opening session) (Hong Kong time) on the trading day of the Stock Exchange immediately following the day on which the mandatory call event occurs, or such other time frame as prescribed by the Stock Exchange from time to time.

Under the terms and conditions of our CBBCs, none of the Stock Exchange, us, the guarantor, the issuer or sponsor of the underlying asset or any of our or their affiliates or agents shall be responsible for any losses suffered as a result of the determination of the price or level of the underlying asset, any adjustments involved in determining the occurrence of the mandatory call event, the calculation of any cash settlement amount and the suspension of trading in connection with the mandatory call event, notwithstanding that such adjustments, calculation or suspension may have occurred as a result of an error.

A CBBC is different from a margin trading position over the same underlying asset

An investment in CBBC is similar to but not the same as a corresponding margin trading position. Both are different from an actual position in the underlying asset in that an investor does not have to pay an amount equal to the maximum potential exposure of the position upon entry. Because the initial payment is small by comparison, a given change in the price or level of the underlying asset can result in a greater percentage change in the value of the investment.

Whilst the total gain or loss of investing in a CBBC upon exercise at expiry will be substantially equal to that of an equivalent margin trading position (of same size and strike price or level) on the same underlying asset, at other times a CBBC differs from an equivalent margin trading position in many ways.

Generally a margin trading position will be marked-to-market at the end of every trading day so that the holder would realise the day's gain or loss immediately; whereas unless a mandatory call event or expiry occurs, the gain or loss of a CBBC is realised only when it is sold. One can maintain a margin trading position even if the underlying asset price or level continues to move against the direction anticipated, so long as the holder continues to put up additional margin; whereas with the CBBC when the underlying asset price or level reaches the call level it is immediately terminated. Once the call level is reached, a CBBC investor would lose his entire investment (for a Category N CBBC) or would only receive the residual value (if any, for a Category R CBBC) and due to the call termination, he would not benefit from the reversal of direction of the underlying asset price or level subsequent to the mandatory call event (for a Category N CBBC) or the determination of residual value (for a Category R CBBC).

This call termination feature of CBBCs (among other reasons) also means that the theoretical value of a CBBC at a time prior to its expiry will be different from that of an equivalent margin trading position. A given percentage change in the price or level of the underlying asset may not result in the same percentage change (in the same direction for a bull CBBC or in the opposite direction for a bear CBBC) in the theoretical value of the CBBC. The percentage change in theoretical value of the CBBC may be greater or smaller (or may be zero), in the same or opposite direction.

The theoretical value of a CBBC at any time will also contain an amount which reflects our cost of maintaining the corresponding hedge position in the underlying asset (e.g. the cost of funding a long position in shares, the net cost of borrowing shares for short sale, or the cost of margin in maintaining the futures position). The purchase price of a CBBC you pay may include all or part of such cost and when the mandatory call event occurs, the cash settlement amount (if any) will not contain a refund of such cost.

Other than at expiry (assuming mandatory call event does not occur prior to expiry) when the cash settlement amount will be set by the closing price or level of the underlying asset, at any time prior to the expiry you may sell your holding of CBBCs in the market and the price realised may or may not be the same as the theoretical value of the CBBCs, as the price will be determined by the levels of supply and demand in the market.

The funding costs of our CBBCs will fluctuate during the term of our CBBCs

The issue price of our CBBCs is set by reference to the difference between the spot price or spot level of the underlying asset as of the launch date and the strike price or strike level, plus the applicable funding cost. The funding cost applicable to our CBBCs is specified in the relevant launch announcement and supplemental listing document. It will fluctuate during the term of our CBBCs as the funding rate changes from time to time. The funding cost is an amount determined by us based on one or more factors, including but not limited to the strike price or strike level (as the case may be), the prevailing interest rate, the expected term of our CBBCs, any expected notional dividends in respect of the underlying asset and the margin financing provided by us.

Residual value will not include residual funding cost

The residual value (if any, for a Category R CBBC) payable by us following the occurrence of a mandatory call event will not include the residual funding cost for the CBBCs. When a mandatory call event occurs, the investors will lose the funding cost for the full period.

TAXATION

We have based this summary of Hong Kong and the Cayman Islands tax on current law and practice. It is intended to give you an overview of what Hong Kong and the Cayman Islands tax you might have to pay if you hold our structured products. It is not complete and we are not giving you any tax advice. You should consult your own tax adviser about the tax consequences of investing in our structured products, particularly if you are subject to special tax rules (for example, if you are a bank, dealer, insurance company or a tax-exempt entity).

HONG KONG

Withholding Tax

We are not required under current law to make any withholding on account of Hong Kong tax from payments in respect of our structured products.

Capital Gains Tax

No capital gains tax is payable in Hong Kong on any capital gains arising from a sale or disposal of our structured products.

Profits Tax

Hong Kong profits tax may be chargeable on any gains arising from a sale or disposal of our structured products where the sale or disposal is or forms part of a trade, profession or business carried on in Hong Kong.

Stamp Duty

Our cash-settled structured products are not subject to Hong Kong stamp duty or bearer instrument duty either when issued or on any subsequent transfer.

CAYMAN ISLANDS

The Government of the Cayman Islands will not, under existing legislation, impose any income, corporate or capital gains tax, estate duty, inheritance tax, gift tax or withholding tax upon us or our investors. The Cayman Islands are not party to a double tax treaty with any country that is applicable to any payments made to or by us.

We have applied for, and received, an undertaking from the Governor-in-Cabinet of the Cayman Islands that, in accordance with section 6 of the Tax Concessions Act (As Revised) of the Cayman Islands, for a period of 20 years from the date of the undertaking, no law which is enacted in the Cayman Islands imposing any tax to be levied on profits, income, gains or appreciations shall apply to us or our operations and, in addition, that no tax to be levied on profits, income, gains or appreciations or which is in the nature of estate duty or inheritance tax shall be payable (i) on or in respect of our shares, debentures or other obligations or (ii) by way of the withholding in whole or in part of a payment of dividend or other distribution of income or capital by us to our investors or a payment of principal or interest or other sums due under a debenture or other obligations of us.

UNITED STATES FEDERAL TAXATION

Possible Application of Section 897 of the Internal Revenue Code

We will not attempt to ascertain whether any issuer of any underlying share, any underlying fund, or any component of an underlying index or underlying basket to which a structured product relates (collectively, the “Underlying Issuers”) is treated as a “United States real property holding corporation” (“USRPHC”) within the meaning of Section 897 of the Internal Revenue Code of 1986, as amended (the “Code”). If any Underlying Issuer were so treated, certain adverse U.S. federal income tax consequences might apply to a non-U.S. holder upon the sale, exchange or retirement of a structured product. You should consult your tax adviser regarding the possible consequences to you if any Underlying Issuer is or becomes a USRPHC.

Possible Application of Section 871(m) of the Internal Revenue Code

Section 871(m) of the Code and Treasury regulations promulgated thereunder (“Section 871(m)”) impose a withholding tax of 30% (or lower treaty rate applicable to dividends) on certain “dividend equivalents” paid or deemed paid to non-U.S. holders with respect to certain financial instruments linked to U.S. equities or indices that include U.S. equities. Subject to the discussion below concerning securities issued before January 1, 2027, a structured product linked to U.S. equities or indices that include U.S. equities (a “U.S. equity linked security”) will generally be subject to the Section 871(m) withholding regime if on the calculation date it (i) has a “delta” of 0.80 or higher with respect to the underlying U.S. equity or (ii) substantially replicates the economic performance of the underlying U.S. equity, as determined by a “substantial equivalence” test that, among other factors, takes into account the initial number of shares of the underlying U.S. equity needed to hedge the transaction fully. The tests described above are set forth in the regulations, and the applicable test will depend on the terms of the relevant U.S. equity linked securities. Under these rules, withholding may apply even where the relevant U.S. equity linked securities do not provide for any payment that is explicitly linked to a dividend. The regulations provide for certain exceptions to the withholding requirements, in particular for instruments linked to certain broad-based indices (a “qualified index”) that meet standards set forth in the regulations, as well as certain securities that track a qualified index.

Under an Internal Revenue Service (“IRS”) notice, Section 871(m) will not apply to securities issued before January 1, 2027 that do not have a “delta” of one with respect to any U.S. equity. If the terms of a U.S. equity linked security are subject to a significant modification, the U.S. equity linked security will generally be treated as reissued for this purpose at the time of the significant modification.

The calculations of “delta” are generally made at the “calculation date,” which is the earlier of (i) the time of pricing of the U.S. equity linked security, i.e., when all material terms have been agreed on, and (ii) the issuance of the U.S. equity linked security. However, if the time of pricing is more than 14 calendar days before the issuance of the U.S. equity linked security, the calculation date is the date of the issuance of the U.S. equity linked security. In those circumstances, information regarding our final determinations for purposes of Section 871(m) may be available only after the issuance of the U.S. equity linked security. As a result, a non-U.S. holder should acquire such a U.S. equity linked security only if it is willing to accept the risk that the U.S. equity linked security is treated as subject to withholding.

The amount of a “dividend equivalent” is equal to, for a “simple” contract, the product of (a) the per-share dividend amount, (b) the number of shares of the underlying U.S. equity referenced in the U.S. equity linked security and (c) the delta, and, for a “complex” contract, the product of (a) the per-share dividend amount and (b) the initial hedge.

The dividend equivalent amount will be determined on the earlier of (a) the record date of the dividend and (b) the day prior to the ex-dividend date. The dividend equivalent amount will include the amount of any actual or, under certain circumstances, estimated dividend. If a U.S. equity linked security is subject to withholding in respect of dividend equivalents, withholding will, depending on the applicable withholding agent's circumstances, generally be required either (i) on the underlying dividend payment date or (ii) when cash payments are made on the relevant U.S. equity linked security or upon the date of maturity, lapse or other disposition thereof by the non-U.S. holder.

We will determine whether any U.S. equity linked securities are subject to withholding under Section 871(m). Unless otherwise indicated in the applicable launch announcement or supplemental listing document, the U.S. equity linked securities will not be subject to withholding. If withholding is required, we will not be required to pay any additional amounts with respect to the amounts so withheld.

Our determination is not binding on the IRS, and the IRS may disagree with this determination. Section 871(m) is complex and its application may depend on the non-U.S. holder's particular circumstances. For example, the application of Section 871(m) may be affected if a non-U.S. holder enters into another transaction in connection with the acquisition of a U.S. equity linked security. Accordingly, non-U.S. holders should consult their tax advisers regarding the potential application of Section 871(m) to the U.S. equity linked securities in their particular circumstances.

FATCA and the Automatic Exchange of Information ("AEOI")

Legislation commonly referred to as "FATCA" generally imposes a withholding tax of 30% on payments to certain non-U.S. entities (including financial intermediaries) with respect to certain financial instruments, unless various due diligence and U.S. information reporting requirements have been satisfied. An intergovernmental agreement between the United States and the non-U.S. entity's jurisdiction may modify these requirements. FATCA withholding (if applicable) generally applies to certain financial instruments that are treated as paying U.S.-source interest or dividends (including dividend equivalents) or other U.S.-source "fixed or determinable annual or periodical" income ("FDAP income"). Withholding (if applicable) applies to payments of U.S.-source FDAP income and to payments of gross proceeds of the disposition (including upon retirement) of certain financial instruments that can produce U.S.-source interest or dividends. However, under proposed Treasury regulations (the preamble to which specifies that taxpayers are permitted to rely on them pending finalization), no withholding will apply to payments of gross proceeds (other than amounts treated as FDAP income). If withholding applies to the structured products, we will not be required to pay any additional amounts with respect to amounts withheld. Payments of non-U.S. source income may become subject to FATCA withholding in the future. However, generally no such withholding will apply until at least two years after the date of publication of U.S. Treasury regulations defining the term "foreign passthru payment".

The intergovernmental agreements entered into between the U.S. and the non-U.S. jurisdictions for the implementation of FATCA generally require the relevant financial institution in the non-U.S. jurisdictions to (i) register with the IRS to obtain a Global Intermediary Identification Number, (ii) adopt and implement written policies and procedures setting out how it will address its obligations under FATCA, (iii) conduct due diligence on its accounts to identify whether any such accounts are considered "Reportable Accounts", (iv) report information on such Reportable Accounts to the IRS annually on its account holders and (v) undertake various U.S. information reporting.

Similarly, the local laws and regulations enforced in the non-U.S. jurisdictions (such as Hong Kong) for the implementation of the AEOI as promulgated by the Organisation for Economic Co-operation and Development require the relevant financial institution in such jurisdictions to satisfy due diligence requirements on its account holders and various information reporting of tax residents of the reportable jurisdictions.

By investing in the structured products and/or continuing to invest in the structured products through certain intermediaries, investors acknowledge that they may be required to provide additional information (such as self-certification forms for FATCA and/or AEOI purposes) to such intermediaries in order for such relevant intermediaries to comply with FATCA and AEOI. The investor's information (and information on beneficial owners, beneficiaries, direct or indirect shareholders or other persons associated with such investors that are not natural persons) pertaining to the name, date/place of birth, addresses, tax residence(s), tax identification number(s) (if any), account details, account balance/value, and income or sale or redemption proceeds, may be reported by such intermediaries to the local tax authorities or the IRS. The information reported to the local tax authorities may be further provided by the local tax authorities to the authorities in other jurisdictions of which the investors are the tax resident.

For the avoidance of doubt, under the current law the above shall not be construed as the AEOI and/or FATCA obligations of the Issuer, the Guarantor, the Manager, HKEX, the Stock Exchange, Hong Kong Securities Clearing Company Limited, HKSCC Nominees Limited or the Index Futures Exchange. However, the above should typically be the FATCA and AEOI obligations of the intermediaries in the non-U.S. jurisdictions which the investors maintain accounts with in order to invest in the structured products. These regulations may vary depending on the jurisdiction in which the account is maintained.

Each prospective investor should consult its own professional advisor(s) on the administrative and substantive implications of FATCA and AEOI on its current or proposed investment in the structured products.

INFORMATION ABOUT US

History and Development

The Issuer was incorporated in the Cayman Islands on 15 July 2005 as an exempted company with limited liability, pursuant to the Companies Law (as amended from time to time) of the Cayman Islands. There is no limitation on the Issuer's duration. Its registration number is 151867 and its registered office is c/o Maples Corporate Services Limited, PO Box 309, Umland House, Grand Cayman, KY1-1104, Cayman Islands, telephone number (1 345) 949 8066.

Investments

All material assets of the Issuer are obligations of (or securities issued by) one or more Morgan Stanley Group companies.

Business and Principal Markets

The Issuer's business consists of the issuance of financial instruments, with a primary focus on the Asian markets, and the hedging of obligations relating thereto.

All material assets of the Issuer are obligations of (or securities issued by) one or more Morgan Stanley Group companies (for the avoidance or doubt, Morgan Stanley Group companies in this context means Morgan Stanley and its subsidiaries and affiliates). If any of these Morgan Stanley Group companies incurs losses with respect to any of its activities (irrespective of whether those activities relate to the Issuer or not) the ability of such company to fulfil its obligations to the Issuer could be impaired, thereby exposing holders of structured products issued by the Issuer to a risk of loss. Should such companies' prospects be impaired, holders of structured products issued by the Issuer may also be exposed to a risk of loss.

Organisational Structure and Major Shareholders

The Issuer has no subsidiaries. It is wholly owned by Morgan Stanley Asia Securities Products LLC. All decisions to issue securities are taken by the board of the Issuer.

Recent Developments and Trend Information

The Issuer issues securities and enters hedges in respect of such issues of securities.

Management

The directors of the Issuer as at the date hereof are:

- Young Lee
- Adrian Priddis
- Scott Honey
- Richard Smerin
- Jack Clein

Save for the interests referred to above under the heading “Management”, the Issuer is not aware of any existing or potential conflicts of interest between any duties owed to the Issuer by its management (as described above) and the private interests and/or other external duties owed by these individuals.

Board Practice

The Issuer considers itself to be in compliance with all Cayman Islands laws relating to corporate governance that are applicable to it.

As of the date of this base listing document, the Issuer does not have an audit committee.

Share Capital and Memorandum and Articles of Association

The authorised share capital of the Issuer is US\$50,000 divided into 50,000 shares of a par value of US\$1 each, all of which have been issued and fully paid.

Under the Memorandum and Articles of Association of the Issuer, Clause 3 in the Memorandum of Association provides that the objects for which the Issuer is established are unrestricted and the Issuer shall have full power and authority to carry out any object not prohibited by the Companies Law (as amended from time to time) or as the same may be revised from time to time, or any other law of the Cayman Islands.

INFORMATION RELATING TO THE GUARANTOR

Morgan Stanley is a global financial services firm that maintains significant market positions in each of its business segments — Institutional Securities, Wealth Management and Investment Management. Morgan Stanley, through its subsidiaries and affiliates, provides a wide variety of products and services to a large and diversified group of clients and customers, including corporations, governments, financial institutions and individuals. Unless the context otherwise requires, the terms “Morgan Stanley,” “Firm,” “us,” “we” or “our” mean Morgan Stanley (the “**Parent Company**”) together with its consolidated subsidiaries. Morgan Stanley was originally incorporated under the laws of the State of Delaware in 1981, and its predecessor companies date back to 1924. Morgan Stanley is a financial holding company regulated by the Board of Governors of the Federal Reserve System under the Bank Holding Company Act of 1956, as amended. Morgan Stanley’s principal executive office is at 1585 Broadway, New York, New York 10036, and its telephone number is (212) 761-4000. The registered office of Morgan Stanley is at The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, DE 19801, U.S.A., registration number 0923632.

Morgan Stanley is a publicly traded company with a principal listing of its ordinary shares on the New York Stock Exchange.

As of 25 March 2024, based on Schedule 13D/A or Schedule 13G/A (as applicable) filed with the SEC by each of the following entities, the following entities beneficially own more than 5% of Morgan Stanley’s common stock: Mitsubishi UFJ Financial Group, Inc. (23.3% holding); State Street Corporation (7.0% holding), The Vanguard Group (6.7% holding) and BlackRock, Inc. (5.6% holding). The percentage holdings are based on the number of common shares as of 25 March 2024.

Morgan Stanley conducts its business from its headquarters in and around New York City, its regional offices and branches throughout the U.S. and its principal offices in London, Frankfurt, Tokyo, Hong Kong and other world financial centers. As at 31 December 2024, Morgan Stanley had approximately 80 thousand employees worldwide.

A description of the clients and principal products and services of each of Morgan Stanley’s business segments is as follows:

- Institutional Securities provides a variety of products and services to corporations, governments, financial institutions and ultra-high net worth clients. Investment Banking services consist of capital raising and financial advisory services, including the underwriting of debt, equity securities and other products, as well as advice on mergers and acquisitions, restructurings and project finance. Our Equity and Fixed Income businesses include sales, financing, prime brokerage, market-making, Asia wealth management services and certain business-related investments. Lending activities include originating corporate loans and commercial real estate loans, providing secured lending facilities, and extending securities-based and other financing to clients. Other activities include research.
- Wealth Management provides a comprehensive array of financial services and solutions to individual investors and small to medium-sized businesses and institutions. Wealth Management covers: financial advisor-led brokerage, custody, administrative and investment advisory services; self-directed brokerage services; financial and wealth planning services; workplace services including stock plan administration; securities based-lending, residential and commercial real estate loans and other lending products; banking; and retirement plan services.

- Investment Management provides a broad range of investment strategies and products that span geographies, asset classes, and public and private markets to a diverse group of clients across institutional and intermediary channels. Strategies and products, which are offered through a variety of investment vehicles, include equity, fixed income, alternatives and solutions, and liquidity and overlay services. Institutional clients include defined benefit/defined contribution plans, foundations, endowments, government entities, sovereign wealth funds, insurance companies, third-party fund sponsors and corporations. Individual clients are generally served through intermediaries, including affiliated and non-affiliated distributors.

As of 21 February 2025, Morgan Stanley's Board of Directors consists of the individuals listed below.

- Edward Pick
- Megan Butler
- Thomas H. Glocer
- Robert H. Herz
- Erika H. James
- Hironori Kamezawa
- Shelley B. Leibowitz
- Jami Miscik
- Masato Miyachi
- Dennis M. Nally
- Mary L. Schapiro
- Perry M. Traquina
- Rayford Wilkins, Jr.

The Executive Vice Presidents of Morgan Stanley are Mandell L. Crawley, Eric F. Grossman, Michael A. Pizzi, Charles A. Smith and Sharon Yeshaya and the Chief Financial Officer of Morgan Stanley is Sharon Yeshaya.

The Guarantor considers itself to be in compliance with all U.S. laws in all material respects relating to corporate governance that are applicable to it and taking into account the consolidated group as a whole.

Legal Proceedings of the Guarantor

The information in this section has been excerpted from Morgan Stanley's Annual Report on Form 10-K for the year ended 31 December 2024. References in this section to the "Firm" mean Morgan Stanley and its consolidated subsidiaries.

In addition to the matters described below, in the normal course of business, the Firm has been named, from time to time, as a defendant in various legal actions, including arbitrations, class actions and other litigation, arising in connection with its activities as a global diversified financial services institution. Certain of the actual or threatened legal actions include claims for substantial compensatory and/or punitive damages or claims for indeterminate amounts of damages. In some cases, the third-party entities that are, or would otherwise be, the primary defendants in such cases are bankrupt, in financial distress, or may not honor applicable indemnification obligations. These actions have included, but are not limited to, antitrust claims, claims under various false claims act statutes, and matters arising from our wealth management businesses, sales and trading businesses, and our activities in the capital markets.

The Firm is also involved, from time to time, in other reviews, investigations and proceedings (both formal and informal) by governmental or other regulatory agencies regarding the Firm's business, and involving, among other matters, sales, financing, prime brokerage, market-making activities, investment banking advisory services, capital markets activities, financial products or offerings sponsored, underwritten or sold by the Firm, wealth and investment management services, and accounting and operational matters, certain of which may result in adverse judgments, settlements, fines, penalties, disgorgement, restitution, forfeiture, injunctions, limitations on our ability to conduct certain business, or other relief.

The Firm contests liability and/or the amount of damages as appropriate in each pending matter. Where available information indicates that it is probable a liability had been incurred at the date of the financial statements and the Firm can reasonably estimate the amount of that loss or the range of loss, the Firm accrues an estimated loss by a charge to income, including with respect to certain of the individual proceedings or investigations described below.

<i>\$ in millions</i>	2024	2023	2022
Legal expenses	\$106	\$488	\$443

The Firm's legal expenses can, and may in the future, fluctuate from period to period, given the current environment regarding government or regulatory agency investigations and private litigation affecting global financial services firms, including the Firm.

In many legal proceedings and investigations, it is inherently difficult to determine whether any loss is probable or reasonably possible, or to estimate the amount of any loss. In addition, even where the Firm has determined that a loss is probable or reasonably possible or an exposure to loss or range of loss exists in excess of the liability already accrued with respect to a previously recognized loss contingency, the Firm may be unable to reasonably estimate the amount of the loss or range of loss. It is particularly difficult to determine if a loss is probable or reasonably possible, or to estimate the amount of loss, where the factual record is being developed or contested or where plaintiffs or government entities seek substantial or indeterminate damages, restitution, forfeiture, disgorgement or penalties. Numerous issues may need to be resolved in an investigation or proceeding before a determination can be made that a loss or additional loss (or range of loss or range of additional loss) is probable or reasonably possible, or to estimate the amount of loss, including through potentially lengthy discovery or determination of important factual matters, determination of issues related to class certification, the calculation of damages or other relief, and consideration of novel or unsettled legal questions relevant to the proceedings or investigations in question.

The Firm has identified below any individual proceedings or investigations where the Firm believes a material loss to be reasonably possible. In certain legal proceedings in which the Firm has determined that a material loss is reasonably possible, the Firm is unable to reasonably estimate the loss or range of loss. There are other matters in which the Firm has determined a loss or range of loss to be reasonably possible, but the Firm does not believe, based on current knowledge and after consultation with counsel, that such losses could have a material adverse effect on the Firm's financial statements as a whole, although the outcome of such proceedings or investigations may significantly impact the Firm's business or results of operations for any particular reporting period, or cause significant reputational harm.

While the Firm has identified below certain proceedings or investigations that the Firm believes to be material, individually or collectively, there can be no assurance that material losses will not be incurred from claims that have not yet been asserted or those where potential losses have not yet been determined to be probable or reasonably possible.

Antitrust Related Matters

The Firm and other financial institutions are responding to a number of governmental investigations and civil litigation matters related to allegations of anticompetitive conduct in various aspects of the financial services industry, including the matters described below.

Beginning in February of 2016, the Firm was named as a defendant in multiple purported antitrust class actions now consolidated into a single proceeding in the United States District Court for the Southern District of New York ("SDNY") styled *In Re: Interest Rate Swaps Antitrust Litigation*. Plaintiffs allege, inter alia, that the Firm, together with a number of other financial institution defendants, violated U.S. and New York state antitrust laws from 2008 through December of 2016 in connection with alleged efforts to prevent the development of electronic exchange-based platforms for interest rate swaps trading. Complaints were filed both on behalf of a purported class of investors who purchased interest rate swaps from defendants, as well as on behalf of three operators of swap execution facilities that allegedly were thwarted by the defendants in their efforts to develop such platforms. The consolidated complaints seek, inter alia, certification of the investor class of plaintiffs and treble damages. On July 28, 2017, the court granted in part and denied in part the defendants' motion to dismiss the complaints. On December 15, 2023, the court denied the class plaintiffs' motion for class certification. On December 29, 2023, the class plaintiffs petitioned the United States Court of Appeals for the Second Circuit for leave to appeal that decision. On February 28, 2024, the parties reached an agreement in principle to settle the class claims. On July 11, 2024, the court granted preliminary approval of the settlement.

The Firm is a defendant in three antitrust class action complaints which have been consolidated into one proceeding in the United States District Court for the SDNY under the caption *City of Philadelphia, et al. v. Bank of America Corporation, et al.* Plaintiffs allege, inter alia, that the Firm, together with a number of other financial institution defendants, violated U.S. antitrust laws and relevant state laws in connection with alleged efforts to artificially inflate interest rates for Variable Rate Demand Obligations ("VRDO"). The consolidated complaint seeks, inter alia, certification of the class of plaintiffs and treble damages. The complaint was filed on behalf of a class of municipal issuers of VRDO for which defendants served as remarketing agent. On November 2, 2020, the court granted in part and denied in part the defendants' motion to dismiss the consolidated complaint, dismissing state law claims, but denying dismissal of the U.S. antitrust claims. On September 21, 2023, the court granted plaintiffs' motion for class certification. On February 5, 2024, the United States Court of Appeals for the Second Circuit granted leave to appeal that decision.

European Matters

Tax

In matters styled *Case number 15/3637* and *Case number 15/4353*, the Dutch Tax Authority (“Dutch Authority”) challenged in the Dutch courts the prior set-off by the Firm of approximately €124 million (approximately \$128 million) plus accrued interest of withholding tax credits against the Firm’s corporation tax liabilities for the tax years 2007 to 2012. The Dutch Authority alleged that the Firm was not entitled to receive the withholding tax credits on the basis, inter alia, that a Firm subsidiary did not hold legal title to certain securities subject to withholding tax on the relevant dates. On April 26, 2018, the District Court in Amsterdam issued a decision dismissing the Dutch Authority’s claims with respect to certain of the tax years in dispute. On May 12, 2020, the Court of Appeal in Amsterdam granted the Dutch Authority’s appeal in matters re-styled *Case number 18/00318* and *Case number 18/00319*. On January 19, 2024, the Dutch High Court granted the Firm’s appeal in matters re-styled *Case number 20/01884* and referred the case to the Court of Appeal in The Hague. On November 11, 2024, the Firm reached an agreement to settle the Dutch Authority’s challenges for the tax years 2007 to 2012 and made payment of the prior set-off amounts and interest indicated above. The case has been withdrawn.

On June 22, 2021, Dutch criminal authorities sought various documents in connection with an investigation of the Firm related to the civil claims asserted by the Dutch Authority concerning the accuracy of the Firm subsidiary’s tax returns for 2007 to 2012. The Dutch criminal authorities have requested additional information, and the Firm is continuing to respond to them in connection with their ongoing investigation, and is engaging with them as the criminal process progresses.

U.K. Government Bond Matter

On February 21, 2025, the UK Competition and Markets Authority announced a settlement with the Firm, as well as other financial institutions, in connection with its investigation of suspected anti-competitive arrangements in the financial services sector, specifically regarding the Firm’s activities concerning certain liquid fixed income products between 2009 and 2012. Separately, on June 16, 2023, the Firm was named as a defendant in a purported antitrust class action in the United States District Court for the SDNY styled *Oklahoma Firefighters Pension and Retirement System v. Deutsche Bank Aktiengesellschaft, et al.*, alleging, inter alia, that the Firm, together with a number of other financial institution defendants, violated U.S. antitrust laws in connection with their alleged effort to fix prices of gilts traded in the United States between 2009 and 2013. The complaint seeks, inter alia, certification of the class of plaintiffs and treble damages. On September 16, 2024, the court granted defendants’ joint motion to dismiss, and the complaint was dismissed without prejudice. The Firm and certain other defendants have reached an agreement in principle to settle the US litigation.

Other

On August 13, 2021, the plaintiff in *Camelot Event Driven Fund, a Series of Frank Funds Trust v. Morgan Stanley & Co. LLC, et al.* filed in the Supreme Court of the State of New York, New York County (“Supreme Court of NY”) a purported class action complaint alleging violations of federal securities laws against ViacomCBS (“Viacom”), certain of its officers and directors, and the underwriters, including the Firm, of two March 2021 Viacom offerings: a \$1.7 billion Viacom Class B Common Stock offering and a \$1 billion offering of 5.75% Series A Mandatory Convertible Preferred Stock (collectively, the “Offerings”). The complaint seeks certification of the class of plaintiffs and unspecified compensatory damages and alleges, inter alia, that the Viacom offering documents for both issuances contained material misrepresentations and omissions because they did not disclose that certain of the underwriters, including the Firm, had prime brokerage relationships and/or served as counterparties to certain derivative transactions with Archegos Capital Management LP, (“Archegos”), a fund with significant exposure to Viacom securities across multiple prime brokers. The complaint also alleges that the offering documents did not adequately disclose the risks associated with Archegos’s concentrated Viacom positions at the various prime brokers, including that

the unwind of those positions could have a deleterious impact on the stock price of Viacom. On November 5, 2021, the complaint was amended to add allegations that defendants failed to disclose that certain underwriters, including the Firm, had intended to unwind Archegos's Viacom positions while simultaneously distributing the Offerings. On February 6, 2023, the court issued a decision denying motions to dismiss as to the Firm and the other underwriters, but granting the motion to dismiss as to Viacom and the Viacom individual defendants. On February 15, 2023, the underwriters, including the Firm, filed their notices of appeal of the denial of their motions to dismiss. On March 10, 2023, the plaintiff appealed the dismissal of Viacom and the individual Viacom defendants. On April 4, 2024, the Appellate Division upheld the lower court's decision as to the Firm and other underwriter defendants that had prime brokerage relationships and/or served as counterparties to certain derivative transactions with Archegos, dismissed the remaining underwriters, and upheld the dismissal of Viacom and its officers and directors. On July 25, 2024, the Appellate Division denied the plaintiff's and the Firm's respective motions for leave to reargue or appeal the April 4, 2024 decision. On January 4, 2024, the court granted the plaintiff's motion for class certification which the defendants have appealed.

On May 17, 2013, the plaintiff in *IKB International S.A. in Liquidation, et al. v. Morgan Stanley, et al.* filed a complaint against the Firm and certain affiliates in the Supreme Court of NY. The complaint alleges that defendants made material misrepresentations and omissions in the sale to the plaintiff of certain mortgage pass-through certificates backed by securitization trusts containing residential mortgage loans. The total amount of certificates allegedly sponsored, underwritten and/or sold by the Firm to the plaintiff was approximately \$133 million. The complaint alleges causes of action against the Firm for common law fraud, fraudulent concealment, aiding and abetting fraud, and negligent misrepresentation, and seeks, inter alia, compensatory and punitive damages. On October 29, 2014, the court granted in part and denied in part the Firm's motion to dismiss. All claims regarding four certificates were dismissed. After these dismissals, the remaining amount of certificates allegedly issued by the Firm or sold to the plaintiff by the Firm was approximately \$116 million. On August 11, 2016, the Appellate Division affirmed the trial court's order denying in part the Firm's motion to dismiss the complaint. On July 15, 2022, the Firm filed a motion for summary judgment on all remaining claims. On March 1, 2023, the court granted in part and denied in part the Firm's motion for summary judgment, narrowing the alleged misrepresentations at issue in the case. On March 26, 2024, the Appellate Division affirmed the trial court's summary judgment order. On August 27, 2024, the plaintiff notified the court that in light of the court's rulings to exclude certain evidence at trial, the plaintiff could not prove its claims at trial, and requested that the court dismiss the case, subject to its right to appeal the evidentiary rulings. On August 28, 2024, the court dismissed the case, and judgment was entered in the Firm's favor. The plaintiff has filed notices of appeal.

Beginning in February of 2024, Morgan Stanley Smith Barney LLC ("MSSB") and E*TRADE Securities LLC ("E*TRADE Securities"), among others, have been named as defendants in multiple putative class actions pending in the federal district courts for the District of New Jersey and SDNY. The class action claims have been brought on behalf of brokerage, advisory and retirement account holders, alleging various contractual, fiduciary, and statutory claims (including under the Racketeer Influenced and Corrupt Organizations Act, 18 U.S.C. §1962(c)-(d)) that MSSB and/or E*TRADE Securities failed to pay a reasonable rate of interest on its cash sweep products. The cases are at an early stage with motions for consolidation and transfer currently pending. Together, the complaints seek, inter alia, certification of a class of plaintiffs, unspecified compensatory damages, equitable and injunctive relief, and treble damages.

The Firm has been engaged with and is responding to requests for information from the Enforcement Division of the SEC regarding advisory account cash balances swept to the affiliate bank deposit program and compliance with the Investment Advisers Act of 1940, and from a state securities regulator regarding brokerage account cash balances swept to the affiliate bank deposit program.

STATUTORY AND GENERAL INFORMATION ABOUT US AND THE GUARANTOR

STATUTORY CONSENTS

Each issue of structured products will have the benefit of the guarantee.

HAVE THE FINANCIAL POSITIONS OF THE ISSUER AND OUR GUARANTOR CHANGED SINCE LAST FINANCIAL YEAR-END?

Save as disclosed in Annex 5 and Annex 6 to this base listing document, there has been no material adverse change in the issuer's and our guarantor's financial or trading position since the date of the most recently published audited consolidated financial statements of the issuer and our guarantor that would have a material adverse effect on the issuer's and our guarantor's ability to perform their respective obligations in respect of the structured products under this base listing document.

IS THE ISSUER OR OUR GUARANTOR SUBJECT TO ANY LITIGATION?

Save as disclosed in this base listing document, we and the guarantor are not aware, to the best of our and the guarantor's knowledge and belief, of any litigation or claims of material importance pending or threatened against us or the guarantor.

FINANCIAL INFORMATION ABOUT THE AUDITOR OF THE GUARANTOR

As at the date of this base listing document, the guarantor's auditor has given and has not withdrawn its written consent to the inclusion of its report on the guarantor's consolidated financial statements as of 31 December 2024 and 2023 and for each of the three years in the period ended 31 December 2024 dated 21 February 2025 in this document and/or references to its name in the listing documents, in the form and context in which it is included. Its report was not prepared for incorporation into this base listing document. The guarantor's auditor does not have any shareholding in us or the guarantor or any of the guarantor's subsidiaries nor does it have the right (whether legally enforceable or not) to subscribe for or to nominate persons to subscribe for our securities or securities of the guarantor or any of the guarantor's subsidiaries.

OUR SERVICE OF PROCESS AGENT

We have authorised Morgan Stanley Hong Kong Limited, Level 46, International Commerce Centre, 1 Austin Road West, Kowloon, Hong Kong (marked to the attention of Head of Legal and Compliance) to accept on our behalf and on behalf of the guarantor service of process and any other notices required to be served on either us or the guarantor in Hong Kong.

ANNEX 1

The relevant Conditions will, together with the supplemental provisions contained in the relevant launch announcement and supplemental listing document and subject to completion and amendment, be endorsed on the back of the global warrant certificate or the global CBBC certificate (as applicable). The applicable launch announcement and supplemental listing document in relation to the issue of any series of warrants or CBBCs may specify other terms and conditions which shall, to the extent so specified or to the extent inconsistent with the relevant Conditions, replace or modify the relevant Conditions for the purpose of such series of warrants or CBBCs. Capitalised terms used in the Conditions and not otherwise defined therein shall have the meaning given to them in the relevant launch announcement and supplemental listing document.

TERMS AND CONDITIONS OF THE CASH-SETTLED STOCK WARRANTS

1 Form; Status; Guarantee; Transfer and Title

- (A) The Warrants (which expression shall, unless the context otherwise requires, include any further warrants issued pursuant to Condition 12) relating to the Shares of the Company are issued in registered form subject to and with the benefit of the instrument dated 18 July 2019 (the “**Instrument**”) made by Morgan Stanley Asia Products Limited (the “**Issuer**”) and the guarantee dated 18 March 2025 (including any supplement or replacement, the “**Guarantee**”) made by Morgan Stanley (the “**Guarantor**”).

Copies of the Instrument and the Guarantee are available for inspection at the office of the manager as specified below. The Warrantholders (as hereinafter defined) are entitled to the benefit of, are bound by and are deemed to have notice of, all the provisions of the Instrument and the Guarantee.

- (B) The settlement obligation of the Issuer in respect of the Warrants represent general unsecured contractual obligations of the Issuer and of no other person which rank, and will rank, equally among themselves and *pari passu* with all other present and future unsecured and unsubordinated contractual obligations of the Issuer, except for obligations accorded preference by mandatory provisions of applicable law.

Warrants represent general contractual obligations of the Issuer, and are not, nor is it the intention (expressed, implicit or otherwise) of the Issuer to create by the issue of the Warrants deposit liabilities of the Issuer or a debt obligation of any kind.

In the Guarantee, the Guarantor has, subject to the terms therein, unconditionally and irrevocably guaranteed to the Warrantholders the due and punctual settlement in full of all obligations due and owing by the Issuer arising under the issuance of the Warrants after taking account of any set off, combination of accounts, netting or similar arrangement from time to time exercisable by the Issuer against any person to whom obligations are from time to time being owed, when and as due (whether at expiry, by acceleration or otherwise).

- (C) Transfers of Warrants may be effected only in Board Lots or integral multiples thereof in the Central Clearing and Settlement System (“**CCASS**”) in accordance with the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time.
- (D) Each person who is for the time being shown in the register kept by or on behalf of the Issuer in Hong Kong as the holder shall be treated by the Issuer and the Guarantor as the absolute owner and holder of the Warrants (which shall be HKSCC Nominees Limited (or its successors) for so long as the Warrants are accepted as eligible securities in CCASS). The expression “Warrantholder” shall be construed accordingly.
- (E) Trading in Warrants on The Stock Exchange of Hong Kong Limited (the “**Stock Exchange**”) shall be suspended prior to the Expiry Date in accordance with the requirements of the Stock Exchange.

2 Warrant Rights and Exercise Expenses

- (A) Every Board Lot entitles the Warrantholder, upon compliance with Condition 4, to payment of the Cash Settlement Amount (as defined in Condition 4(D)).
- (B) The Warrantholder will be required to pay all charges which are incurred in respect of the exercise of the Warrants (the “**Exercise Expenses**”). To effect such payment, an amount equivalent to the Exercise Expenses will be deducted by the Issuer from the Cash Settlement Amount in accordance with Condition 4(B).

3 Automatic Exercise

- (A) Any Warrant in respect of which the Cash Settlement Amount would be payable by the Issuer if exercised on the Expiry Date shall be deemed automatically exercised on the Expiry Date (“**Automatic Exercise**”).
- (B) Any Warrant which has not been automatically exercised in accordance with Condition 3(A) shall expire immediately without value thereafter and all rights of the Warrantholder and obligations of the Issuer with respect to such Warrant shall cease.
- (C) In these Conditions, “**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong. For the avoidance of doubt, if such a day falls on a day on which the tropical cyclone warning signal number 8 or above or a “BLACK” rainstorm signal is issued or an “extreme condition” announcement is made by the Hong Kong Government, that day shall be deemed to be a Business Day.

4 Exercise of Warrants

- (A) Warrants may only be exercised in Board Lots or integral multiples thereof.
- (B) An irrevocable authorisation is deemed to be given to the Issuer to deduct any determined Exercise Expenses from the Cash Settlement Amount. Any Exercise Expenses which have not been determined by the Issuer on the Expiry Date shall be notified as soon as practicable after determination by the Issuer to the Warrantholder and shall be paid by the Warrantholder forthwith in immediately available funds no later than 3 Business Days after the Warrantholder receives notice of any unpaid expenses.
- (C) Following the Expiry Date, the Issuer will, with effect from the first Business Day following the Expiry Date, cancel and destroy the Global Warrant Certificate.
- (D) Subject to an Automatic Exercise in accordance with Condition 3(A), the Issuer will as soon as practicable and on a date not later than the Settlement Date in accordance with these Conditions procure payment of the aggregate Cash Settlement Amount (following deduction of determined Exercise Expenses), for all Warrants deemed exercised, electronically through CCASS by crediting the relevant bank account of the Warrantholder as appearing in the register kept by or on behalf of the Issuer.

Subject to adjustment as provided in Condition 5, “**Cash Settlement Amount**” means an amount payable in the Settlement Currency (such amount to be calculated by the Issuer) equal to:

In the case of a series of Call Warrants:

$$\text{“Cash Settlement Amount” per Board Lot} = \frac{\text{Entitlement} \times (\text{Average Price} - \text{Exercise Price}) \times \text{one Board Lot}}{\text{Number of Warrant(s) per Entitlement}}$$

In the case of a series of Put Warrants:

$$\text{“Cash Settlement Amount” per Board Lot} = \frac{\text{Entitlement} \times (\text{Exercise Price} - \text{Average Price}) \times \text{one Board Lot}}{\text{Number of Warrant(s) per Entitlement}}$$

“**Average Price**” shall be the arithmetic mean of the closing prices of one Share (as derived from the Daily Quotation Sheet of the Stock Exchange, subject to any adjustment to such closing prices as may be necessary to reflect any event as contemplated in Condition 5 such as capitalisation, rights issue, distribution or the like) in respect of each Valuation Date.

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time, subject to such modification and amendment prescribed by HKSCC from time to time.

“**Entitlement**” means such number of Shares as specified in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 5.

“**Market Disruption Event**” means:

- (1) the occurrence or existence on any Valuation Date during the one-half hour period that ends at the close of trading of any suspension of or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the Stock Exchange or otherwise) on the Stock Exchange in (i) the Shares or (ii) any options or futures contracts relating to the Shares if, in any such case, such suspension or limitation is, in the determination of the Issuer, material;
- (2) the occurrence of any event on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of such event; or
- (3) a limitation or closure of the Stock Exchange due to any unforeseen circumstances.

“**Settlement Currency**” means Hong Kong dollars unless otherwise specified in the relevant Launch Announcement and Supplemental Listing Document.

“**Settlement Date**” means the third CCASS Settlement Day after the later of: (i) the Expiry Date; and (ii) the day on which the Average Price is determined in accordance with these Conditions.

“**Valuation Date**” means, each of the five Business Days immediately preceding the Expiry Date. If the Issuer determines, in its sole discretion, that a Market Disruption Event has occurred on any Valuation Date, then that Valuation Date shall be postponed until the first succeeding Business Day on which there is no Market Disruption Event irrespective of whether that postponed Valuation Date would fall on a Business Day that already is or is deemed to be a Valuation Date. For the avoidance of doubt, in the event that a Market Disruption Event has occurred and a Valuation Date is postponed as aforesaid, the closing price of the Shares on the first succeeding Business Day will be used more than once in determining the Average Price, so that in no event shall there be less than five closing prices used to determine the Average Price.

If the postponement of a Valuation Date as aforesaid would result in the Valuation Date falling on or after the Expiry Date, then:

- (i) the Business Day immediately preceding the Expiry Date (the “**Last Valuation Date**”) shall be deemed to be the Valuation Date notwithstanding the Market Disruption Event; and
- (ii) the Issuer shall determine the closing price of the Shares on the basis of its good faith estimate of the price that would have prevailed on the Last Valuation Date but for the Market Disruption Event.

Any payment made pursuant to this Condition 4(D) shall be delivered at the risk and expense of the Warrantholder to the Warrantholder as recorded on the register.

- (E) If as a result of an event beyond the control of the Issuer (“**Settlement Disruption Event**”), it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant bank account of the Warrantholder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant bank account of the Warrantholder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Warrantholder for any interest in respect of the amount due or any loss or damage that such Warrantholder may suffer as a result of the existence of a Settlement Disruption Event.
- (F) These Conditions shall not be construed so as to give rise to any relationship of agency or trust between the Guarantor, the Issuer or its agent or nominee and the Warrantholder and neither the Guarantor, the Issuer nor its agent or nominee shall owe any duty of a fiduciary nature to the Warrantholder.

None of the Issuer or the Guarantor shall have any responsibility for any errors or omissions in the calculation and dissemination of any variables published by a third party and used in any calculation made pursuant to these terms and conditions or in the calculation of the Cash Settlement Amount arising from such errors or omissions.

The Issuer’s obligations to pay the Cash Settlement Amount shall be discharged by payment in accordance with Condition 4(D) above.

5 Adjustments

Adjustments may be made by the Issuer to the terms of the Warrants (including, but not limited to, the Exercise Price and the Entitlement) on the basis of the following provisions:

- (A) (i) If and whenever the Company shall, by way of Rights (as defined below), offer new Shares for subscription at a fixed subscription price to the holders of existing Shares pro rata to existing holdings (a “**Rights Offer**”), the Entitlement and the Exercise Price shall be adjusted to take effect on the Business Day on which the trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

The Entitlement will be adjusted to:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

The Exercise Price will be adjusted to:

$$\text{Adjusted Exercise Price} = \frac{1}{\text{Adjustment Factor}} \times X$$

Where:

$$\text{“Adjustment Factor”} = \frac{1 + M}{1 + (R/S) \times M}$$

E: Existing Entitlement immediately prior to the Rights Offer

X: Existing Exercise Price immediately prior to the Rights Offer

S: Cum-Rights Share price, being the closing price of an existing Share, as derived from the Daily Quotation Sheet of the Stock Exchange on the last Business Day on which the Shares are traded on a cum-rights basis

R: Subscription price per new Share specified in the Rights Offer plus an amount equal to any dividends or other benefits foregone to exercise the Right

M: Number of new Shares per existing Share (whether a whole or a fraction) each holder of an existing Share is entitled to subscribe or have

For the purposes of these Conditions, “**Rights**” means the right(s) attached to each existing Share or needed to acquire one new Share (as the case may be) which are given to a holder of existing Shares to subscribe at a fixed subscription price for new Shares pursuant to the Rights Offer (whether by the exercise of one Right, a part of a Right or an aggregate number of Rights).

- (ii) The Adjusted Exercise Price shall be rounded to the nearest 0.001.
- (iii) For the purpose of Condition 5(A), no adjustment will be made if the adjustment to the Entitlement is one per cent. or less of the Entitlement immediately prior to the adjustment.

- (B) (i) If and whenever the Company shall make an issue of Shares credited as fully paid to the holders of Shares generally by way of capitalisation of profits or reserves (other than pursuant to a scrip dividend or similar scheme for the time being operated by the Company or otherwise in lieu of a cash dividend and without any payment or other consideration being made or given by such holders) (a “**Bonus Issue**”), the Entitlement and the Exercise Price shall be adjusted to take effect on the Business Day on which trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

The Entitlement will be adjusted to:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

The Exercise Price will be adjusted to:

$$\text{Adjusted Exercise Price} = \frac{1}{\text{Adjustment Factor}} \times X$$

Where:

$$\text{“Adjustment Factor”} = 1 + N$$

E: Existing Entitlement immediately prior to the Bonus Issue

X: Existing Exercise Price immediately prior to the Bonus Issue

N: Number of additional Shares (whether a whole or a fraction) received by a holder of existing Shares for each Share held prior to the Bonus Issue

- (ii) The Adjusted Exercise Price shall be rounded to the nearest 0.001.
- (iii) For the purpose of Condition 5(B), no adjustment will be made if the adjustment to the Entitlement is one per cent. or less of the Entitlement immediately prior to the adjustment.
- (C) If and whenever the Company shall subdivide its outstanding share capital into a greater number of shares or consolidate its outstanding share capital into a smaller number of shares, the Entitlement shall be increased and the Exercise Price shall be decreased (in the case of a subdivision) or the Entitlement shall be decreased and the Exercise Price shall be increased (in the case of a consolidation) accordingly, in each case on the day on which the relevant subdivision or consolidation shall have taken effect.
- (D) If it is announced that the Company is to or may merge or consolidate with or into any other corporation (including becoming, by agreement or otherwise, a subsidiary of or controlled by any person or corporation) (except where the Company is the surviving corporation in a merger or consolidation) or that it is to or may sell or transfer all or substantially all of its assets, the rights attaching to the Warrants may in the absolute discretion of the Issuer be amended no later than the Business Day preceding the consummation of such merger, consolidation, sale or transfer (each a “**Restructuring Event**”) (as determined by the Issuer in its absolute discretion).

The rights attaching to the Warrants after the adjustment shall, after such Restructuring Event, relate to the number of shares of the corporation(s) resulting from or surviving such Restructuring Event or other securities (the “**Substituted Securities**”) and/or cash offered in substitution for the affected Shares, as the case may be, to which the holder of such

number of Shares to which the Warrants related immediately before such Restructuring Event would have been entitled upon such Restructuring Event. Thereafter the provisions hereof shall apply to such Substituted Securities, provided that any Substituted Securities may, in the absolute discretion of the Issuer, be deemed to be replaced by an amount in the relevant currency equal to the market value or, if no market value is available, fair value, of such Substituted Securities in each case as determined by the Issuer as soon as practicable after such Restructuring Event is effected.

For the avoidance of doubt, any remaining Shares shall not be affected by this paragraph (D) and, where cash is offered in substitution for Shares or is deemed to replace Substituted Securities as described above, references in these Conditions to the Shares shall include any such cash.

- (E) Generally, no adjustment will be made for an ordinary cash dividend (whether or not it is offered with a scrip alternative). For any other forms of cash distribution (each a “**Cash Distribution**”) announced by the Company, such as a cash bonus, special dividend or extraordinary dividend, no adjustment will be made unless the value of the Cash Distribution accounts for 2 per cent. or more of the Share’s closing price on the day of announcement by the Company.

If and whenever the Company shall make a Cash Distribution credited as fully paid to the holders of Shares generally, the Entitlement and the Exercise Price shall be adjusted to take effect on the Business Day on which trading in the Shares becomes ex-entitlement (each a “**Dividend Adjustment Date**”) in accordance with the following formula:

The Entitlement will be adjusted to:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

The Exercise Price will be adjusted to:

$$\text{Adjusted Exercise Price} = \frac{1}{\text{Adjustment Factor}} \times X$$

Where:

$$\text{“Adjustment Factor”} = \frac{S - OD}{S - OD - CD}$$

E: Existing Entitlement immediately prior to the relevant Cash Distribution

X: Existing Exercise Price immediately prior to the relevant Cash Distribution

S: Closing price of a Share, as derived from the Daily Quotation Sheet of the Stock Exchange on the Business Day immediately prior to the Dividend Adjustment Date

OD: Amount of ordinary cash dividend per Share, provided that “OD” shall be deemed to be zero if no ordinary cash dividend is announced by the Company or if the ex-entitlement date of the ordinary cash dividend is different from the ex-entitlement date of the relevant Cash Distribution

CD: Amount of the relevant Cash Distribution per Share

The Adjusted Exercise Price shall be rounded to the nearest 0.001.

- (F) Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Conditions, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the Warrants as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is (i) not materially prejudicial to the interests of the Warrantheolders generally (without considering the circumstances of any individual Warrantheolder or the tax or other consequences of such adjustment in any particular jurisdiction) or (ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.
- (G) The Issuer shall determine any adjustment or amendment and its determination shall be conclusive and binding on the Warrantheolder save in the case of manifest error. Any such adjustment or amendment shall be set out in a notice, which shall be given to the Warrantheolder in accordance with Condition 9 as soon as practicable after the determination.

6 Purchase by the Issuer

The Issuer and any of its affiliates may purchase Warrants at any time on or after the date of their issue and any Warrants which are so purchased may be surrendered for cancellation or offered from time to time in one or more transactions in the over-the-counter market or otherwise at prevailing market prices or in negotiated transactions, at the discretion of the Issuer or any such affiliate, as the case may be.

7 Global Warrant Certificate

A global warrant certificate (the “**Global Warrant Certificate**”) representing the Warrants will be deposited within CCASS and registered in the name of HKSCC Nominees Limited (or its successors). The Global Warrant Certificate will not be exchangeable for definitive warrant certificates.

8 Meeting of Warrantheolder; Modification

- (A) *Meetings of Warrantheolder.* Notices for convening meetings to consider any matter affecting the Warrantheolder’s interests will be given to the Warrantheolder in accordance with the provisions of Condition 9.

Every question submitted to a meeting of the Warrantheolder shall be decided by poll. A meeting may be convened by the Issuer or by the Warrantheolder holding not less than 10 percent of the Warrants for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons (including any nominee appointed by the Warrantheolder) holding or representing not less than 25 percent of the Warrants for the time being remaining unexercised, or at any adjourned meeting two or more persons (including any nominee appointed by the Warrantheolder) being or representing Warrantheolder whatever the number of Warrants so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such Warrantheolder as, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the Warrantheolder shall be binding on all the holders of the Warrants, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the Warrantholder being held if passed unanimously.

- (B) *Modification.* The Issuer may, without the consent of the Warrantholders, effect any modification of the terms and conditions of the Warrants or the Instrument which, in the opinion of the Issuer, is (i) not materially prejudicial to the interests of the Warrantholders generally (without considering the circumstances of any individual Warrantholder or the tax or other consequences of such modification in any particular jurisdiction); (ii) of a formal, minor or technical nature; (iii) made to correct a manifest error; or (iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong. Any such modification shall be binding on the Warrantholders and shall be notified to them by the Issuer as soon as practicable thereafter in accordance with Condition 9.

9 Notices

All notices in English and Chinese to the Warrantholder will be validly given if published on the website of the Hong Kong Exchanges and Clearing Limited.

10 Liquidation

In the event of a liquidation or dissolution or winding up of the Company or the appointment of a liquidator, receiver or administrator or analogous person under applicable law in respect of the whole or substantially the whole of the undertaking, property or assets of the Company, (each an “**Insolvency Event**”), all unexercised Warrants shall terminate automatically upon the occurrence of any Insolvency Event and the Issuer shall have no further obligation under the Warrants, except that in the case of a series of put Warrants:

- (A) if the Issuer determines in good faith and in a commercially reasonable manner that there is any residual value in the put Warrants upon the occurrence of such Insolvency Event:
- (i) the Issuer shall pay to each Warrantholder the residual value of the put Warrants in cash representing the fair market value in respect of each put Warrant held by such Warrantholder on or about the occurrence of such Insolvency Event less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion, acting in good faith and in a commercially reasonable manner. Payment will be made to each Warrantholder in such manner as shall be notified to the Warrantholder in accordance with Condition 9; and
 - (ii) the Issuer may, but shall not be obliged to, determine such cash amount by having regard to the manner in which the options contracts or futures contracts of the Shares traded on the Stock Exchange are calculated;
- (B) otherwise, if the Issuer determines in good faith and in a commercially reasonable manner that there is no residual value in the put Warrants upon the occurrence of such Insolvency Event, the put Warrants shall lapse and cease to be valid for any purpose upon the occurrence of the Insolvency Event.

For the purpose of this Condition 10, an Insolvency Event occurs,

- (i) in the case of a voluntary liquidation or winding up of the Company, on the effective date of the relevant resolution; or
- (ii) in the case of an involuntary liquidation or dissolution or winding up of the Company, on the date of the relevant court order; or

- (iii) in the case of the appointment of a liquidator or receiver or administrator or analogous person under applicable law in respect of the whole or substantially the whole of the undertaking, property or assets of the Company, on the date when such appointment is effective but subject (in any such case) to any contrary mandatory requirement of the applicable law.

11 Delisting of Company

- (A) If at any time the Shares cease to be listed on the Stock Exchange, the Issuer shall give effect to these Conditions in such manner and make such adjustments to the rights attaching to the Warrants as it shall, in its absolute discretion, consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the Warrantholder generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of the Warrantholder or the tax or other consequences that may result in any particular jurisdiction).
- (B) Without prejudice to the generality of Condition 11(A), where the Shares are or, upon the delisting, become, listed on any other stock exchange, these Conditions may, in the absolute discretion of the Issuer, be amended to the extent necessary to allow for the substitution of that other stock exchange in place of the Stock Exchange and the Issuer may, without the consent of the Warrantholder, make such adjustments to the entitlements of the Warrantholder on exercise (including, if appropriate, by converting foreign currency amounts at prevailing market rates into the relevant currency) as it shall consider appropriate in the circumstances.
- (C) Any adjustment, amendment or determination made by the Issuer pursuant to this Condition 11 shall be conclusive and binding on the Warrantholder save in the case of manifest error. Notice of any adjustments or amendments shall be given to the Warrantholder in accordance with Condition 9 as soon as practicable after they are determined.

12 Further Issues

The Issuer shall be at liberty from time to time, without the consent of the Warrantholder, to create and issue further warrants, upon such terms as to issue price, commencement of the exercise period and otherwise as the Issuer may determine so as to form a single series with the Warrants.

13 Illegality and Impracticability

The Issuer is entitled to terminate the Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (i) for it to perform its obligations under the Warrants, or for the Guarantor to perform its obligations under the Guarantee, in whole or in part as a result of:
 - (a) the adoption of, or any change in, any relevant law or regulation (including any tax law); or
 - (b) the promulgation of, or any change in, the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law),(each of (a) and (b), a “**Change in Law Event**”); or
- (ii) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by the applicable law or regulation, pay to each Warrantholder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Warrant held by such Warrantholder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion. Payment will be made to each Warrantholder in such manner as shall be notified to the Warrantholders in accordance with Condition 9.

14 Good Faith and Commercially Reasonable Manner

Any exercise of discretion by the Issuer under these Conditions will be made in good faith and in a commercially reasonable manner.

15 Governing Law

The Warrants and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"). The Issuer and the Warrantholder (by its acquisition of the Warrants) shall be deemed to have submitted for all purposes in connection with the Warrants and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

16 Language

A Chinese translation of these Conditions is available upon request during usual business hours on any weekday (Saturdays, Sundays and holidays excepted) at the offices of the Manager. In the event of any inconsistency between the English version and Chinese translation of these Conditions, the English version shall prevail and be governing.

17 Contracts (Rights of Third Parties) Ordinance

A person who is not a party to the terms and conditions of the Warrants has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the Warrants.

Manager

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TERMS AND CONDITIONS OF THE INDEX WARRANTS

1 Form; Status; Guarantee; Transfer and Title

- (A) The Warrants (which expression shall, unless the context otherwise requires, include any further warrants issued pursuant to Condition 10) relating to the Index as published by the Index Sponsor are issued in registered form subject to and with the benefit of the instrument dated 18 July 2019 (the “**Instrument**”) made by Morgan Stanley Asia Products Limited (the “**Issuer**”) and the guarantee dated 18 March 2025 (including any supplement or replacement, the “**Guarantee**”) made by Morgan Stanley (the “**Guarantor**”).

Copies of the Instrument and the Guarantee are available for inspection at the office of the manager as specified below. The Warrantholders (as hereinafter defined) are entitled to the benefit of, are bound by and are deemed to have notice of, all the provisions of the Instrument and the Guarantee.

- (B) The settlement obligation of the Issuer in respect of the Warrants represent general unsecured contractual obligations of the Issuer and of no other person which rank, and will rank, equally among themselves and *pari passu* with all other present and future unsecured and unsubordinated contractual obligations of the Issuer, except for obligations accorded preference by mandatory provisions of applicable law.

Warrants represent general contractual obligations of the Issuer, and are not, nor is it the intention (expressed, implicit or otherwise) of the Issuer to create by the issue of the Warrants deposit liabilities of the Issuer or a debt obligation of any kind.

In the Guarantee, the Guarantor has, subject to the terms therein, unconditionally and irrevocably guaranteed to the Warrantholders the due and punctual settlement in full of all obligations due and owing by the Issuer arising under the issuance of the Warrants after taking account of any set off, combination of accounts, netting or similar arrangement from time to time exercisable by the Issuer against any person to whom obligations are from time to time being owed, when and as due (whether at expiry, by acceleration or otherwise).

- (C) Transfers of Warrants may be effected only in Board Lots or integral multiples thereof in the Central Clearing and Settlement System (“**CCASS**”) in accordance with the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time.
- (D) Each person who is for the time being shown in the register kept by or on behalf of the Issuer in Hong Kong as the holder shall be treated by the Issuer and the Guarantor as the absolute owner and holder of the Warrants (which shall be HKSCC Nominees Limited (or its successors) for so long as the Warrants are accepted as eligible securities in CCASS). The expression “**Warrantholder**” shall be construed accordingly.
- (E) Trading in Warrants on The Stock Exchange of Hong Kong Limited (the “**Stock Exchange**”) shall be suspended prior to the Expiry Date in accordance with the requirements of the Stock Exchange.

2 Warrant Rights and Exercise Expenses

- (A) Every Board Lot entitles the Warrantholder, upon compliance with Condition 4, to payment of the Cash Settlement Amount (as defined in Condition 4(D)).
- (B) The Warrantholder will be required to pay all charges which are incurred in respect of the exercise of the Warrants (the “**Exercise Expenses**”). To effect such payment, an amount equivalent to the Exercise Expenses will be deducted by the Issuer from the Cash Settlement Amount in accordance with Condition 4(B).

3 Automatic Exercise

- (A) Any Warrant in respect of which the Cash Settlement Amount would be payable by the Issuer if exercised on the Expiry Date shall be deemed automatically exercised on the Expiry Date (“**Automatic Exercise**”).
- (B) Any Warrant which has not been automatically exercised in accordance with Condition 3(A) shall expire immediately without value thereafter and all rights of the Warrantholder and obligations of the Issuer with respect to such Warrant shall cease.
- (C) In these Conditions, “**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong. For the avoidance of doubt, if such a day falls on a day on which the tropical cyclone warning signal number 8 or above or a “BLACK” rainstorm signal is issued or an “extreme condition” announcement is made by the Hong Kong Government, that day shall be deemed to be a Business Day.

4 Exercise of Warrants

- (A) Warrants may only be exercised in Board Lots or integral multiples thereof.
- (B) An irrevocable authorisation is deemed to be given to the Issuer to deduct any determined Exercise Expenses from the Cash Settlement Amount. Any Exercise Expenses which have not been determined by the Issuer on the Expiry Date shall be notified as soon as practicable after determination by the Issuer to the Warrantholder and shall be paid by the Warrantholder forthwith in immediately available funds no later than 3 Business Days after the Warrantholder receives notice of any unpaid expenses.
- (C) Following the Expiry Date, the Issuer will, with effect from the first Business Day following the Expiry Date, cancel and destroy the Global Warrant Certificate.
- (D) Subject to an Automatic Exercise in accordance with Condition 3(A), the Issuer will as soon as practicable and on a date not later than the Settlement Date in accordance with these Conditions procure payment of the aggregate Cash Settlement Amount (following deduction of determined Exercise Expenses), for all Warrants deemed exercised, electronically through CCASS by crediting the relevant bank account of the Warrantholder as appearing in the register kept by or on behalf of the Issuer.

Subject to adjustment as provided in Condition 5, “**Cash Settlement Amount**” means an amount payable in the Settlement Currency (such amount to be calculated by the Issuer) equal to:

In the case of a series of Index Call Warrants:

$$\text{“Cash Settlement Amount” per Board Lot} = \frac{(\text{Closing Level} - \text{Strike Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

In the case of a series of Index Put Warrants:

$$\text{“Cash Settlement Amount” per Board Lot} = \frac{(\text{Strike Level} - \text{Closing Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

If applicable, such amount will be either (i) converted from the Reference Currency into the Settlement Currency at the Exchange Rate or, as the case may be, (ii) converted into the Interim Currency at the First Exchange Rate and then (if applicable) converted into the Settlement Currency at the Second Exchange Rate.

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time, subject to such modification and amendment prescribed by HKSCC from time to time.

“**Exchange Rate**”, if applicable, has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document.

“**First Exchange Rate**”, if applicable, has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document.

“**Market Disruption Event**” means:

- (1) the occurrence or existence, on the Valuation Date during the one-half hour period that ends at the close of trading on the Index Exchange, of any of:
 - (i) the suspension of or material limitation on the trading of a material number of constituent securities that comprise the Index; or
 - (ii) the suspension of or material limitation on the trading of options or futures contracts relating to the Index on any exchange on which such contracts are traded; or
 - (iii) the imposition of any exchange controls in respect of any currencies involved in determining the Cash Settlement Amount;

for the purpose of paragraph (1), (x) the limitation of the number of hours or days of trading will not constitute a Market Disruption Event if it results from an announced change in the regular business hours of any relevant exchange, and (y) a limitation on trading imposed by reason of the movements in price exceeding the levels permitted by any relevant exchange will constitute a Market Disruption Event; or

- (2) where the Index Exchange is the Stock Exchange, the occurrence of any event on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of such event;
- (3) a limitation or closure of the Index Exchange due to any unforeseen circumstances; or
- (4) any circumstances beyond the control of the Issuer in which the Closing Level or, if applicable, the Exchange Rate, the First Exchange Rate or the Second Exchange Rate (as the case may be) cannot be determined by the Issuer in the manner set out in these Conditions or in such other manner as the Issuer considers appropriate at such time after taking into account all the relevant circumstances.

“**Second Exchange Rate**”, if applicable, has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document.

“**Settlement Currency**” means Hong Kong dollars unless otherwise specified in the relevant Launch Announcement and Supplemental Listing Document.

“**Settlement Date**” means the third CCASS Settlement Day after the later of: (i) the Expiry Date; and (ii) the day on which the Closing Level is determined in accordance with these Conditions.

“**Valuation Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document. If the Issuer determines, in its sole discretion, that a Market Disruption Event has occurred on the Valuation Date, then the Issuer shall determine the Closing Level on the basis of its good faith estimate of the Closing Level that would have prevailed on that day but for the occurrence of the Market Disruption Event, provided that the Issuer, if applicable, may, but shall not be obliged to, determine such Closing Level by having regard to the manner in which futures contracts relating to the Index are calculated.

Any payment made pursuant to this Condition 4(D) shall be delivered at the risk and expense of the Warrantholder to the Warrantholder as recorded on the register.

- (E) If as a result of an event beyond the control of the Issuer (“**Settlement Disruption Event**”), it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant bank account of the Warrantholder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant bank account of the Warrantholder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Warrantholder for any interest in respect of the amount due or any loss or damage that such Warrantholder may suffer as a result of the existence of a Settlement Disruption Event.

The Issuer’s obligations to pay the Cash Settlement Amount shall be discharged by payment in accordance with Condition 4(D) above.

- (F) These Conditions shall not be construed so as to give rise to any relationship of agency or trust between the Guarantor, the Issuer or its agent or nominee and the Warrantholder and neither the Guarantor, the Issuer nor its agent or nominee shall owe any duty of a fiduciary nature to the Warrantholder.

None of the Issuer or the Guarantor shall have any responsibility for any errors or omissions in the calculation and dissemination of any variables published by a third party and used in any calculation made pursuant to these terms and conditions or in the calculation of the Cash Settlement Amount arising from such errors or omissions.

5 Adjustment to the Index

- (A) If the Index is (i) not calculated and announced by the Index Sponsor but is calculated and published by a successor to the Index Sponsor (the “**Successor Index Sponsor**”) acceptable to the Issuer or (ii) replaced by a successor index using, in the determination of the Issuer, the same or a substantially similar formula for and method of calculation as used in the calculation of the Index, then the Index will be deemed to be the index so calculated and announced by the Successor Index Sponsor or that successor index, as the case may be.
- (B) If (i) on or prior to a Valuation Date the Index Sponsor or (if applicable) the Successor Index Sponsor makes a material change in the formula for or the method of calculating the Index or in any other way materially modifies the Index (other than a modification prescribed in that formula or method to maintain the Index in the event of changes in constituent stock, contracts or commodities and other routine events), or (ii) on a Valuation Date the Index Sponsor or (if applicable) the Successor Index Sponsor fails to calculate and publish the Index (other than as a result of a Market Disruption Event), then the Issuer shall determine the Closing Level using, in lieu of a published level for the Index, the level for the Index as at that Valuation Date as determined by the Issuer in accordance with the formula for and method of calculating the Index last in effect prior to the change or failure, but using only those securities/commodities that comprised the Index immediately prior to that change or failure (other than those securities that have since ceased to be listed on the relevant exchange).
- (C) Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Conditions, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the Warrants as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is (i) not materially prejudicial to the interests of the Warrantholders generally (without considering the circumstances of any individual Warrantholder or the tax or other consequences of such adjustment in any particular jurisdiction) or (ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.
- (D) All determinations made by the Issuer pursuant hereto will be conclusive and binding on the Warrantholders. The Issuer will give, or procure that there is given, notice as soon as practicable of any determinations by publication in accordance with Condition 9.

6 Purchase by the Issuer

The Issuer and any of its affiliates may purchase Warrants at any time on or after the date of their issue and any Warrants which are so purchased may be surrendered for cancellation or offered from time to time in one or more transactions in the over-the-counter market or otherwise at prevailing market prices or in negotiated transactions, at the discretion of the Issuer or any such affiliate, as the case may be.

7 Global Warrant Certificate

A global warrant certificate (the “**Global Warrant Certificate**”) representing the Warrants will be deposited within CCASS and registered in the name of HKSCC Nominees Limited (or its successors). The Global Warrant Certificate will not be exchangeable for definitive warrant certificates.

8 Meeting of Warrantholder; Modification

- (A) *Meetings of Warrantholder.* Notices for convening meetings to consider any matter affecting the Warrantholder’s interests will be given to the Warrantholder in accordance with the provisions of Condition 9.

Every question submitted to a meeting of the Warrantholder shall be decided by poll. A meeting may be convened by the Issuer or by the Warrantholder holding not less than 10 percent of the Warrants for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons (including any nominee appointed by the Warrantholder) holding or representing not less than 25 percent of the Warrants for the time being remaining unexercised, or at any adjourned meeting two or more persons (including any nominee appointed by the Warrantholder) being or representing Warrantholder whatever the number of Warrants so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such Warrantholder as, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the Warrantholder shall be binding on all the holders of the Warrants, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the Warrantholder being held if passed unanimously.

- (B) *Modification.* The Issuer may, without the consent of the Warrantholders, effect any modification of the terms and conditions of the Warrants or the Instrument which, in the opinion of the Issuer, is (i) not materially prejudicial to the interests of the Warrantholders generally (without considering the circumstances of any individual Warrantholder or the tax or other consequences of such modification in any particular jurisdiction); (ii) of a formal, minor or technical nature; (iii) made to correct a manifest error; or (iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong. Any such modification shall be binding on the Warrantholders and shall be notified to them by the Issuer as soon as practicable thereafter in accordance with Condition 9.

9 Notices

All notices in English and Chinese to the Warrantholder will be validly given if published on the website of the Hong Kong Exchanges and Clearing Limited.

10 Further Issues

The Issuer shall be at liberty from time to time, without the consent of the Warrantholder, to create and issue further warrants, upon such terms as to issue price, commencement of the exercise period and otherwise as the Issuer may determine so as to form a single series with the Warrants.

11 Illegality and Impracticability

The Issuer is entitled to terminate the Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (i) for it to perform its obligations under the Warrants, or for the Guarantor to perform its obligations under the Guarantee, in whole or in part as a result of:
 - (a) the adoption of, or any change in, any relevant law or regulation (including any tax law); or
 - (b) the promulgation of, or any change in, the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law),(each of (a) and (b), a “**Change in Law Event**”); or
- (ii) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by the applicable law or regulation, pay to each Warrantholder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Warrant held by such Warrantholder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion. Payment will be made to each Warrantholder in such manner as shall be notified to the Warrantholders in accordance with Condition 9.

12 Good Faith and Commercially Reasonable Manner

Any exercise of discretion by the Issuer under these Conditions will be made in good faith and in a commercially reasonable manner.

13 Governing Law

The Warrants and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People’s Republic of China (“**Hong Kong**”). The Issuer and the Warrantholder (by its acquisition of the Warrants) shall be deemed to have submitted for all purposes in connection with the Warrants and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

14 Language

A Chinese translation of these Conditions is available upon request during usual business hours on any weekday (Saturdays, Sundays and holidays excepted) at the offices of the Manager. In the event of any inconsistency between the English version and Chinese translation of these Conditions, the English version shall prevail and be governing.

15 Contracts (Rights of Third Parties) Ordinance

A person who is not a party to the terms and conditions of the Warrants has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the Warrants.

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TERMS AND CONDITIONS OF THE CASH-SETTLED WARRANTS RELATING TO THE UNITS OF A FUND

1 Form; Status; Guarantee; Transfer and Title

- (A) The Warrants (which expression shall, unless the context otherwise requires, include any further warrants issued pursuant to Condition 12) relating to the Units of the Fund are issued in registered form subject to and with the benefit of the instrument dated 18 July 2019 (the “**Instrument**”) made by Morgan Stanley Asia Products Limited (the “**Issuer**”) and the guarantee dated 18 March 2025 (including any supplement or replacement, the “**Guarantee**”) made by Morgan Stanley (the “**Guarantor**”).

Copies of the Instrument and the Guarantee are available for inspection at the office of the manager as specified below. The Warrantholders (as hereinafter defined) are entitled to the benefit of, are bound by and are deemed to have notice of, all the provisions of the Instrument and the Guarantee.

- (B) The settlement obligation of the Issuer in respect of the Warrants represent general unsecured contractual obligations of the Issuer and of no other person which rank, and will rank, equally among themselves and *pari passu* with all other present and future unsecured and unsubordinated contractual obligations of the Issuer, except for obligations accorded preference by mandatory provisions of applicable law.

Warrants represent general contractual obligations of the Issuer, and are not, nor is it the intention (expressed, implicit or otherwise) of the Issuer to create by the issue of the Warrants deposit liabilities of the Issuer or a debt obligation of any kind.

In the Guarantee, the Guarantor has, subject to the terms therein, unconditionally and irrevocably guaranteed to the Warrantholders the due and punctual settlement in full of all obligations due and owing by the Issuer arising under the issuance of the Warrants after taking account of any set off, combination of accounts, netting or similar arrangement from time to time exercisable by the Issuer against any person to whom obligations are from time to time being owed, when and as due (whether at expiry, by acceleration or otherwise).

- (C) Transfers of Warrants may be effected only in Board Lots or integral multiples thereof in the Central Clearing and Settlement System (“**CCASS**”) in accordance with the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time.
- (D) Each person who is for the time being shown in the register kept by or on behalf of the Issuer in Hong Kong as the holder shall be treated by the Issuer and the Guarantor as the absolute owner and holder of the Warrants (which shall be HKSCC Nominees Limited (or its successors) for so long as the Warrants are accepted as eligible securities in CCASS). The expression “**Warrantholder**” shall be construed accordingly.
- (E) Trading in Warrants on The Stock Exchange of Hong Kong Limited (the “**Stock Exchange**”) shall be suspended prior to the Expiry Date in accordance with the requirements of the Stock Exchange.

2 Warrant Rights and Exercise Expenses

- (A) Every Board Lot entitles the Warrantholder, upon compliance with Condition 4, to payment of the Cash Settlement Amount (as defined in Condition 4(D)).
- (B) The Warrantholder will be required to pay all charges which are incurred in respect of the exercise of the Warrants (the “**Exercise Expenses**”). To effect such payment, an amount equivalent to the Exercise Expenses will be deducted by the Issuer from the Cash Settlement Amount in accordance with Condition 4(B).

3 Automatic Exercise

- (A) Any Warrant in respect of which the Cash Settlement Amount would be payable by the Issuer if exercised on the Expiry Date shall be deemed automatically exercised on the Expiry Date (“**Automatic Exercise**”).
- (B) Any Warrant which has not been automatically exercised in accordance with Condition 3(A) shall expire immediately without value thereafter and all rights of the Warrantholder and obligations of the Issuer with respect to such Warrant shall cease.
- (C) In these Conditions, “**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong. For the avoidance of doubt, if such a day falls on a day on which the tropical cyclone warning signal number 8 or above or a “BLACK” rainstorm signal is issued or an “extreme condition” announcement is made by the Hong Kong Government, that day shall be deemed to be a Business Day.

4 Exercise of Warrants

- (A) Warrants may only be exercised in Board Lots or integral multiples thereof.
- (B) An irrevocable authorisation is deemed to be given to the Issuer to deduct any determined Exercise Expenses from the Cash Settlement Amount. Any Exercise Expenses which have not been determined by the Issuer on the Expiry Date shall be notified as soon as practicable after determination by the Issuer to the Warrantholder and shall be paid by the Warrantholder forthwith in immediately available funds no later than 3 Business Days after the Warrantholder receives notice of any unpaid expenses.
- (C) Following the Expiry Date, the Issuer will, with effect from the first Business Day following the Expiry Date, cancel and destroy the Global Warrant Certificate.
- (D) Subject to an Automatic Exercise in accordance with Condition 3(A), the Issuer will as soon as practicable and on a date not later than the Settlement Date in accordance with these Conditions procure payment of the aggregate Cash Settlement Amount (following deduction of determined Exercise Expenses), for all Warrants deemed exercised, electronically through CCASS by crediting the relevant bank account of the Warrantholder as appearing in the register kept by or on behalf of the Issuer.

Subject to adjustment as provided in Condition 5, “**Cash Settlement Amount**” means an amount payable in the Settlement Currency (such amount to be calculated by the Issuer) equal to:

In the case of a series of Call Warrants:

$$\text{“Cash Settlement Amount” per Board Lot} = \frac{\text{Entitlement} \times (\text{Average Price} - \text{Exercise Price}) \times \text{one Board Lot}}{\text{Number of Warrant(s) per Entitlement}}$$

In the case of a series of Put Warrants:

$$\text{“Cash Settlement Amount” per Board Lot} = \frac{\text{Entitlement} \times (\text{Exercise Price} - \text{Average Price}) \times \text{one Board Lot}}{\text{Number of Warrant(s) per Entitlement}}$$

“**Average Price**” shall be the arithmetic mean of the closing prices of one Unit (as derived from the Daily Quotation Sheet of the Stock Exchange, subject to any adjustment to such closing prices as may be necessary to reflect any event as contemplated in Condition 5 such as capitalisation, rights issue, distribution or the like) in respect of each Valuation Date.

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time, subject to such modification and amendment prescribed by HKSCC from time to time.

“**Entitlement**” means such number of Units as specified in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 5.

“**Market Disruption Event**” means:

- (1) the occurrence or existence on any Valuation Date during the one-half hour period that ends at the close of trading of any suspension of or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the Stock Exchange or otherwise) on the Stock Exchange in (i) the Units or (ii) any options or futures contracts relating to the Units if, in any such case, such suspension or limitation is, in the determination of the Issuer, material;
- (2) the occurrence of any event on any day which either (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of such event; or
- (3) a limitation or closure of the Stock Exchange due to any unforeseen circumstances.

“**Settlement Currency**” means Hong Kong dollars unless otherwise specified in the relevant Launch Announcement and Supplemental Listing Document.

“**Settlement Date**” means the third CCASS Settlement Day after the later of: (i) the Expiry Date; and (ii) the day on which the Average Price is determined in accordance with these Conditions.

“**Valuation Date**” means, each of the five Business Days immediately preceding the Expiry Date. If the Issuer determines, in its sole discretion, that a Market Disruption Event has occurred on any Valuation Date, then that Valuation Date shall be postponed until the first succeeding Business Day on which there is no Market Disruption Event irrespective of whether that postponed Valuation Date would fall on a Business Day that already is or is deemed to be a Valuation Date. For the avoidance of doubt, in the event that a Market Disruption Event has occurred and a Valuation Date is postponed as aforesaid, the closing price of the Units on the first succeeding Business Day will be used more than once in determining the Average Price, so that in no event shall there be less than five closing price used to determine the Average Price.

If the postponement of a Valuation Date as aforesaid would result in the Valuation Date falling on or after the Expiry Date, then:

- (i) the Business Day immediately preceding the Expiry Date (the “**Last Valuation Date**”) shall be deemed to be the Valuation Date notwithstanding the Market Disruption Event; and
- (ii) the Issuer shall determine the closing price of the Units on the basis of its good faith estimate of the price that would have prevailed on the Last Valuation Date but for the Market Disruption Event.

Any payment made pursuant to this Condition 4(D) shall be delivered at the risk and expense of the Warrantholder to the Warrantholder as recorded on the register.

- (E) If as a result of an event beyond the control of the Issuer (“**Settlement Disruption Event**”), it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant bank account of the Warrantholder on the original Settlement Date, the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant bank account of the Warrantholder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Warrantholder for any interest in respect of the amount due or any loss or damage that such Warrantholder may suffer as a result of the existence of a Settlement Disruption Event.
- (F) These Conditions shall not be construed so as to give rise to any relationship of agency or trust between the Guarantor, the Issuer or its agent or nominee and the Warrantholder and neither the Guarantor, the Issuer nor its agent or nominee shall owe any duty of a fiduciary nature to the Warrantholder.

None of the Issuer or the Guarantor shall have any responsibility for any errors or omissions in the calculation and dissemination of any variables published by a third party and used in any calculation made pursuant to these terms and conditions or in the calculation of the Cash Settlement Amount arising from such errors or omissions.

The Issuer’s obligations to pay the Cash Settlement Amount shall be discharged by payment in accordance with Condition 4(D) above.

5 Adjustments

Adjustments may be made by the Issuer to the terms of the Warrants (including, but not limited to, the Exercise Price and the Entitlement) on the basis of the following provisions:

- (A) (i) If and whenever the Fund shall, by way of Rights (as defined below), offer new Units for subscription at a fixed subscription price to the holders of existing Units pro rata to existing holdings (a “**Rights Offer**”), the Entitlement and the Exercise Price shall be adjusted to take effect on the Business Day on which the trading in the Units of the Fund becomes ex-entitlement in accordance with the following formula:

The Entitlement will be adjusted to:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

The Exercise Price will be adjusted to:

$$\text{Adjusted Exercise Price} = \frac{1}{\text{Adjustment Factor}} \times X$$

Where:

$$\text{“Adjustment Factor”} = \frac{1 + M}{1 + (R/S) \times M}$$

E: Existing Entitlement immediately prior to the Rights Offer

X: Existing Exercise Price immediately prior to the Rights Offer

S: Cum-Rights Unit price, being the closing price of an existing Unit, as derived from the Daily Quotation Sheet of the Stock Exchange on the last Business Day on which the Units are traded on a cum-rights basis

R: Subscription price per new Unit specified in the Rights Offer plus an amount equal to any distributions or other benefits foregone to exercise the Right

M: Number of new Units per existing Unit (whether a whole or a fraction) each holder of an existing Unit is entitled to subscribe or have

For the purposes of these Conditions, “**Rights**” means the right(s) attached to each existing Unit or needed to acquire one new Unit (as the case may be) which are given to a holder of existing Units to subscribe at a fixed subscription price for new Units pursuant to the Rights Offer (whether by the exercise of one Right, a part of a Right or an aggregate number of Rights).

- (ii) The Adjusted Exercise Price shall be rounded to the nearest 0.001.

- (iii) For the purpose of Condition 5(A), no adjustment will be made if the adjustment to the Entitlement is one per cent. or less of the Entitlement immediately prior to the adjustment.

- (B) (i) If and whenever the Fund shall make an issue of Units credited as fully paid to the holders of Units generally by way of capitalisation of profits or reserves (other than pursuant to a scrip distribution or similar scheme for the time being operated by the Fund or otherwise in lieu of a cash distribution and without any payment or other consideration being made or given by such holders) (a “**Bonus Issue**”), the Entitlement and the Exercise Price shall be adjusted to take effect on the Business Day on which trading in the Units of the Fund becomes ex-entitlement in accordance with the following formula:

The Entitlement will be adjusted to:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

The Exercise Price will be adjusted to:

$$\text{Adjusted Exercise Price} = \frac{1}{\text{Adjustment Factor}} \times X$$

Where:

$$\text{“Adjustment Factor”} = 1 + N$$

E: Existing Entitlement immediately prior to the Bonus Issue

X: Existing Exercise Price immediately prior to the Bonus Issue

N: Number of additional Units (whether a whole or a fraction) received by a holder of existing Units for each Unit held prior to the Bonus Issue

- (ii) The Adjusted Exercise Price shall be rounded to the nearest 0.001.
- (iii) For the purpose of Condition 5(B), no adjustment will be made if the adjustment to the Entitlement is one per cent. or less of the Entitlement immediately prior to the adjustment.
- (C) If and whenever the Fund shall subdivide its Units or any class of its outstanding Units into a greater number of units or shares or consolidate its outstanding Units or any class of it into a smaller number of units or shares, the Entitlement shall be increased and the Exercise Price shall be decreased (in the case of a subdivision) or the Entitlement shall be decreased and the Exercise Price shall be increased (in the case of a consolidation) accordingly, in each case on the day on which the relevant subdivision or consolidation shall have taken effect.
- (D) If it is announced that the Fund is to or may merge or consolidate with or into any other trust or corporation (including becoming, by agreement or otherwise, a subsidiary of or controlled by any person or corporation) (except where the Fund is the surviving entity in a merger or consolidation) or that it is to or may sell or transfer all or substantially all of its assets, the rights attaching to the Warrants may in the absolute discretion of the Issuer be amended no later than the Business Day preceding the consummation of such merger, consolidation, sale or transfer (each a “**Restructuring Event**”) (as determined by the Issuer in its absolute discretion).

The rights attaching to the Warrants after the adjustment shall, after such Restructuring Event, relate to the number of units or shares of the trust(s) or corporation(s) resulting from or surviving such Restructuring Event or other securities (the “**Substituted Securities**”)

and/or cash offered in substitution for the affected Units, as the case may be, to which the holder of such number of Units to which the Warrants related immediately before such Restructuring Event would have been entitled upon such Restructuring Event. Thereafter the provisions hereof shall apply to such Substituted Securities, provided that any Substituted Securities may, in the absolute discretion of the Issuer, be deemed to be replaced by an amount in the relevant currency equal to the market value or, if no market value is available, fair value, of such Substituted Securities in each case as determined by the Issuer as soon as practicable after such Restructuring Event is effected.

For the avoidance of doubt, any remaining Units shall not be affected by this paragraph (D) and, where cash is offered in substitution for Units or is deemed to replace Substituted Securities as described above, references in these Conditions to the Units shall include any such cash.

- (E) Generally, no adjustment will be made for an ordinary cash distribution (whether or not it is offered with a scrip alternative). For any other forms of cash distribution (each a “**Cash Distribution**”) announced by the Fund, such as a cash bonus, special dividend or extraordinary dividend, no adjustment will be made unless the value of the Cash Distribution accounts for 2 per cent. or more of the Unit’s closing price on the day of announcement by the Fund.

If and whenever the Fund shall make a Cash Distribution credited as fully paid to the holders of Units generally, the Entitlement and the Exercise Price shall be adjusted to take effect on the Business Day on which trading in the Units becomes ex-entitlement (each a “**Dividend Adjustment Date**”) in accordance with the following formula:

The Entitlement will be adjusted to:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

The Exercise Price will be adjusted to:

$$\text{Adjusted Exercise Price} = \frac{1}{\text{Adjustment Factor}} \times X$$

Where:

$$\text{“Adjustment Factor”} = \frac{S - OD}{S - OD - CD}$$

E: Existing Entitlement immediately prior to the relevant Cash Distribution

X: Existing Exercise Price immediately prior to the relevant Cash Distribution

S: Closing price of a Unit, as derived from the Daily Quotation Sheet of the Stock Exchange on the Business Day immediately prior to the Dividend Adjustment Date

OD: Amount of ordinary cash distribution per Unit, provided that “OD” shall be deemed to be zero if no ordinary cash distribution is announced by the Fund or if the ex-entitlement date of the ordinary cash distribution is different from the ex-entitlement date of the relevant Cash Distribution

CD: Amount of the relevant Cash Distribution per Unit

The Adjusted Exercise Price shall be rounded to the nearest 0.001.

- (F) Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Conditions, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the Warrants as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is (i) not materially prejudicial to the interests of the Warrantholders generally (without considering the circumstances of any individual Warrantholder or the tax or other consequences of such adjustment in any particular jurisdiction) or (ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.
- (G) The Issuer shall determine any adjustment or amendment and its determination shall be conclusive and binding on the Warrantholder save in the case of manifest error. Any such adjustment or amendment shall be set out in a notice, which shall be given to the Warrantholder in accordance with Condition 9 as soon as practicable after the determination.

6 Purchase by the Issuer

The Issuer and any of its affiliates may purchase Warrants at any time on or after the date of their issue and any Warrants which are so purchased may be surrendered for cancellation or offered from time to time in one or more transactions in the over-the-counter market or otherwise at prevailing market prices or in negotiated transactions, at the discretion of the Issuer or any such affiliate, as the case may be.

7 Global Warrant Certificate

A global warrant certificate (the “**Global Warrant Certificate**”) representing the Warrants will be deposited within CCASS and registered in the name of HKSCC Nominees Limited (or its successors). The Global Warrant Certificate will not be exchangeable for definitive warrant certificates.

8 Meeting of Warrantholder; Modification

- (A) *Meetings of Warrantholder.* Notices for convening meetings to consider any matter affecting the Warrantholder’s interests will be given to the Warrantholder in accordance with the provisions of Condition 9.

Every question submitted to a meeting of the Warrantholder shall be decided by poll. A meeting may be convened by the Issuer or by the Warrantholder holding not less than 10 percent of the Warrants for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons (including any nominee appointed by the Warrantholder) holding or representing not less than 25 percent of the Warrants for the time being remaining unexercised, or at any adjourned meeting two or more persons (including any nominee appointed by the Warrantholder) being or representing Warrantholder whatever the number of Warrants so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such Warrantholder as, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the Warrantholder shall be binding on all the holders of the Warrants, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the Warrantholder being held if passed unanimously.

- (B) *Modification.* The Issuer may, without the consent of the Warrantholders, effect any modification of the terms and conditions of the Warrants or the Instrument which, in the opinion of the Issuer, is (i) not materially prejudicial to the interests of the Warrantholders generally (without considering the circumstances of any individual Warrantholder or the tax or other consequences of such modification in any particular jurisdiction); (ii) of a formal, minor or technical nature; (iii) made to correct a manifest error; or (iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong. Any such modification shall be binding on the Warrantholders and shall be notified to them by the Issuer as soon as practicable thereafter in accordance with Condition 9.

9 Notices

All notices in English and Chinese to the Warrantholder will be validly given if published on the website of the Hong Kong Exchanges and Clearing Limited.

10 Termination or Liquidation of the Fund

In the event of a Termination or the liquidation, winding up or dissolution of the Fund or, if applicable, the trustee of the Fund (including any successor trustee appointed from time to time) (“**Trustee**”) (in its capacity as trustee of the Fund) or the appointment of a liquidator, receiver or administrator or analogous person under applicable law in respect of the whole or substantially the whole of the undertaking, property or assets of the Fund or, if applicable, the Trustee (each an “**Insolvency Event**”), all unexercised Warrants shall terminate automatically upon the occurrence of any Insolvency Event and the Issuer shall have no further obligation under the Warrants, except that in the case of a series of put Warrants:

- (A) if the Issuer determines in good faith and in a commercially reasonable manner that there is any residual value in the put Warrants upon the occurrence of such Insolvency Event:
- (i) the Issuer shall pay to each Warrantholder the residual value of the put Warrants in cash representing the fair market value in respect of each put Warrant held by such Warrantholder on or about the occurrence of such Insolvency Event less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion, acting in good faith and in a commercially reasonable manner. Payment will be made to each Warrantholder in such manner as shall be notified to the Warrantholder in accordance with Condition 9;
 - (ii) the Issuer may, but shall not be obliged to, determine such cash amount by having regard to the manner in which the options contracts or futures contracts of the Units traded on the Stock Exchange are calculated; and
- (B) otherwise, if the Issuer determines in good faith and in a commercially reasonable manner that there is no residual value in the put Warrants upon the occurrence of such Insolvency Event, the put Warrants shall lapse and cease to be valid for any purpose upon the occurrence of the Insolvency Event.

For the purpose of this Condition 10,

- (a) an Insolvency Event occurs:
 - (i) in the case of a Termination, on the effective date of the Termination; or
 - (ii) in the case of a voluntary liquidation or winding up of the Fund or, if applicable, Trustee (in its capacity as trustee of the Fund), on the effective date of the resolution; or
 - (iii) in the case of an involuntary liquidation, winding up or dissolution of the Fund or, if applicable, Trustee (in its capacity as trustee of the Fund), on the date of the relevant court order; or
 - (iv) in the case of the appointment of a liquidator or receiver or administrator or analogous person under applicable law in respect of the whole or substantially the whole of the undertaking, property or assets of the Fund or, if applicable, Trustee, on the date when such appointment is effective but subject (in any such case) to any contrary mandatory requirement of the applicable law.

- (b) “**Termination**” means:
 - (i) the Fund is terminated or required to be terminated for whatever reason or the termination of the Fund commences;
 - (ii) where applicable, the Fund is held or is conceded by the Trustee or the manager of the Fund (including any successor manager appointed from time to time) not to have been constituted or to have been imperfectly constituted;
 - (iii) where applicable, the Trustee ceases to be authorised under the Fund to hold the property of the Fund in its name and perform its obligations under the trust deed constituting the Fund; or
 - (iv) the Fund ceases to be authorised as an authorised collective investment scheme under the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong).

11 Delisting of Fund

- (A) If at any time the Units cease to be listed on the Stock Exchange, the Issuer shall give effect to these Conditions in such manner and make such adjustments to the rights attaching to the Warrants as it shall, in its absolute discretion, consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the Warranholder generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of the Warranholder or the tax or other consequences that may result in any particular jurisdiction).

- (B) Without prejudice to the generality of Condition 11(A), where the Units are or, upon the delisting, become, listed on any other stock exchange, these Conditions may, in the absolute discretion of the Issuer, be amended to the extent necessary to allow for the substitution of that other stock exchange in place of the Stock Exchange and the Issuer may, without the consent of the Warrantholder, make such adjustments to the entitlements of the Warrantholder on exercise (including, if appropriate, by converting foreign currency amounts at prevailing market rates into the relevant currency) as it shall consider appropriate in the circumstances.
- (C) Any adjustment, amendment or determination made by the Issuer pursuant to this Condition 11 shall be conclusive and binding on the Warrantholder save in the case of manifest error. Notice of any adjustments or amendments shall be given to the Warrantholder in accordance with Condition 9 as soon as practicable after they are determined.

12 Further Issues

The Issuer shall be at liberty from time to time, without the consent of the Warrantholder, to create and issue further warrants, upon such terms as to issue price, commencement of the exercise period and otherwise as the Issuer may determine so as to form a single series with the Warrants.

13 Illegality and Impracticability

The Issuer is entitled to terminate the Warrants if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (i) for it to perform its obligations under the Warrants, or for the Guarantor to perform its obligations under the Guarantee, in whole or in part as a result of:
 - (a) the adoption of, or any change in, any relevant law or regulation (including any tax law); or
 - (b) the promulgation of, or any change in, the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law),(each of (a) and (b), a “**Change in Law Event**”); or
- (ii) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the Warrants due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by the applicable law or regulation, pay to each Warrantholder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each Warrant held by such Warrantholder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion. Payment will be made to each Warrantholder in such manner as shall be notified to the Warrantholders in accordance with Condition 9.

14 Good Faith and Commercially Reasonable Manner

Any exercise of discretion by the Issuer under these Conditions will be made in good faith and in a commercially reasonable manner.

15 Governing Law

The Warrants and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"). The Issuer and the Warrantholder (by its acquisition of the Warrants) shall be deemed to have submitted for all purposes in connection with the Warrants and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

16 Language

A Chinese translation of these Conditions is available upon request during usual business hours on any weekday (Saturdays, Sundays and holidays excepted) at the offices of the Manager. In the event of any inconsistency between the English version and Chinese translation of these Conditions, the English version shall prevail and be governing.

17 Contracts (Rights of Third Parties) Ordinance

A person who is not a party to the terms and conditions of the Warrants has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the Warrants.

Manager

Morgan Stanley Asia Limited
Level 46
International Commerce Centre
1 Austin Road West, Kowloon
Hong Kong

TERMS AND CONDITIONS OF THE CBBCS RELATING TO SINGLE STOCK

1 Form; Status; Guarantee; Transfer and Title

- (A) The callable bull/bear contracts or “CBBCs” (which expression shall, unless the context otherwise requires, include any further CBBCs issued pursuant to Condition 11) relating to the Shares of the Company are issued in registered form subject to and with the benefit of the instrument dated 18 July 2019 (the “**Instrument**”) made by Morgan Stanley Asia Products Limited (the “**Issuer**”) and the guarantee dated 18 March 2025 (including any supplement or replacement, the “**Guarantee**”) made by Morgan Stanley (the “**Guarantor**”).

Copies of the Instrument and the Guarantee are available for inspection at the office of the manager as specified below. The Holders (as hereinafter defined) are entitled to the benefit of, are bound by and are deemed to have notice of, all the provisions of the Instrument and the Guarantee.

- (B) The settlement obligations of the Issuer in respect of the CBBCs represent general unsecured contractual obligations of the Issuer and of no other person which rank, and will rank, equally among themselves and *pari passu* with all other present and future unsecured and unsubordinated contractual obligations of the Issuer, except for obligations accorded preference by mandatory provisions of applicable law.

CBBCs represent general contractual obligations of the Issuer, and are not, nor is it the intention (expressed, implicit or otherwise) of the Issuer to create by the issue of CBBCs deposit liabilities of the Issuer or a debt obligation of any kind.

In the Guarantee, the Guarantor has, subject to the terms therein, unconditionally and irrevocably guaranteed to the Holders the due and punctual settlement in full of all obligations due and owing by the Issuer arising under the issuance of the CBBCs after taking account of any set-off, combination of accounts, netting or similar arrangement from time to time exercisable by the Issuer against any person to whom obligations are from time to time being owed, as and when due (whether at expiry, by acceleration or otherwise).

- (C) Transfers of CBBCs may be effected only in Board Lots or integral multiples thereof in the Central Clearing and Settlement System (“**CCASS**”) in accordance with the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time.
- (D) Each person who is for the time being shown in the register kept by or on behalf of the Issuer in Hong Kong as the holder shall be treated by the Issuer and the Guarantor as the absolute owner and holder of the CBBCs (which shall be HKSCC Nominees Limited or another nominee of Hong Kong Securities Clearing Company Limited for so long as the CBBCs are accepted as eligible securities in CCASS). The expression “**Holder**” shall be construed accordingly.
- (E) Trading in CBBCs on The Stock Exchange of Hong Kong Limited (the “**Stock Exchange**”) shall be suspended after the occurrence of a Mandatory Call Event in accordance with the rules of the Stock Exchange. None of the Stock Exchange, the Issuer, the Guarantor nor any of their affiliates shall have any responsibility towards the Holder for any losses suffered in connection with the determination of a Mandatory Call Event, whether or not such losses are a result of the suspension of trading of the CBBCs, notwithstanding that such suspension may have occurred as a result of an error in the determination of the event.

2 CBBCs Rights and Exercise Expenses

- (A) Every Board Lot of the CBBCs entitles the Holder, upon compliance with Condition 3, to payment of the Cash Settlement Amount.
- (B) The Holder will be required to pay the Exercise Expenses in respect of the Mandatory Call Termination or Automatic Exercise of the CBBCs. To effect such payment, an amount equivalent to the Exercise Expenses will be deducted by the Issuer from the Cash Settlement Amount in accordance with Condition 3(D).
- (C) An irrevocable authorisation is deemed to be given to the Issuer to deduct any determined Exercise Expenses from the Cash Settlement Amount.

3 Mandatory Call Termination and Automatic Exercise

- (A) Upon the occurrence of a Mandatory Call Event, the CBBCs will terminate automatically on the date on which the Mandatory Call Event occurs (“**Mandatory Call Termination**”) and the Issuer will give notice of the occurrence of the Mandatory Call Event to the Holders in accordance with Condition 8. Trading in the CBBCs will be suspended immediately upon a Mandatory Call Event and all Post MCE Trades will be cancelled and will not be recognized by the Stock Exchange or the Issuer.

Whereas:

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong. For the avoidance of doubt, if such a day falls on a day on which the tropical cyclone warning signal number 8 or above or a “BLACK” rainstorm signal is issued or an “extreme condition” announcement is made by the Hong Kong Government, that day shall be deemed to be a Business Day;

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Mandatory Call Event**” occurs when the Spot Price of the Shares is, at any time during a Trading Day in the Observation Period:

- (i) in the case of a series of Bull CBBCs, at or below the Call Price; or
- (ii) in the case of a series of Bear CBBCs, at or above the Call Price;

“**Observation Period**” means the period from the Observation Commencement Date to the Trading Day immediately before the Expiry Date (both dates inclusive);

“**Post MCE Trades**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to such modification and amendment prescribed by the Stock Exchange from time to time;

“Spot Price” means:

- (i) in respect of a continuous trading session of the Stock Exchange, the price per Share concluded by means of automatic order matching on the Stock Exchange as reported in the official real-time dissemination mechanism for the Stock Exchange during such continuous trading session in accordance with the Trading Rules, excluding direct business (as defined in the Trading Rules); and
- (ii) in respect of a pre-opening session or a closing auction session (if applicable) of the Stock Exchange, as the case may be, the final Indicative Equilibrium Price (as defined in the Trading Rules) of the Share (if any) calculated at the end of the pre-order matching period of such pre-opening session or closing auction session (if applicable), as the case may be, in accordance with the Trading Rules, excluding direct business (as defined in the Trading Rules),

subject to such modification and amendment prescribed by the Stock Exchange from time to time;

“Trading Day” means any day on which the Stock Exchange is scheduled to open for trading for its regular trading sessions; and

“Trading Rules” means the Rules and Regulations of the Stock Exchange prescribed by the Stock Exchange from time to time.

- (B) Any CBBCs with respect to which a Mandatory Call Event has not occurred during the Observation Period shall be deemed automatically exercised on the Expiry Date (**“Automatic Exercise”**).
- (C) Following the date on which the Mandatory Call Event occurs or the Expiry Date, the Issuer will, with effect from the first Business Day following the Settlement Date cancel and destroy the Global CBBC Certificate.
- (D) Following a Mandatory Call Termination or an Automatic Exercise in accordance with Conditions 3(A) or 3(B), the Issuer will on a date no later than the Settlement Date in accordance with these Conditions procure payment of the aggregate Cash Settlement Amount (following deduction of any determined Exercise Expenses) for all CBBCs terminated or deemed automatically exercised in favour of the Holder as appearing in the register kept by or on behalf of the Issuer.

Any payment of the Cash Settlement Amount made pursuant to this Condition 3(D) shall be delivered at the risk and expense of the Holder to the Holder as recorded on the register, or such bank, broker or agent in Hong Kong (if any) as directed by the Holder.

Whereas:

“Cash Settlement Amount” means, subject to adjustment as provided in Condition 4, an amount calculated by the Issuer in accordance with the following formula:

- (i) if no Mandatory Call Event has occurred:

- (a) in the case of a series of Bull CBBCs:

$$\text{“Cash Settlement Amount” per Board Lot} = \frac{\text{Entitlement} \times (\text{Closing Price} - \text{Strike Price}) \times \text{one Board Lot}}{\text{Number of CBBC(s) per Entitlement}}$$

- (b) in the case of a series of Bear CBBCs:

$$\text{“Cash Settlement Amount” per Board Lot} = \frac{\text{Entitlement} \times (\text{Strike Price} - \text{Closing Price}) \times \text{one Board Lot}}{\text{Number of CBBC(s) per Entitlement}}$$

- (ii) following a Mandatory Call Event:

- (a) in the case of a series of Category R CBBCs, the Residual Value; or
- (b) in the case of a series of Category N CBBCs, zero;

provided that if the relevant formula above produces an amount that is equal to or less than zero or the Exercise Expenses (if any), then no Cash Settlement Amount shall be payable. The aggregate Cash Settlement Amount payable to a Holder shall be expressed in the Settlement Currency and shall be rounded up to the nearest two decimal places in the Settlement Currency.

“Closing Price” shall be the closing price of one Share (as derived from the Daily Quotation Sheet of the Stock Exchange, subject to any adjustment to such closing price as may be necessary to reflect any event as contemplated in Condition 4 such as capitalisation, rights issue, distribution or the like) on the Valuation Date;

“Entitlement” means such number of Shares as specified in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 4;

“Exercise Expenses” means any charges or expenses including any taxes or duties which are incurred in respect of the early termination of the CBBCs upon the occurrence of a Mandatory Call Event or the exercise of the CBBCs at expiry;

“Market Disruption Event” means:

- (i) the occurrence or existence on any Trading Day during the one-half hour period that ends at the close of trading of any suspension of or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the Stock Exchange or otherwise) on the Stock Exchange in (a) the Shares; or (b) any options or futures contracts relating to the Shares if, in any such case, such suspension or limitation is, in the determination of the Issuer, material;
- (ii) the occurrence of any event on any day which (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of such event; or
- (iii) a limitation or closure of the Stock Exchange due to any unforeseen circumstances.

“Maximum Trade Price” means the highest Spot Price of the Shares (subject to any adjustment to such Spot Price as may be necessary to reflect any event as contemplated in Condition 4 such as capitalisation, rights issue, distribution or the like) during the MCE Valuation Period;

“**MCE Valuation Period**” means the period commencing from and including the moment upon which the Mandatory Call Event occurs (the trading session during which the Mandatory Call Event occurs is the “**1st Session**”) and up to the end of the trading session on the Stock Exchange immediately following the 1st Session (“**2nd Session**”) unless, in the determination of the Issuer in its good faith, the 2nd Session for any reason (including, without limitation, a Market Disruption Event occurring and subsisting in the 2nd Session) does not contain any continuous period of 1 hour or more than 1 hour during which trading in the Shares is permitted on the Stock Exchange with no limitation imposed, the MCE Valuation Period shall be extended to the end of the subsequent trading session following the 2nd Session during which trading in the Shares is permitted on the Stock Exchange with no limitation imposed for a continuous period of at least 1 hour notwithstanding the existence or continuance of a Market Disruption Event in such postponed trading session, unless the Issuer determines in its good faith that each trading session on each of the four Trading Days immediately following the date on which the Mandatory Call Event occurs does not contain any continuous period of 1 hour or more than 1 hour during which trading in the Shares is permitted on the Stock Exchange with no limitation imposed. In that case:

- (i) the period commencing from the 1st Session up to, and including, the last trading session on the Stock Exchange of the fourth Trading Day immediately following the date on which the Mandatory Call Event occurs shall be deemed to be the MCE Valuation Period; and
- (ii) the Issuer shall determine the Maximum Trade Price or the Minimum Trade Price (as the case may be) having regard to the then prevailing market conditions, the last reported Spot Price of the Shares and such other factors as the Issuer may determine to be relevant in its good faith.

For the avoidance of doubt, all Spot Prices available throughout the extended MCE Valuation Period shall be taken into account to determine the Maximum Trade Price or the Minimum Trade Price (as the case may be) for the calculation of the Residual Value.

For the purposes of this definition,

- (a) the pre-opening session, the morning session and, in the case of half day trading, the closing auction session (if applicable) of the same day; and
- (b) the afternoon session and the closing auction session (if applicable) of the same day,

shall each be considered as one trading session only;

“**Minimum Trade Price**” means the lowest Spot Price of the Shares (subject to any adjustment to such Spot Price as may be necessary to reflect any event as contemplated in Condition 4 such as capitalisation, rights issue, distribution or the like) during the MCE Valuation Period;

“**Residual Value**” means, subject to adjustment as provided in Condition 4:

- (i) in the case of a series of Bull CBBCs:

$$\text{“Residual Value” per Board Lot} = \frac{\text{Entitlement} \times (\text{Minimum Trade Price} - \text{Strike Price}) \times \text{one Board Lot}}{\text{Number of CBBC(s) per Entitlement}}$$

(ii) in the case of a series of Bear CBBCs:

$$\text{“Residual Value” per Board Lot} = \frac{\text{Entitlement} \times (\text{Strike Price} - \text{Maximum Trade Price}) \times \text{one Board Lot}}{\text{Number of CBBC(s) per Entitlement}}$$

“**Settlement Currency**” means Hong Kong dollars unless otherwise specified in the relevant Launch Announcement and Supplemental Listing Document; and

“**Settlement Date**” means the third CCASS Settlement Day after (i) the end of the MCE Valuation Period or (ii) the later of: (a) the Expiry Date; and (b) the day on which the Closing Price is determined in accordance with these Conditions (as the case may be).

“**Valuation Date**” means, the Trading Day immediately preceding the Expiry Date. If the Issuer determines, in its sole discretion, that a Market Disruption Event has occurred on the Valuation Date, then the Valuation Date shall be the first succeeding Trading Day on which the Issuer determines that there is no Market Disruption Event, unless the Issuer determines that there is a Market Disruption Event occurring on each of the four Trading Days immediately following the original date which (but for the Market Disruption Event) would have been the Valuation Date. In that case:

- (i) the fourth Trading Day immediately following the original date shall be deemed to be the Valuation Date (regardless of the Market Disruption Event); and
 - (ii) the Issuer shall determine the Closing Price having regard to the then prevailing market conditions, the last reported trading price of the Shares on the Stock Exchange and such other factors as the Issuer determines to be relevant.
- (E) If as a result of an event beyond the control of the Issuer, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant bank account of the Holder on the original Settlement Date (“**Settlement Disruption Event**”), the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant bank account of the Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Holder for any interest in respect of the amount due or any loss or damage that such Holder may suffer as a result of the existence of a Settlement Disruption Event, nor shall the Issuer be under any circumstances be liable for any acts or defaults of CCASS in relation to the performance of its duties in relation to the CBBCs.
- (F) These Conditions shall not be construed so as to give rise to any relationship of agency or trust between the Stock Exchange, the Guarantor, the Issuer or its agent or nominee and the Holder and neither the Stock Exchange, the Guarantor, the Issuer nor its agent or nominee shall owe any duty of a fiduciary nature to the Holder.

None of the Stock Exchange, the Issuer or the Guarantor shall have any responsibility for any errors or omissions in the calculation and determination of any variables published by it or a third party and used in any calculation or determination made pursuant to these terms and conditions (including the determination as to the occurrence of the Mandatory Call Event) or in the calculation of the Cash Settlement Amount arising from such errors or omissions.

The Issuer’s obligations to pay the Cash Settlement Amount shall be discharged by payment in accordance with Condition 3(D) above.

4 Adjustments

Adjustments may be made by the Issuer to the terms of the CBBCs (including, but not limited to (i) the Strike Price, (ii) the Call Price and/or (iii) the Entitlement) on the basis of the following provisions:

- (A) (i) If and whenever the Company shall, by way of Rights, offer new Shares for subscription at a fixed subscription price to the holders of existing Shares pro rata to existing holdings (a “**Rights Offer**”), the Entitlement, the Strike Price and the Call Price shall be adjusted to take effect on the Business Day on which the trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

The Entitlement will be adjusted to:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

The Strike Price will be adjusted to:

$$\text{Adjusted Strike Price} = \frac{1}{\text{Adjustment Factor}} \times X$$

The Call Price will be adjusted to:

$$\text{Adjusted Call Price} = \frac{1}{\text{Adjustment Factor}} \times Y$$

Where:

$$\text{“Adjustment Factor”} = \frac{1 + M}{1 + (R/S) \times M}$$

E: Existing Entitlement immediately prior to the Rights Offer

X: Existing Strike Price immediately prior to the Rights Offer

Y: Existing Call Price immediately prior to the Rights Offer

S: Cum-Rights Share price, being the closing price of an existing Share, as derived from the Daily Quotation Sheet of the Stock Exchange on the last Business Day on which the Shares are traded on a cum-rights basis

R: Subscription price per new Share specified in the Rights Offer plus an amount equal to any dividends or other benefits foregone to exercise the Right

M: Number of new Shares per existing Share (whether a whole or a fraction) each holder of an existing Share is entitled to subscribe or have

For the purposes of these Conditions, “**Rights**” means the right(s) attached to each existing Share or needed to acquire one new Share (as the case may be) which are given to a holder of existing Shares to subscribe at a fixed subscription price for new Shares pursuant to the Rights Offer (whether by the exercise of one Right, a part of a Right or an aggregate number of Rights).

- (ii) The Adjusted Strike Price and the Adjusted Call Price shall be rounded to the nearest 0.001.
 - (iii) For the purpose of Condition 4(A), no adjustment will be made if the adjustment to the Entitlement is one per cent. or less of the Entitlement immediately prior to the adjustment.
- (B) (i) If and whenever the Company shall make an issue of Shares credited as fully paid to the holders of Shares generally by way of capitalisation of profits or reserves (other than pursuant to a scrip dividend or similar scheme for the time being operated by the Company or otherwise in lieu of a cash dividend and without any payment or other consideration being made or given by such holders) (a “**Bonus Issue**”), the Entitlement, the Strike Price and the Call Price shall be adjusted to take effect on the Business Day on which trading in the Shares of the Company becomes ex-entitlement in accordance with the following formula:

The Entitlement will be adjusted to:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

The Strike Price will be adjusted to:

$$\text{Adjusted Strike Price} = \frac{1}{\text{Adjustment Factor}} \times X$$

The Call Price will be adjusted to:

$$\text{Adjusted Call Price} = \frac{1}{\text{Adjustment Factor}} \times Y$$

Where:

$$\text{“Adjustment Factor”} = 1 + N$$

E: Existing Entitlement immediately prior to the Bonus Issue

X: Existing Strike Price immediately prior to the Bonus Issue

Y: Existing Call Price immediately prior to the Bonus Issue

N: Number of additional Shares (whether a whole or a fraction) received by a holder of existing Shares for each Share held prior to the Bonus Issue

- (ii) The Adjusted Strike Price and the Adjusted Call Price shall be rounded to the nearest 0.001.
 - (iii) For the purpose of Condition 4(B), no adjustment will be made if the adjustment to the Entitlement is one per cent. or less of the Entitlement immediately prior to the adjustment.
- (C) If and whenever the Company shall subdivide its outstanding share capital into a greater number of shares or consolidate its outstanding share capital into a smaller number of shares, the Entitlement shall be increased and the Strike Price and the Call Price shall be

decreased (in the case of a subdivision) or the Entitlement shall be decreased and the Strike Price and the Call Price shall be increased (in the case of a consolidation) accordingly, in each case on the day on which the relevant subdivision or consolidation shall have taken effect.

- (D) If it is announced that the Company is to or may merge or consolidate with or into any other corporation (including becoming, by agreement or otherwise, a subsidiary of or controlled by any person or corporation) (except where the Company is the surviving corporation in a merger or consolidation) or that it is to or may sell or transfer all or substantially all of its assets, the rights attaching to the CBBCs may in the absolute discretion of the Issuer be amended no later than the Business Day preceding the consummation of such merger, consolidation, sale or transfer (each a “**Restructuring Event**”) (as determined by the Issuer in its absolute discretion).

The rights attaching to the CBBCs after the adjustment shall, after such Restructuring Event, relate to the number of shares of the corporation(s) resulting from or surviving such Restructuring Event or other securities (the “**Substituted Securities**”) and/or cash offered in substitution for the affected Shares, as the case may be, to which the holder of such number of Shares to which the CBBCs related immediately before such Restructuring Event would have been entitled upon such Restructuring Event. Thereafter the provisions hereof shall apply to such Substituted Securities, provided that any Substituted Securities may, in the absolute discretion of the Issuer, be deemed to be replaced by an amount in the relevant currency equal to the market value or, if no market value is available, fair value, of such Substituted Securities in each case as determined by the Issuer as soon as practicable after such Restructuring Event is effected.

For the avoidance of doubt, any remaining Shares shall not be affected by this paragraph (D) and, where cash is offered in substitution for Shares or is deemed to replace Substituted Securities as described above, references in these Conditions to the Shares shall include any such cash.

- (E) Generally, no adjustment will be made for an ordinary cash dividend (whether or not it is offered with a scrip alternative). For any other forms of cash distribution (each a “**Cash Distribution**”) announced by the Company, such as a cash bonus, special dividend or extraordinary dividend, no adjustment will be made unless the value of the Cash Distribution accounts for 2 per cent. or more of the Share’s closing price on the day of announcement by the Company.

If and whenever the Company shall make a Cash Distribution credited as fully paid to the holders of Shares generally, the Entitlement, the Call Price and the Strike Price shall be adjusted to take effect on the Business Day on which trading in the Shares becomes ex-entitlement (each a “**Dividend Adjustment Date**”) in accordance with the following formula:

The Entitlement will be adjusted to:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

The Strike Price will be adjusted to:

$$\text{Adjusted Strike Price} = \frac{1}{\text{Adjustment Factor}} \times X$$

The Call Price will be adjusted to:

$$\text{Adjusted Call Price} = \frac{1}{\text{Adjustment Factor}} \times Y$$

Where:

$$\text{“Adjustment Factor”} = \frac{S - OD}{S - OD - CD}$$

- E: Existing Entitlement immediately prior to the relevant Cash Distribution
- X: Existing Strike Price immediately prior to the relevant Cash Distribution
- Y: Existing Call Price immediately prior to the relevant Cash Distribution
- S: Closing Price of a Share, as derived from the Daily Quotation Sheet of the Stock Exchange on the Business Day immediately prior to the Dividend Adjustment Date
- OD: Amount of ordinary cash dividend per Share, provided that “OD” shall be deemed to be zero if no ordinary cash dividend is announced by the Company or if the ex-entitlement date of the ordinary cash dividend is different from the ex-entitlement date of the relevant Cash Distribution
- CD: Amount of the relevant Cash Distribution per Share

The Adjusted Strike Price and the Adjusted Call Price shall be rounded to the nearest 0.001.

- (F) Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Conditions, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the CBBCs as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is (i) not materially prejudicial to the interests of the Holders generally (without considering the circumstances of any individual Holder or the tax or other consequences of such adjustment in any particular jurisdiction) or (ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.
- (G) The Issuer shall determine any adjustment or amendment and its determination shall be conclusive and binding on the Holder save in the case of manifest error. Any such adjustment or amendment shall be set out in a notice, which shall be given to the Holder in accordance with Condition 8 as soon as practicable after the determination.

5 Purchase by the Issuer

The Issuer and any of its affiliates may purchase CBBCs at any time on or after the date of their issue and any CBBCs which are so purchased may be surrendered for cancellation or offered from time to time in one or more transactions in the over-the-counter market or otherwise at prevailing market prices or in negotiated transactions, at the discretion of the Issuer or any such affiliate, as the case may be.

6 Global CBBC Certificate

A global callable bull/bear contract certificate (the “**Global CBBC Certificate**”) representing the CBBCs will be deposited within CCASS and registered in the name of HKSCC Nominees Limited or another nominee of Hong Kong Securities Clearing Company Limited. The Global CBBC Certificate will not be exchangeable for definitive certificates.

7 Meeting of Holder; Modification

- (A) *Meetings of Holder.* Notices for convening meetings to consider any matter affecting the Holder’s interests will be given to the Holder in accordance with the provisions of Condition 8.

Every question submitted to a meeting of the Holder shall be decided by poll. A meeting may be convened by the Issuer or by the Holder holding not less than 10 per cent. of the CBBCs for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons (including any nominee appointed by the Holder) holding or representing not less than 25 per cent. of the CBBCs for the time being remaining unexercised, or at any adjourned meeting two or more persons (including any nominee appointed by the Holder) being or representing Holder whatever the number of CBBCs so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such Holder as, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the Holder shall be binding on all the holders of the CBBCs, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the Holder being held if passed unanimously.

Where the Holder is a clearing house recognised by the Laws of Hong Kong or its nominee(s), it may authorise such person or person(s) as it thinks fit to act as its representative(s) or proxy(ies) at any Holders’ meeting provided that, if more than one person is so authorised, the authorisation or proxy form must specify the number of CBBCs in respect of which each such person is so authorised. Each person so authorised will be entitled to exercise the same powers and right, including the right to vote on a show of hands, on behalf of the recognised clearing house or its nominee(s) as that clearing house or its nominee(s) as if he was an individual Holder of the CBBC.

- (B) *Modification.* The Issuer may, without the consent of the Holders, effect any modification of the terms and conditions of the CBBCs or the Instrument which, in the opinion of the Issuer, is (i) not materially prejudicial to the interests of the Holders generally (without considering the circumstances of any individual Holder or the tax or other consequences of such modification in any particular jurisdiction); (ii) of a formal, minor or technical nature; (iii) made to correct a manifest error; or (iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong. Any such modification shall be binding on the Holders and shall be notified to them by the Issuer as soon as practicable thereafter in accordance with Condition 8.

8 Notices

All notices in English and Chinese to the Holder will be validly given if published on the website of the Hong Kong Exchanges and Clearing Limited.

9 Liquidation

In the event of a liquidation or dissolution or winding up of the Company or the appointment of a liquidator, receiver or administrator or analogous person under applicable law in respect of the whole or substantially the whole of the undertaking, property or assets of the Company (each an “**Insolvency Event**”), all unexercised CBBCs shall terminate automatically upon the occurrence of any Insolvency Event and the Issuer shall have no further obligation under the CBBCs, except that in the case of a series of bear CBBCs:

- (A) if the Issuer determines in good faith and in a commercially reasonable manner that there is any residual value in the bear CBBCs upon the occurrence of such Insolvency Event:
 - (i) the Issuer shall pay to each Holder the residual value of the bear CBBCs in cash representing the fair market value in respect of each bear CBBC held by such Holder on or about the occurrence of such Insolvency Event less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion, acting in good faith and in a commercially reasonable manner. Payment will be made to each Holder in such manner as shall be notified to the Holder in accordance with Condition 8; and
 - (ii) the Issuer may, but shall not be obliged to, determine such cash amount by having regard to the manner in which the options contracts or futures contracts of the Shares traded on the Stock Exchange are calculated;
- (B) otherwise, if the Issuer determines in good faith and in a commercially reasonable manner that there is no residual value in the bear CBBCs upon the occurrence of such Insolvency Event, the bear CBBCs shall lapse and cease to be valid for any purpose upon the occurrence of the Insolvency Event.

For the purpose of this Condition 9, an Insolvency Event occurs,

- (i) in the case of a voluntary liquidation or winding up of the Company, on the effective date of the relevant resolution; or
- (ii) in the case of an involuntary liquidation or dissolution or winding up of the Company, on the date of the relevant court order; or
- (iii) in the case of the appointment of a liquidator or receiver or administrator or analogous person under applicable law in respect of the whole or substantially the whole of the undertaking, property or assets of the Company, on the date when such appointment is effective but subject (in any such case) to any contrary mandatory requirement of the applicable law.

10 Delisting of Company

- (A) If at any time the Shares cease to be listed on the Stock Exchange, the Issuer shall give effect to these Conditions in such manner and make such adjustments to the rights attaching to the CBBCs as it shall, in its absolute discretion, consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the Holder generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of the Holder or the tax or other consequences that may result in any particular jurisdiction).

- (B) Without prejudice to the generality of Condition 10(A), where the Shares are or, upon the delisting, become, listed on any other stock exchange, these Conditions may, in the absolute discretion of the Issuer, be amended to the extent necessary to allow for the substitution of that other stock exchange in place of the Stock Exchange and the Issuer may, without the consent of the Holder, make such adjustments to the entitlements of the Holder on exercise (including, if appropriate, by converting foreign currency amounts at prevailing market rates into the relevant currency) as it shall consider appropriate in the circumstances.
- (C) Any such adjustment or amendment and determination made by the Issuer pursuant to this Condition 10 shall be conclusive and binding on the Holder save in the case of manifest error. Notice of any adjustments or amendments shall be given to the Holder in accordance with Condition 8 as soon as practicable after they are determined.

11 Further Issues

The Issuer shall be at liberty from time to time, without the consent of the Holder, to create and issue further callable bull/bear contracts, upon such terms as to issue price and otherwise as the Issuer may determine so as to form a single series with the CBBCs.

12 Illegality and Impracticability

The Issuer is entitled to terminate the CBBCs if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (i) for it to perform its obligations under the CBBCs, or for the Guarantor to perform its obligations under the Guarantee, in whole or in part as a result of:
 - (a) the adoption of, or any change in, any relevant law or regulation (including any tax law); or
 - (b) the promulgation of, or any change in, the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law),(each of (a) and (b), a “**Change in Law Event**”); or
- (ii) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the CBBCs due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by the applicable law or regulation, pay to each Holder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each CBBC held by such Holder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion. Payment will be made to each Holder in such manner as shall be notified to the Holders in accordance with Condition 8.

13 Good Faith and Commercially Reasonable Manner

Any exercise of discretion by the Issuer under these Conditions will be made in good faith and in a commercially reasonable manner.

14 Governing Law

The CBBCs and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People's Republic of China ("**Hong Kong**"). The Issuer and the Holder (by its acquisition of the CBBCs) shall be deemed to have submitted for all purposes in connection with the CBBCs and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

15 Language

A Chinese translation of these Conditions is available upon request during usual business hours on any weekday (Saturdays, Sundays and holidays excepted) at the offices of the Manager. In the event of any inconsistency between the English version and Chinese translation of these Conditions, the English version shall prevail and be governing.

16 Contracts (Rights of Third Parties) Ordinance

A person who is not a party to the terms and conditions of the CBBCs has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the CBBCs.

Manager

Morgan Stanley Asia Limited
Level 46
International Commerce Centre
1 Austin Road West, Kowloon
Hong Kong

TERMS AND CONDITIONS OF THE CBBCS RELATING TO AN INDEX

1 Form; Status; Guarantee; Transfer and Title

- (A) The callable bull/bear contracts or “CBBCs” (which expression shall, unless the context otherwise requires, include any further CBBCs issued pursuant to Condition 9) relating to the Index are issued in registered form subject to and with the benefit of the instrument dated 18 July 2019 (the “**Instrument**”) made by Morgan Stanley Asia Products Limited (the “**Issuer**”) and the guarantee dated 18 March 2025 (including any supplement or replacement, the “**Guarantee**”) made by Morgan Stanley (the “**Guarantor**”).

Copies of the Instrument and the Guarantee are available for inspection at the office of the manager as specified below. The Holders (as hereinafter defined) are entitled to the benefit of, are bound by and are deemed to have notice of, all the provisions of the Instrument and the Guarantee.

- (B) The settlement obligations of the Issuer in respect of the CBBCs represent general unsecured contractual obligations of the Issuer and of no other person which rank, and will rank, equally among themselves and *pari passu* with all other present and future unsecured and unsubordinated contractual obligations of the Issuer, except for obligations accorded preference by mandatory provisions of applicable law.

CBBCs represent general contractual obligations of the Issuer, and are not, nor is it the intention (expressed, implicit or otherwise) of the Issuer to create by the issue of CBBCs deposit liabilities of the Issuer or a debt obligation of any kind.

In the Guarantee, the Guarantor has, subject to the terms therein, unconditionally and irrevocably guaranteed to the Holders the due and punctual settlement in full of all obligations due and owing by the Issuer arising under the issuance of the CBBCs after taking account of any set-off, combination of accounts, netting or similar arrangement from time to time exercisable by the Issuer against any person to whom obligations are from time to time being owed, as and when due (whether at expiry, by acceleration or otherwise).

- (C) Transfers of CBBCs may be effected only in Board Lots or integral multiples thereof in the Central Clearing and Settlement System (“**CCASS**”) in accordance with the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time.
- (D) Each person who is for the time being shown in the register kept by or on behalf of the Issuer in Hong Kong as the holder shall be treated by the Issuer and the Guarantor as the absolute owner and holder of the CBBCs (which shall be HKSCC Nominees Limited or another nominee of Hong Kong Securities Clearing Company Limited for so long as the CBBCs are accepted as eligible securities in CCASS). The expression “**Holder**” shall be construed accordingly.
- (E) Trading in CBBCs on The Stock Exchange of Hong Kong Limited (the “**Stock Exchange**”) shall be suspended after the occurrence of a Mandatory Call Event in accordance with the rules of the Stock Exchange. None of the Stock Exchange, the Issuer, the Guarantor, the Index Sponsor nor any of their affiliates shall have any responsibility towards the Holder for any losses suffered in connection with the determination of a Mandatory Call Event, whether or not such losses are a result of the suspension of trading of the CBBCs, notwithstanding that such suspension may have occurred as a result of an error in the determination of the event.

2 CBBCs Rights and Exercise Expenses

- (A) Every Board Lot of the CBBCs entitles the Holder, upon compliance with Condition 3, to payment of the Cash Settlement Amount.
- (B) The Holder will be required to pay the Exercise Expenses in respect of the Mandatory Call Termination or Automatic Exercise of the CBBCs. To effect such payment, an amount equivalent to the Exercise Expenses will be deducted by the Issuer from the Cash Settlement Amount in accordance with Condition 3(D).
- (C) An irrevocable authorisation is deemed to be given to the Issuer to deduct any determined Exercise Expenses from the Cash Settlement Amount.

3 Mandatory Call Termination and Automatic Exercise

- (A) Upon the occurrence of a Mandatory Call Event, the CBBCs will terminate automatically on the date on which the Mandatory Call Event occurs (“**Mandatory Call Termination**”) and the Issuer will give notice of the occurrence of the Mandatory Call Event to the Holders in accordance with Condition 8. Trading in the CBBCs will be suspended immediately upon a Mandatory Call Event and all Post MCE Trades will be cancelled and will not be recognized by the Stock Exchange or the Issuer.

Whereas:

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong. For the avoidance of doubt, if such a day falls on a day on which the tropical cyclone warning signal number 8 or above or a “BLACK” rainstorm signal is issued or an “extreme condition” announcement is made by the Hong Kong Government, that day shall be deemed to be a Business Day;

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Index Business Day**” means any day on which the Index Exchange is scheduled to open for trading for its regular trading sessions;

“**Mandatory Call Event**” occurs when the Spot Level of the Index is, at any time during an Index Business Day in the Observation Period:

- (i) in the case of a series of Bull CBBCs, at or below the Call Level; or
- (ii) in the case of a series of Bear CBBCs, at or above the Call Level;

“**Observation Period**” means the period from the Observation Commencement Date to the Trading Day immediately before the Expiry Date (both dates inclusive);

“**Post MCE Trades**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to such modification and amendment prescribed by the Stock Exchange from time to time;

“**Spot Level**” means the spot level of the Index as compiled and published by the Index Sponsor; and

“**Trading Day**” means any day on which the Stock Exchange is scheduled to open for trading for its regular trading sessions.

- (B) Any CBBCs with respect to which a Mandatory Call Event has not occurred during the Observation Period shall be deemed automatically exercised on the Expiry Date (“**Automatic Exercise**”).
- (C) Following the date on which the Mandatory Call Event occurs or the Expiry Date, the Issuer will, with effect from the first Business Day following the Settlement Date, cancel and destroy the Global CBBC Certificate.
- (D) Following a Mandatory Call Termination or an Automatic Exercise in accordance with Conditions 3(A) or 3(B), the Issuer will as soon as practicable and on a date no later than the Settlement Date in accordance with these Conditions procure payment of the aggregate Cash Settlement Amount, (following deduction of any determined Exercise Expenses) for all CBBCs terminated or deemed automatically exercised in favour of the Holder as appearing in the register kept by or on behalf of the Issuer.

Any payment of the Cash Settlement Amount made pursuant to this Condition 3(D) shall be delivered at the risk and expense of the Holder to the Holder as recorded on the register, or such bank, broker or agent in Hong Kong (if any) as directed by the Holder.

Whereas:

“**Cash Settlement Amount**” means, subject to adjustment as provided in Condition 4, an amount calculated by the Issuer in accordance with the following formula (and if applicable, either (i) converted from the Reference Currency into the Settlement Currency at the Exchange Rate or, as the case may be, (ii) converted into the Interim Currency at the First Exchange Rate and then (if applicable) converted into the Settlement Currency at the Second Exchange Rate):

(i) if no Mandatory Call Event has occurred:

(a) in the case of a series of Bull CBBCs:

$$\text{“Cash Settlement Amount” per Board Lot} = \frac{(\text{Closing Level} - \text{Strike Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

(b) in the case of a series of Bear CBBCs:

$$\text{“Cash Settlement Amount” per Board Lot} = \frac{(\text{Strike Level} - \text{Closing Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

(ii) following a Mandatory Call Event:

(a) in the case of a series of Category R CBBCs, the Residual Value; or

(b) in the case of a series of Category N CBBCs, zero;

provided that if the relevant formula above produces an amount that is equal to or less than zero or the Exercise Expenses (if any), then no Cash Settlement Amount shall be payable. The aggregate Cash Settlement Amount payable to a Holder shall be expressed in the Settlement Currency and shall be rounded up to the nearest two decimal places in the Settlement Currency.

“**Closing Level**” means the level of the Index specified in the relevant Launch Announcement and Supplemental Listing Document subject to any adjustment in accordance with Condition 4;

“**Exchange Rate**”, if applicable, has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document.

“**Exercise Expenses**” means any charges or expenses including any taxes or duties which are incurred in respect of the early termination of the CBBCs upon the occurrence of a Mandatory Call Event or the exercise of the CBBCs at expiry;

“**First Exchange Rate**”, if applicable, has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document.

“**Market Disruption Event**” means:

- (i) the occurrence or existence, on any Trading Day or Index Business Day during the one-half hour period that ends at the close of trading, of any of:
 - (1) the suspension of or material limitation on the trading of a material number of constituent securities that comprise the Index; or
 - (2) the suspension of or material limitation on the trading of options or futures contracts relating to the Index on any exchanges on which such contracts are traded; or
 - (3) the imposition of any exchange controls in respect of any currencies involved in determining the Cash Settlement Amount.

For the purposes of this definition, (a) the limitation of the number of hours or days of trading will not constitute a Market Disruption Event if it results from an announced change in the regular business hours of any exchange, and (b) a limitation on trading imposed by reason of the movements in price exceeding the levels permitted by any relevant exchange will constitute a Market Disruption Event; or

- (ii) where the Index Exchange is the Stock Exchange, the occurrence of any event on any day which (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of such event; or
- (iii) a limitation or closure of the Index Exchange due to any unforeseen circumstances.

“**Maximum Index Level**” means the highest Spot Level of the Index during the MCE Valuation Period;

“**MCE Valuation Period**” means the period commencing from and including the moment upon which the Mandatory Call Event occurs (the trading session during which the Mandatory Call Event occurs is the “**1st Session**”) and up to the end of the trading session on the Index Exchange immediately following the 1st Session (“**2nd Session**”) unless, in the determination of the Issuer in its good faith, the 2nd Session for any reason (including, without limitation, a Market Disruption Event occurring and subsisting in the 2nd Session) does not contain any continuous period of 1 hour or more than 1 hour during which Spot Levels are available, the MCE Valuation Period shall be extended to the end of the subsequent trading session on the Index Exchange following the 2nd Session during which Spot Levels are available for a continuous period of at least 1 hour notwithstanding the existence or continuance of a Market Disruption Event in such postponed trading session, unless the Issuer determines in its good faith that each trading session on each of the four Index Business Days immediately following the date on which the Mandatory Call Event occurs does not contain any continuous period of 1 hour or more than 1 hour during which Spots Levels are available. In that case:

- (i) the period commencing from the 1st Session up to, and including, the last trading session of the fourth Index Business Day on the Index Exchange immediately following the date on which the Mandatory Call Event occurs shall be deemed to be the MCE Valuation Period; and
- (ii) the Issuer shall determine the Maximum Index Level or the Minimum Index Level (as the case may be) having regard to the then prevailing market conditions, the last reported Spot Level of the Index and such other factors as the Issuer may determine to be relevant in its good faith.

For the avoidance of doubt, all Spot Levels available throughout the extended MCE Valuation Period shall be taken into account to determine the Maximum Index Level or the Minimum Index Level (as the case may be) for the calculation of the Residual Value.

For the purposes of this definition,

- (a) the pre-opening session, the morning session and, in the case of half day trading, the closing auction session (if applicable) of the same day; and
- (b) the afternoon session and the closing auction session (if applicable) of the same day, shall each be considered as one trading session only;

“**Minimum Index Level**” means the lowest Spot Level of the Index during the MCE Valuation Period;

“**Residual Value**” means, subject to adjustment as provided in Condition 4, an amount calculated by the Issuer in accordance with the following formula (and if applicable, either (i) converted from the Reference Currency into the Settlement Currency at the Exchange Rate or, as the case may be, (ii) converted into the Interim Currency at the First Exchange Rate and then (if applicable) converted into the Settlement Currency at the Second Exchange Rate):

- (i) in the case of a series of Bull CBBCs:

$$\text{“Residual Value” per Board Lot} = \frac{(\text{Minimum Index Level} - \text{Strike Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

(ii) in the case of a series of Bear CBBCs:

$$\text{“Residual Value” per Board Lot} = \frac{(\text{Strike Level} - \text{Maximum Index Level}) \times \text{one Board Lot} \times \text{Index Currency Amount}}{\text{Divisor}}$$

“**Second Exchange Rate**”, if applicable, has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document.

“**Settlement Currency**” means Hong Kong dollars unless otherwise specified in the relevant Launch Announcement and Supplemental Listing Document; and

“**Settlement Date**” means the third CCASS Settlement Day after (i) the end of the MCE Valuation Period or (ii) the later of: (a) the Expiry Date; and (b) the day on which the Closing Level is determined in accordance with these Conditions (as the case may be).

“**Valuation Date**” means the date specified as such in the relevant Launch Announcement and Supplemental Listing Document. If the Issuer determines, in its sole discretion, that a Market Disruption Event has occurred on the Valuation Date, then the Issuer shall determine the Closing Level on the basis of its good faith estimate of the Closing Level that would have prevailed on that day but for the occurrence of the Market Disruption Event, provided that the Issuer, if applicable, may, but shall not be obliged to, determine such Closing Level by having regard to the manner in which futures contracts relating to the Index are calculated.

- (E) If as a result of an event beyond the control of the Issuer, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant bank account of the Holder on the original Settlement Date (“**Settlement Disruption Event**”), the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant bank account of the Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Holder for any interest in respect of the amount due or any loss or damage that such Holder may suffer as a result of the existence of a Settlement Disruption Event, nor shall the Issuer be under any circumstances be liable for any acts or defaults of CCASS in relation to the performance of its duties in relation to the CBBCs.
- (F) These Conditions shall not be construed so as to give rise to any relationship of agency or trust between the Stock Exchange, the Guarantor, the Issuer, the Index Sponsor, or its agent or nominee and the Holder and neither the Stock Exchange, the Guarantor, the Issuer, the Index Sponsor, nor its agent or nominee shall owe any duty of a fiduciary nature to the Holder.

None of the Stock Exchange, the Issuer, the Guarantor or the Index Sponsor shall have any responsibility for any errors or omissions in the calculation and determination of any variables published by it or a third party and used in any calculation or determination made pursuant to these terms and conditions (including the determination as to the occurrence of the Mandatory Call Event) or in the calculation of the Cash Settlement Amount arising from such errors or omissions.

The Issuer’s obligations to pay the Cash Settlement Amount shall be discharged by payment in accordance with Condition 3(D) above.

4 Adjustment to the Index

- (A) If the Index is (i) not calculated and announced by the Index Sponsor but is calculated and published by a successor to the Index Sponsor (the “**Successor Index Sponsor**”) acceptable to the Issuer or (ii) replaced by a successor index using, in the determination of the Issuer, the same or a substantially similar formula for and method of calculation as used in the calculation of the Index, then the Index will be deemed to be the index so calculated and announced by the Successor Index Sponsor or that successor index, as the case may be.
- (B) If (i) on or prior to the Valuation Date the Index Sponsor or (if applicable) the Successor Index Sponsor makes a material change in the formula for or the method of calculating the Index or in any other way materially modifies the Index (other than a modification prescribed in that formula or method to maintain the Index in the event of changes in constituent stock, contracts or commodities and other routine events), or (ii) on the Valuation Date the Index Sponsor or (if applicable) the Successor Index Sponsor fails to calculate and publish the Index (other than as a result of a Market Disruption Event), then the Issuer shall determine the Closing Level using, in lieu of the level of the Index calculated for the purpose of final settlement of the contract specified in the Launch Announcement and Supplemental Listing Document, the level for the Index as at the Valuation Date as determined by the Issuer in accordance with the formula for and method of calculating the Index last in effect prior to the change or failure, but using only those securities/commodities that comprised the Index immediately prior to that change or failure (other than those securities that have since ceased to be listed on the relevant exchange).
- (C) Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Conditions, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the CBBCs as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is (i) not materially prejudicial to the interests of the Holders generally (without considering the circumstances of any individual Holder or the tax or other consequences of such adjustment in any particular jurisdiction) or (ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.
- (D) All determinations made by the Issuer pursuant hereto will be conclusive and binding on the Holders. The Issuer will give, or procure that there is given, notice as soon as practicable of any determinations by publication in accordance with Condition 8.

5 Purchase by the Issuer

The Issuer and any of its affiliates may purchase CBBCs at any time on or after the date of their issue and any CBBCs which are so purchased may be surrendered for cancellation or offered from time to time in one or more transactions in the over-the-counter market or otherwise at prevailing market prices or in negotiated transactions, at the discretion of the Issuer or any such affiliate, as the case may be.

6 Global CBBC Certificate

A global callable bull/bear contract certificate (the “**Global CBBC Certificate**”) representing the CBBCs will be deposited within CCASS and registered in the name of HKSCC Nominees Limited or another nominee of Hong Kong Securities Clearing Company Limited. The Global CBBC Certificate will not be exchangeable for definitive certificates.

7 Meeting of Holder; Modification

- (A) *Meetings of Holder.* Notices for convening meetings to consider any matter affecting the Holder's interests will be given to the Holder in accordance with the provisions of Condition 8.

Every question submitted to a meeting of the Holder shall be decided by poll. A meeting may be convened by the Issuer or by the Holder holding not less than 10 per cent. of the CBBCs for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons (including any nominee appointed by the Holder) holding or representing not less than 25 per cent. of the CBBCs for the time being remaining unexercised, or at any adjourned meeting two or more persons (including any nominee appointed by the Holder) being or representing Holder whatever the number of CBBCs so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such Holder as, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the Holder shall be binding on all the holders of the CBBCs, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the Holder being held if passed unanimously.

Where the Holder is a clearing house recognised by the Laws of Hong Kong or its nominee(s), it may authorise such person or person(s) as it thinks fit to act as its representative(s) or proxy(ies) at any Holders' meeting provided that, if more than one person is so authorised, the authorisation or proxy form must specify the number of CBBCs in respect of which each such person is so authorised. Each person so authorised will be entitled to exercise the same powers and right, including the right to vote on a show of hands, on behalf of the recognised clearing house or its nominee(s) as that clearing house or its nominee(s) as if he was an individual Holder of the CBBC.

- (B) *Modification.* The Issuer may, without the consent of the Holders, effect any modification of the terms and conditions of the CBBCs or the Instrument which, in the opinion of the Issuer, is (i) not materially prejudicial to the interests of the Holders generally (without considering the circumstances of any individual Holder or the tax or other consequences of such modification in any particular jurisdiction); (ii) of a formal, minor or technical nature; (iii) made to correct a manifest error; or (iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong. Any such modification shall be binding on the Holders and shall be notified to them by the Issuer as soon as practicable thereafter in accordance with Condition 8.

8 Notices

All notices in English and Chinese to the Holder will be validly given if published on the website of the Hong Kong Exchanges and Clearing Limited.

9 Further Issues

The Issuer shall be at liberty from time to time, without the consent of the Holder, to create and issue further callable bull/bear contracts, upon such terms as to issue price and otherwise as the Issuer may determine so as to form a single series with the CBBCs.

10 Illegality and Impracticability

The Issuer is entitled to terminate the CBBCs if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (i) for it to perform its obligations under the CBBCs, or for the Guarantor to perform its obligations under the Guarantee, in whole or in part as a result of:
 - (a) the adoption of, or any change in, any relevant law or regulation (including any tax law); or
 - (b) the promulgation of, or any change in, the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law),(each of (a) and (b), a “**Change in Law Event**”); or
- (ii) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the CBBCs due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by the applicable law or regulation, pay to each Holder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each CBBC held by such Holder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion. Payment will be made to each Holder in such manner as shall be notified to the Holders in accordance with Condition 8.

11 Good Faith and Commercially Reasonable Manner

Any exercise of discretion by the Issuer under these Conditions will be made in good faith and in a commercially reasonable manner.

12 Governing Law

The CBBCs and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People’s Republic of China (“**Hong Kong**”). The Issuer and the Holder (by its acquisition of the CBBCs) shall be deemed to have submitted for all purposes in connection with the CBBCs and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

13 Language

A Chinese translation of these Conditions is available upon request during usual business hours on any weekday (Saturdays, Sundays and holidays excepted) at the offices of the Manager. In the event of any inconsistency between the English version and Chinese translation of these Conditions, the English version shall prevail and be governing.

14 Contracts (Rights of Third Parties) Ordinance

A person who is not a party to the terms and conditions of the CBBCs has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the CBBCs.

Manager

Morgan Stanley Asia Limited
Level 46
International Commerce Centre
1 Austin Road West, Kowloon
Hong Kong

TERMS AND CONDITIONS OF THE CBBCS RELATING TO THE UNITS OF A FUND

1 Form; Status; Guarantee; Transfer and Title

- (A) The callable bull/bear contracts or “CBBCs” (which expression shall, unless the context otherwise requires, include any further CBBCs issued pursuant to Condition 11) relating to the Units of the Fund are issued in registered form subject to and with the benefit of the instrument dated 18 July 2019 (the “**Instrument**”) made by Morgan Stanley Asia Products Limited (the “**Issuer**”) and the guarantee dated 18 March 2025 (including any supplement or replacement, the “**Guarantee**”) made by Morgan Stanley (the “**Guarantor**”).

Copies of the Instrument and the Guarantee are available for inspection at the office of the manager as specified below. The Holders (as hereinafter defined) are entitled to the benefit of, are bound by and are deemed to have notice of, all the provisions of the Instrument and the Guarantee.

- (B) The settlement obligations of the Issuer in respect of the CBBCs represent general unsecured contractual obligations of the Issuer and of no other person which rank, and will rank, equally among themselves and *pari passu* with all other present and future unsecured and unsubordinated contractual obligations of the Issuer, except for obligations accorded preference by mandatory provisions of applicable law.

CBBCs represent general contractual obligations of the Issuer, and are not, nor is it the intention (expressed, implicit or otherwise) of the Issuer to create by the issue of CBBCs deposit liabilities of the Issuer or a debt obligation of any kind.

In the Guarantee, the Guarantor has, subject to the terms therein, unconditionally and irrevocably guaranteed to the Holders the due and punctual settlement in full of all obligations due and owing by the Issuer arising under the issuance of the CBBCs after taking account of any set-off, combination of accounts, netting or similar arrangement from time to time exercisable by the Issuer against any person to whom obligations are from time to time being owed, as and when due (whether at expiry, by acceleration or otherwise).

- (C) Transfers of CBBCs may be effected only in Board Lots or integral multiples thereof in the Central Clearing and Settlement System (“**CCASS**”) in accordance with the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time.
- (D) Each person who is for the time being shown in the register kept by or on behalf of the Issuer in Hong Kong as the holder shall be treated by the Issuer and the Guarantor as the absolute owner and holder of the CBBCs (which shall be HKSCC Nominees Limited or another nominee of Hong Kong Securities Clearing Company Limited for so long as the CBBCs are accepted as eligible securities in CCASS). The expression “**Holder**” shall be construed accordingly.
- (E) Trading in CBBCs on The Stock Exchange of Hong Kong Limited (the “**Stock Exchange**”) shall be suspended after the occurrence of a Mandatory Call Event in accordance with the rules of the Stock Exchange. None of the Stock Exchange, the Issuer, the Guarantor nor any of their affiliates shall have any responsibility towards the Holder for any losses suffered in connection with the determination of a Mandatory Call Event, whether or not such losses are a result of the suspension of trading of the CBBCs, notwithstanding that such suspension may have occurred as a result of an error in the determination of the event.

2 CBBCs Rights and Exercise Expenses

- (A) Every Board Lot of the CBBCs entitles the Holder, upon compliance with Condition 3, to payment of the Cash Settlement Amount.
- (B) The Holder will be required to pay the Exercise Expenses in respect of the Mandatory Call Termination or Automatic Exercise of the CBBCs. To effect such payment, an amount equivalent to the Exercise Expenses will be deducted by the Issuer from the Cash Settlement Amount in accordance with Condition 3(D).
- (C) An irrevocable authorisation is deemed to be given to the Issuer to deduct any determined Exercise Expenses from the Cash Settlement Amount.

3 Mandatory Call Termination and Automatic Exercise

- (A) Upon the occurrence of a Mandatory Call Event, the CBBCs will terminate automatically on the date on which the Mandatory Call Event occurs (“**Mandatory Call Termination**”) and the Issuer will give notice of the occurrence of the Mandatory Call Event to the Holders in accordance with Condition 8. Trading in the CBBCs will be suspended immediately upon a Mandatory Call Event and all Post MCE Trades will be cancelled and will not be recognized by the Stock Exchange or the Issuer.

Whereas:

“**Business Day**” means a day (excluding Saturdays) on which the Stock Exchange is scheduled to open for dealings in Hong Kong and banks are open for business in Hong Kong. For the avoidance of doubt, if such a day falls on a day on which the tropical cyclone warning signal number 8 or above or a “BLACK” rainstorm signal is issued or an “extreme condition” announcement is made by the Hong Kong Government, that day shall be deemed to be a Business Day;

“**CCASS Settlement Day**” has the meaning ascribed to the term “Settlement Day” in the General Rules of CCASS and the CCASS Operational Procedures in effect from time to time, subject to such modification and amendment prescribed by HKSCC from time to time;

“**Mandatory Call Event**” occurs when the Spot Price of the Units is, at any time during a Trading Day in the Observation Period:

- (i) in the case of a series of Bull CBBCs, at or below the Call Price; or
- (ii) in the case of a series of Bear CBBCs, at or above the Call Price;

“**Observation Period**” means the period from the Observation Commencement Date to the Trading Day immediately before the Expiry Date (both dates inclusive);

“**Post MCE Trades**” has the meaning given to it in the relevant Launch Announcement and Supplemental Listing Document, subject to such modification and amendment prescribed by the Stock Exchange from time to time;

“Spot Price” means:

- (i) in respect of a continuous trading session of the Stock Exchange, the price per Unit concluded by means of automatic order matching on the Stock Exchange as reported in the official real-time dissemination mechanism for the Stock Exchange during such continuous trading session in accordance with the Trading Rules, excluding direct business (as defined in the Trading Rules); and
- (ii) in respect of a pre-opening session or a closing auction session (if applicable) of the Stock Exchange, as the case may be, the final Indicative Equilibrium Price (as defined in the Trading Rules) of the Share (if any) calculated at the end of the pre-order matching period of such pre-opening session or closing auction session (if applicable), as the case may be, in accordance with the Trading Rules, excluding direct business (as defined in the Trading Rules),

subject to such modification and amendment prescribed by the Stock Exchange from time to time;

“Trading Day” means any day on which the Stock Exchange is scheduled to open for trading for its regular trading sessions; and

“Trading Rules” means the Rules and Regulations of the Stock Exchange prescribed by the Stock Exchange from time to time.

- (B) Any CBBCs with respect to which a Mandatory Call Event has not occurred during the Observation Period shall be deemed automatically exercised on the Expiry Date (**“Automatic Exercise”**).
- (C) Following the date on which the Mandatory Call Event occurs or the Expiry Date, the Issuer will, with effect from the first Business Day following the Settlement Date cancel and destroy the Global CBBC Certificate.
- (D) Following a Mandatory Call Termination or an Automatic Exercise in accordance with Conditions 3(A) or 3(B), the Issuer will on a date no later than the Settlement Date in accordance with these Conditions procure payment of the aggregate Cash Settlement Amount (following deduction of any determined Exercise Expenses) for all CBBCs terminated or deemed automatically exercised in favour of the Holder as appearing in the register kept by or on behalf of the Issuer.

Any payment of the Cash Settlement Amount made pursuant to this Condition 3(D) shall be delivered at the risk and expense of the Holder to the Holder as recorded on the register, or such bank, broker or agent in Hong Kong (if any) as directed by the Holder.

Whereas:

“Cash Settlement Amount” means, subject to adjustment as provided in Condition 4, an amount calculated by the Issuer in accordance with following formula:

- (i) if no Mandatory Call Event has occurred:

- (a) in the case of a series of Bull CBBCs:

$$\text{“Cash Settlement Amount” per Board Lot} = \frac{\text{Entitlement} \times (\text{Closing Price} - \text{Strike Price}) \times \text{one Board Lot}}{\text{Number of CBBC(s) per Entitlement}}$$

(b) in the case of a series of Bear CBBCs:

$$\text{“Cash Settlement Amount” per Board Lot} = \frac{\text{Entitlement} \times (\text{Strike Price} - \text{Closing Price}) \times \text{one Board Lot}}{\text{Number of CBBC(s) per Entitlement}}$$

(ii) following a Mandatory Call Event:

(a) in the case of a series of Category R CBBCs, the Residual Value; or

(b) in the case of a series of Category N CBBCs, zero;

provided that if the relevant formula above produces an amount that is equal to or less than zero or the Exercise Expenses (if any), then no Cash Settlement Amount shall be payable. The aggregate Cash Settlement Amount payable to a Holder shall be expressed in the Settlement Currency and shall be rounded up to the nearest two decimal places in the Settlement Currency.

“Closing Price” shall be the closing price of one Unit (as derived from the Daily Quotation Sheet of the Stock Exchange, subject to any adjustment to such closing price as may be necessary to reflect any event as contemplated in Condition 4 such as capitalisation, rights issue, distribution or the like) on the Valuation Date;

“Entitlement” means such number of Units as specified in the relevant Launch Announcement and Supplemental Listing Document, subject to any adjustment in accordance with Condition 4;

“Exercise Expenses” means any charges or expenses including any taxes or duties which are incurred in respect of the early termination of the CBBCs upon the occurrence of a Mandatory Call Event or the exercise of the CBBCs at expiry;

“Market Disruption Event” means:

- (i) the occurrence or existence on any Trading Day during the one-half hour period that ends at the close of trading of any suspension of or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the Stock Exchange or otherwise) on the Stock Exchange in (a) the Units; or (b) any options or futures contracts relating to the Units if, in any such case, such suspension or limitation is, in the determination of the Issuer, material;
- (ii) the occurrence of any event on any day which (i) results in the Stock Exchange being closed for trading for the entire day; or (ii) results in the Stock Exchange being closed prior to its regular time for close of trading for the relevant day (for the avoidance of doubt, in the case when the Stock Exchange is scheduled to open for the morning trading session only, closed prior to its regular time for close of trading for the morning session), PROVIDED THAT there shall be no Market Disruption Event solely by reason of the Stock Exchange opening for trading later than its regular time for opening of trading on any day as a result of such event; or
- (iii) a limitation or closure of the Stock Exchange due to any unforeseen circumstances.

“Maximum Trade Price” means the highest Spot Price of the Unit (subject to any adjustment to such Spot Price as may be necessary to reflect any event as contemplated in Condition 4 such as capitalisation, rights issue, distribution or the like) during the MCE Valuation Period;

“**MCE Valuation Period**” means the period commencing from and including the moment upon which the Mandatory Call Event occurs (the trading session during which the Mandatory Call Event occurs is the “**1st Session**”) and up to the end of the trading session on the Stock Exchange immediately following the 1st Session (“**2nd Session**”) unless, in the determination of the Issuer in its good faith, the 2nd Session for any reason (including, without limitation, a Market Disruption Event occurring and subsisting in the 2nd Session) does not contain any continuous period of 1 hour or more than 1 hour during which trading in the Units is permitted on the Stock Exchange with no limitation imposed, the MCE Valuation Period shall be extended to the end of the subsequent trading session following the 2nd Session during which trading in the Units is permitted on the Stock Exchange with no limitation imposed for a continuous period of at least 1 hour notwithstanding the existence or continuance of a Market Disruption Event in such postponed trading session, unless the Issuer determines in its good faith that each trading session on each of the four Trading Days immediately following the date on which the Mandatory Call Event occurs does not contain any continuous period of 1 hour or more than 1 hour during which trading in the Units is permitted on the Stock Exchange with no limitation imposed. In that case:

- (i) the period commencing from the 1st Session up to, and including, the last trading session on the Stock Exchange of the fourth Trading Day immediately following the date on which the Mandatory Call Event occurs shall be deemed to be the MCE Valuation Period; and
- (ii) the Issuer shall determine the Maximum Trade Price or the Minimum Trade Price (as the case may be) having regard to the then prevailing market conditions, the last reported Spot Price of the Unit and such other factors as the Issuer may determine to be relevant in its good faith.

For the avoidance of doubt, all Spot Prices available throughout the extended MCE Valuation Period shall be taken into account to determine the Maximum Trade Price or the Minimum Trade Price (as the case may be) for the calculation of the Residual Value.

For the purposes of this definition,

- (a) the pre-opening session, the morning session and, in the case of half day trading, the closing auction session (if applicable) of the same day; and
- (b) the afternoon session and the closing auction session (if applicable) of the same day, shall each be considered as one trading session only;

“**Minimum Trade Price**” means the lowest Spot Price of the Unit (subject to any adjustment to such Spot Price as may be necessary to reflect any event as contemplated in Condition 4 such as capitalisation, rights issue, distribution or the like) during the MCE Valuation Period;

“**Residual Value**” means, subject to adjustment as provided in Condition 4:

- (a) in the case of a series of Bull CBBCs:

$$\text{“Residual Value” per Board Lot} = \frac{\text{Entitlement} \times (\text{Minimum Trade Price} - \text{Strike Price}) \times \text{one Board Lot}}{\text{Number of CBBC(s) per Entitlement}}$$

(b) in the case of a series of Bear CBBCs:

$$\text{“Residual Value” per Board Lot} = \frac{\text{Entitlement} \times (\text{Strike Price} - \text{Maximum Trade Price}) \times \text{one Board Lot}}{\text{Number of CBBC(s) per Entitlement}}$$

“**Settlement Currency**” means Hong Kong dollars unless otherwise specified in the relevant Launch Announcement and Supplemental Listing Document;

“**Settlement Date**” means the third CCASS Settlement Day after (i) the end of the MCE Valuation Period or (ii) the later of: (a) the Expiry Date; and (b) the day on which the Closing Price is determined in accordance with the Conditions (as the case may be); and

“**Valuation Date**” means, the Trading Day immediately preceding the Expiry Date. If the Issuer determines, in its sole discretion, that a Market Disruption Event has occurred on the Valuation Date, then the Valuation Date shall be the first succeeding Trading Day on which the Issuer determines that there is no Market Disruption Event, unless the Issuer determines that there is a Market Disruption Event occurring on each of the four Trading Days immediately following the original date which (but for the Market Disruption Event) would have been the Valuation Date. In that case:

- (i) the fourth Trading Day immediately following the original date shall be deemed to be the Valuation Date (regardless of the Market Disruption Event); and
 - (ii) the Issuer shall determine the Closing Price having regard to the then prevailing market conditions, the last reported trading price of the Units on the Stock Exchange and such other factors as the Issuer determines to be relevant.
- (E) If as a result of an event beyond the control of the Issuer, it is not possible for the Issuer to procure payment electronically through CCASS by crediting the relevant bank account of the Holder on the original Settlement Date (“**Settlement Disruption Event**”), the Issuer shall use its reasonable endeavours to procure payment electronically through CCASS by crediting the relevant bank account of the Holder as soon as reasonably practicable after the original Settlement Date. The Issuer will not be liable to the Holder for any interest in respect of the amount due or any loss or damage that such Holder may suffer as a result of the existence of a Settlement Disruption Event, nor shall the Issuer be under any circumstances be liable for any acts or defaults of CCASS in relation to the performance of its duties in relation to the CBBCs.
- (F) These Conditions shall not be construed so as to give rise to any relationship of agency or trust between the Stock Exchange, the Guarantor, the Issuer or its agent or nominee and the Holder and neither the Stock Exchange, the Guarantor, the Issuer nor its agent or nominee shall owe any duty of a fiduciary nature to the Holder.

None of the Stock Exchange, the Issuer or the Guarantor shall have any responsibility for any errors or omissions in the calculation and determination of any variables published by it or a third party and used in any calculation or determination made pursuant to these terms and conditions (including the determination as to the occurrence of the Mandatory Call Event) or in the calculation of the Cash Settlement Amount arising from such errors or omissions.

The Issuer’s obligations to pay the Cash Settlement Amount shall be discharged by payment in accordance with Condition 3(D) above.

4 Adjustments

Adjustments may be made by the Issuer to the terms of the CBBCs (including, but not limited to (i) the Strike Price, (ii) the Call Price and/or (iii) the Entitlement) on the basis of the following provisions:

- (A) (i) If and whenever the Fund shall, by way of Rights, offer new Units for subscription at a fixed subscription price to the holders of existing Units pro rata to existing holdings (a “**Rights Offer**”), the Entitlement, the Strike Price and the Call Price shall be adjusted to take effect on the Business Day on which the trading in the Units of the Fund becomes ex-entitlement in accordance with the following formula:

The Entitlement will be adjusted to:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

The Strike Price will be adjusted to:

$$\text{Adjusted Strike Price} = \frac{1}{\text{Adjustment Factor}} \times X$$

The Call Price will be adjusted to:

$$\text{Adjusted Call Price} = \frac{1}{\text{Adjustment Factor}} \times Y$$

Where:

$$\text{“Adjustment Factor”} = \frac{1 + M}{1 + (R/S) \times M}$$

E: Existing Entitlement immediately prior to the Rights Offer

X: Existing Strike Price immediately prior to the Rights Offer

Y: Existing Call Price immediately prior to the Rights Offer

S: Cum-Rights Unit price, being the closing price of an existing Unit, as derived from the Daily Quotation Sheet of the Stock Exchange on the last Business Day on which the Units are traded on a cum-rights basis

R: Subscription price per new Unit specified in the Rights Offer plus an amount equal to any dividends or other benefits foregone to exercise the Right

M: Number of new Units per existing Unit (whether a whole or a fraction) each holder of an existing Unit is entitled to subscribe or have

For the purposes of these Conditions, “**Rights**” means the right(s) attached to each existing Unit or needed to acquire one new Unit (as the case may be) which are given to a holder of existing Units to subscribe at a fixed subscription price for new Units pursuant to the Rights Offer (whether by the exercise of one Right, a part of a Right or an aggregate number of Rights).

- (ii) The Adjusted Strike Price and the Adjusted Call Price shall be rounded to the nearest 0.001.
 - (iii) For the purpose of Condition 4(A), no adjustment will be made if the adjustment to the Entitlement is one per cent. or less of the Entitlement immediately prior to the adjustment.
- (B) (i) If and whenever the Fund shall make an issue of Units credited as fully paid to the holders of Units generally by way of capitalisation of profits or reserves (other than pursuant to a scrip distribution or similar scheme for the time being operated by the Fund or otherwise in lieu of a cash distribution and without any payment or other consideration being made or given by such holders) (a “**Bonus Issue**”), the Entitlement, the Strike Price and the Call Price shall be adjusted to take effect on the Business Day on which trading in the Units of the Fund becomes ex-entitlement in accordance with the following formula:

The Entitlement will be adjusted to:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

The Strike Price will be adjusted to:

$$\text{Adjusted Strike Price} = \frac{1}{\text{Adjustment Factor}} \times X$$

The Call Price will be adjusted to:

$$\text{Adjusted Call Price} = \frac{1}{\text{Adjustment Factor}} \times Y$$

Where:

$$\text{“Adjustment Factor”} = 1 + N$$

E: Existing Entitlement immediately prior to the Bonus Issue

X: Existing Strike Price immediately prior to the Bonus Issue

Y: Existing Call Price immediately prior to the Bonus Issue

N: Number of additional Units (whether a whole or a fraction) received by a holder of existing Units for each Unit held prior to the Bonus Issue

- (ii) The Adjusted Strike Price and the Adjusted Call Price shall be rounded to the nearest 0.001.
- (iii) For the purpose of Condition 4(B), no adjustment will be made if the adjustment to the Entitlement is one per cent. or less of the Entitlement immediately prior to the adjustment.

- (C) If and whenever the Fund shall subdivide its Units or any class of its outstanding Units into a greater number of units or shares or consolidate its outstanding Units or any class of it into a smaller number of units or shares, the Entitlement shall be increased and the Strike Price and the Call Price shall be decreased (in the case of a subdivision) or the Entitlement shall be decreased and the Strike Price and the Call Price shall be increased (in the case of a consolidation) accordingly, in each case on the day on which the relevant subdivision or consolidation shall have taken effect.
- (D) If it is announced that the Fund is to or may merge or consolidate with or into any other trust or corporation (including becoming, by agreement or otherwise, a subsidiary of or controlled by any person or corporation) (except where the Fund is the surviving entity in a merger or consolidation) or that it is to or may sell or transfer all or substantially all of its assets, the rights attaching to the CBBCs may in the absolute discretion of the Issuer be amended no later than the Business Day preceding the consummation of such merger, consolidation, sale or transfer (each a “**Restructuring Event**”).

The rights attaching to the CBBCs after the adjustment shall, after such Restructuring Event, relate to the number of units or shares of the trust(s) or corporation(s) resulting from or surviving such Restructuring Event or other securities (the “**Substituted Securities**”) and/or cash offered in substitution for the affected Units, as the case may be, to which the holder of such number of Units to which the CBBCs related immediately before such Restructuring Event would have been entitled upon such Restructuring Event. Thereafter the provisions hereof shall apply to such Substituted Securities, provided that any Substituted Securities may, in the absolute discretion of the Issuer, be deemed to be replaced by an amount in the relevant currency equal to the market value or, if no market value is available, fair value, of such Substituted Securities in each case as determined by the Issuer as soon as practicable after such Restructuring Event is effected.

For the avoidance of doubt, any remaining Units shall not be affected by this paragraph (D) and, where cash is offered in substitution for Units or is deemed to replace Substituted Securities as described above, references in these Conditions to the Units shall include any such cash.

- (E) Generally, no adjustment will be made for an ordinary cash distribution (whether or not it is offered with a scrip alternative). For any other forms of cash distribution (each a “**Cash Distribution**”) announced by the Fund, such as a cash bonus, special dividend or extraordinary dividend, no adjustment will be made unless the value of the Cash Distribution accounts for 2 per cent. or more of the Unit’s closing price on the day of announcement by the Fund.

If and whenever the Fund shall make a Cash Distribution credited as fully paid to the holders of Units generally, the Entitlement, the Call Price and the Strike Price shall be adjusted to take effect on the Business Day on which trading in the Units becomes ex-entitlement (each a “**Dividend Adjustment Date**”) in accordance with the following formula:

The Entitlement will be adjusted to:

$$\text{Adjusted Entitlement} = \text{Adjustment Factor} \times E$$

The Strike Price will be adjusted to:

$$\text{Adjusted Strike Price} = \frac{1}{\text{Adjustment Factor}} \times X$$

The Call Price will be adjusted to:

$$\text{Adjusted Call Price} = \frac{1}{\text{Adjustment Factor}} \times Y$$

Where:

$$\text{“Adjustment Factor”} = \frac{S - OD}{S - OD - CD}$$

- E: Existing Entitlement immediately prior to the relevant Cash Distribution
- X: Existing Strike Price immediately prior to the relevant Cash Distribution
- Y: Existing Call Price immediately prior to the relevant Cash Distribution
- S: Closing Price of a Unit, as derived from the Daily Quotation Sheet of the Stock Exchange on the Business Day immediately prior to the Dividend Adjustment Date
- OD: Amount of ordinary cash distribution per Unit, provided that “OD” shall be deemed to be zero if no ordinary cash distribution is announced by the Fund or if the ex-entitlement date of the ordinary cash distribution is different from the ex-entitlement date of the relevant Cash Distribution
- CD: Amount of the relevant Cash Distribution per Unit

The Adjusted Strike Price and the Adjusted Call Price shall be rounded to the nearest 0.001.

- (F) Without prejudice to and notwithstanding any prior adjustment(s) made pursuant to the applicable Conditions, the Issuer may (but shall not be obliged to) make such other adjustments to the terms and conditions of the CBBCs as appropriate where any event (including the events as contemplated in the applicable Conditions) occurs and irrespective of, in substitution for, or in addition to the provisions contemplated in the applicable Conditions, provided that such adjustment is (i) not materially prejudicial to the interests of the Holders generally (without considering the circumstances of any individual Holder or the tax or other consequences of such adjustment in any particular jurisdiction) or (ii) determined by the Issuer in good faith to be appropriate and commercially reasonable.
- (G) The Issuer shall determine any adjustment or amendment and its determination shall be conclusive and binding on the Holder save in the case of manifest error. Any such adjustment or amendment shall be set out in a notice, which shall be given to the Holder in accordance with Condition 8 as soon as practicable after the determination.

5 Purchase by the Issuer

The Issuer and any of its affiliates may purchase CBBCs at any time on or after the date of their issue and any CBBCs which are so purchased may be surrendered for cancellation or offered from time to time in one or more transactions in the over-the-counter market or otherwise at prevailing market prices or in negotiated transactions, at the discretion of the Issuer or any such affiliate, as the case may be.

6 Global CBBC Certificate

A global callable bull/bear contract certificate (the “**Global CBBC Certificate**”) representing the CBBCs will be deposited within CCASS and registered in the name of HKSCC Nominees Limited or another nominee of Hong Kong Securities Clearing Company Limited. The Global CBBC Certificate will not be exchangeable for definitive certificates.

7 Meeting of Holder; Modification

- (A) *Meetings of Holder.* Notices for convening meetings to consider any matter affecting the Holder’s interests will be given to the Holder in accordance with the provisions of Condition 8.

Every question submitted to a meeting of the Holder shall be decided by poll. A meeting may be convened by the Issuer or by the Holder holding not less than 10 per cent. of the CBBCs for the time being remaining unexercised. The quorum at any such meeting for passing an Extraordinary Resolution will be two or more persons (including any nominee appointed by the Holder) holding or representing not less than 25 per cent. of the CBBCs for the time being remaining unexercised, or at any adjourned meeting two or more persons (including any nominee appointed by the Holder) being or representing Holder whatever the number of CBBCs so held or represented.

A resolution will be an Extraordinary Resolution when it has been passed at a duly convened meeting by not less than three-quarters of the votes cast by such Holder as, being entitled to do so, vote in person or by proxy.

An Extraordinary Resolution passed at any meeting of the Holder shall be binding on all the holders of the CBBCs, whether or not they are present at the meeting.

Resolutions can be passed in writing without a meeting of the Holder being held if passed unanimously.

Where the Holder is a clearing house recognised by the Laws of Hong Kong or its nominee(s), it may authorise such person or person(s) as it thinks fit to act as its representative(s) or proxy(ies) at any Holders’ meeting provided that, if more than one person is so authorised, the authorisation or proxy form must specify the number of CBBCs in respect of which each such person is so authorised. Each person so authorised will be entitled to exercise the same powers and right, including the right to vote on a show of hands, on behalf of the recognised clearing house or its nominee(s) as that clearing house or its nominee(s) as if he was an individual Holder of the CBBC.

- (B) *Modification.* The Issuer may, without the consent of the Holders, effect any modification of the terms and conditions of the CBBCs or the Instrument which, in the opinion of the Issuer, is (i) not materially prejudicial to the interests of the Holders generally (without considering the circumstances of any individual Holder or the tax or other consequences of such modification in any particular jurisdiction); (ii) of a formal, minor or technical nature;

(iii) made to correct a manifest error; or (iv) necessary in order to comply with mandatory provisions of the laws or regulations of Hong Kong. Any such modification shall be binding on the Holders and shall be notified to them by the Issuer as soon as practicable thereafter in accordance with Condition 8.

8 Notices

All notices in English and Chinese to the Holder will be validly given if published on the website of the Hong Kong Exchanges and Clearing Limited.

9 Termination or Liquidation of the Fund

In the event of a Termination or the liquidation, winding up or dissolution of the Fund or, if applicable, the trustee of the Fund (including any successor trustee appointed from time to time) (“**Trustee**”) (in its capacity as trustee of the Fund) or the appointment of a liquidator, receiver or administrator or analogous person under applicable law in respect of the whole or substantially the whole of the undertaking, property or assets of the Fund or, if applicable, the Trustee (each an “**Insolvency Event**”), all unexercised CBBCs shall terminate automatically upon the occurrence of any Insolvency Event and the Issuer shall have no further obligation under the CBBCs, except that in the case of a series of bear CBBCs:

- (A) if the Issuer determines in good faith and in a commercially reasonable manner that there is any residual value in the bear CBBCs upon the occurrence of such Insolvency Event:
 - (i) the Issuer shall pay to each Holder the residual value of the bear CBBCs in cash representing the fair market value in respect of each bear CBBC held by such Holder immediately on or about the occurrence of such Insolvency Event less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion, acting in good faith and in a commercially reasonable manner. Payment will be made to each Holder in such manner as shall be notified to the Holder in accordance with Condition 8;
 - (ii) the Issuer may, but shall not be obliged to, determine such cash amount by having regard to the manner in which the options contracts or futures contracts of the Units traded on the Stock Exchange are calculated; and
- (B) otherwise, if the Issuer determines in good faith and in a commercially reasonable manner that there is no residual value in the bear CBBCs upon the occurrence of such Insolvency Event, the bear CBBCs shall lapse and cease to be valid for any purpose upon the occurrence of the Insolvency Event.

For the purpose of this Condition 9,

- (a) an Insolvency Event occurs:
 - (i) in the case of a Termination, on the effective date of the Termination; or
 - (ii) in the case of a voluntary liquidation or winding up of the Fund or, if applicable, Trustee (in its capacity as trustee of the Fund), on the effective date of the resolution; or

- (iii) in the case of an involuntary liquidation, winding up or dissolution of the Fund or, if applicable, Trustee (in its capacity as trustee of the Fund), on the date of the relevant court order; or
 - (iv) in the case of the appointment of a liquidator or receiver or administrator or analogous person under applicable law in respect of the whole or substantially the whole of the undertaking, property or assets of the Fund or, if applicable, Trustee, on the date when such appointment is effective but subject (in any such case) to any contrary mandatory requirement of the applicable law.
- (b) **“Termination”** means:
- (i) the Fund is terminated or required to be terminated for whatever reason, or the termination of the Fund commences;
 - (ii) where applicable, the Fund is held or is conceded by the Trustee or the manager of the Fund (including any successor manager appointed from time to time) not to have been constituted or to have been imperfectly constituted;
 - (iii) where applicable, the Trustee ceases to be authorised under the Fund to hold the property of the Fund in its name and perform its obligations under the trust deed constituting the Fund; or
 - (iv) the Fund ceases to be authorised as an authorised collective investment scheme under the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong).

10 Delisting of Fund

- (A) If at any time the Units cease to be listed on the Stock Exchange, the Issuer shall give effect to these Conditions in such manner and make such adjustments to the rights attaching to the CBBCs as it shall, in its absolute discretion, consider appropriate to ensure, so far as it is reasonably able to do so, that the interests of the Holders generally are not materially prejudiced as a consequence of such delisting (without considering the individual circumstances of the Holders or the tax or other consequences that may result in any particular jurisdiction).
- (B) Without prejudice to the generality of Condition 10(A), where the Units are or, upon the delisting, become, listed on any other stock exchange, these Conditions may, in the absolute discretion of the Issuer, be amended to the extent necessary to allow for the substitution of that other stock exchange in place of the Stock Exchange and the Issuer may, without the consent of the Holder, make such adjustments to the entitlements of the Holders on exercise (including, if appropriate, by converting foreign currency amounts at prevailing market rates into the relevant currency) as it shall consider appropriate in the circumstances.
- (C) Any adjustment, amendment or determination made by the Issuer pursuant to this Condition 10 shall be conclusive and binding on the Holders save in the case of manifest error. Notice of any adjustments or amendments shall be given to the Holders in accordance with Condition 8 as soon as practicable after they are determined.

11 Further Issues

The Issuer shall be at liberty from time to time, without the consent of the Holder, to create and issue further callable bull/bear contracts, upon such terms as to issue price and otherwise as the Issuer may determine so as to form a single series with the CBBCs.

12 Illegality and Impracticability

The Issuer is entitled to terminate the CBBCs if it determines in good faith and in a commercially reasonable manner that, for reasons beyond its control, it has become or it will become illegal or impracticable:

- (i) for it to perform its obligations under the CBBCs, or for the Guarantor to perform its obligations under the Guarantee, in whole or in part as a result of:
 - (a) the adoption of, or any change in, any relevant law or regulation (including any tax law); or
 - (b) the promulgation of, or any change in, the interpretation by any court, tribunal, governmental, administrative, legislative, regulatory or judicial authority or power with competent jurisdiction of any relevant law or regulation (including any tax law),(each of (a) and (b), a “**Change in Law Event**”); or
- (ii) for it or any of its affiliates to maintain the Issuer’s hedging arrangements with respect to the CBBCs due to a Change in Law Event.

Upon the occurrence of a Change in Law Event, the Issuer will, if and to the extent permitted by the applicable law or regulation, pay to each Holder a cash amount that the Issuer determines in good faith and in a commercially reasonable manner to be the fair market value in respect of each CBBC held by such Holder immediately prior to such termination (ignoring such illegality or impracticability) less the cost to the Issuer of unwinding any related hedging arrangement as determined by the Issuer in its sole and absolute discretion. Payment will be made to each Holder in such manner as shall be notified to the Holders in accordance with Condition 8.

13 Good Faith and Commercially Reasonable Manner

Any exercise of discretion by the Issuer under these Conditions will be made in good faith and in a commercially reasonable manner.

14 Governing Law

The CBBCs and the Instrument will be governed by and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People’s Republic of China (“**Hong Kong**”). The Issuer and the Holder (by its acquisition of the CBBCs) shall be deemed to have submitted for all purposes in connection with the CBBCs and the Instrument to the non-exclusive jurisdiction of the courts of Hong Kong.

15 Language

A Chinese translation of these Conditions is available upon request during usual business hours on any weekday (Saturdays, Sundays and holidays excepted) at the offices of the Manager. In the event of any inconsistency between the English version and Chinese translation of these Conditions, the English version shall prevail and be governing.

16 Contracts (Rights of Third Parties) Ordinance

A person who is not a party to the terms and conditions of the CBBCs has no right under the Contracts (Rights of Third Parties) Ordinance (Cap. 623 of the Laws of Hong Kong) to enforce or to enjoy the benefit of any term of the CBBCs.

Manager

Morgan Stanley Asia Limited
Level 46
International Commerce Centre
1 Austin Road West, Kowloon
Hong Kong

ANNEX 2

FORM OF GUARANTEE

GUARANTEE

THIS GUARANTEE is made by way of deed poll on 18 March 2025 by Morgan Stanley a corporation duly organized under the laws of the State of Delaware (the “Guarantor”).

WHEREAS:

- A) Morgan Stanley Asia Products Limited (the “Issuer”) may determine to issue from time to time various series of warrants (the “Warrants”) and callable bull/bear contracts (the “CBBCs”) pursuant to an instrument by way of deed poll dated 18 July 2019 for each series of Warrants and CBBCs (the “Instrument”). The Warrants and the CBBCs shall together be referred to as the “Structured Products” in this Guarantee.
- B) The Guarantor has determined to execute this Guarantee of the Issuer’s contractual obligations (the “Obligations”) set out under the terms and conditions in respect of each series of the Structured Products issued pursuant to a base listing document dated 18 March 2025 (as amended and/or restated and/or supplemented from time to time), as a primary obligor and not merely as surety, for the benefit of the holders for the time being of the Structured Products (each, a “Holder”).
- C) Terms defined in the Instrument shall bear the same meaning in this Guarantee.

THE GUARANTOR hereby agrees as follows:

- 1. For value received, the Guarantor hereby unconditionally and irrevocably, subject to the provisions of paragraph 3 and 4 hereof, guarantees to each and every Holder the due and punctual payment and performance when due and owing of the Obligations in accordance with the terms and conditions of the Structured Products, and the Guarantor hereby agrees to (i) cause any such payment to be made promptly when and as the same shall become due and payable; and (ii) cause any such performance to be discharged promptly when and as the same shall become due, as if such payment was made or, as the case may be, performance was discharged, by the Issuer in accordance with the terms and conditions.
- 2. The Guarantor hereby waives notice of acceptance of this Guarantee and notice of the Obligations, and waives presentment, demand for payment, protest, notice of dishonour or non-payment of the Obligations. The Guarantor waives any right it may have of first requiring the Holder (or any trustee or agent on its behalf) to proceed against or enforce any other rights or security or claim payment from any person before claiming from the Guarantor under this Guarantee. This waiver applies irrespective of any law or any provision of this Guarantee to the contrary.
- 3. The obligations of the Guarantor will not be impaired or released by: (1) any change in the terms of the Obligations; (2) the taking or failure to take any action of any kind in respect of any security for the Obligations; (3) the exercising or refraining from exercising any rights against the Issuer or others in respect of the Obligations; or (4) any compromise or subordination of the Obligations, including any security therefor.
- 4. The Guarantee shall continue in full force and effect unless revoked by the Guarantor by giving written notice of termination to the Issuer. Notwithstanding any such termination, this Guarantee shall continue in full force and effect with respect to the Obligations which have been incurred prior to such termination until all such Obligations have been satisfied in full.

5. The Guarantor further agrees that this Guarantee will continue to be effective or be reinstated, as the case may be, if at any time payment, or any part thereof, of any of the Obligations, or interest thereon is rescinded or must otherwise be restored or returned by the Holder upon the liquidation, bankruptcy, insolvency, dissolution or reorganization of the Issuer.
6. This Guarantee shall continue to be effective if the Issuer merges or consolidates with or into, or transfers all or substantially all of its assets to, another entity, loses its separate legal identity, is liquidated or ceases to exist.
7. The Guarantor's obligations under this Guarantee are absolute and unconditional and shall not be affected by the validity, regularity or enforceability of any Structured Products, Obligation or any instrument evidencing any Obligation, or by the validity, enforceability, perfection or existence of any collateral therefor or by any other circumstance relating to any Obligation which might otherwise constitute a legal or equitable discharge of or defense of a guarantor or surety, provided that the Guarantor may interpose any counterclaim or setoff which the Issuer is or would have been entitled to interpose and that the Guarantor may interpose any defense which the Issuer is or would have been entitled to interpose.
8. Notwithstanding paragraph 1 hereof, the Guarantor may perform any of its duties and obligations under this Guarantee through any of its affiliates, provided that the Guarantor shall remain liable in accordance with the terms of this Guarantee for all such duties and obligations performed through such affiliate.

The Guarantor has appointed Morgan Stanley Hong Kong Limited, Level 46 International Commerce Centre, 1 Austin Road West, Kowloon, Hong Kong as its agent for service of process in Hong Kong.

THE GUARANTEE SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH HONG KONG LAW WITHOUT GIVING EFFECT TO PRINCIPLES OF CONFLICTS OF LAW.

THE GUARANTOR IRREVOCABLY AGREES THAT THE COURTS OF HONG KONG ARE TO HAVE EXCLUSIVE JURISDICTION TO SETTLE ANY DISPUTES ARISING FROM OR RELATING TO THIS GUARANTEE.

IN WITNESS whereof this Guarantee has been executed by the Guarantor as a deed poll and delivered on the date specified at the beginning of this Guarantee.

MORGAN STANLEY

By: _____
Authorized Officer

ANNEX 3

PURCHASE AND SALE

General

No action has been or will be taken by the Issuer or the Guarantor that would permit a public offering (other than Hong Kong) of any series of structured products or possession or distribution of any offering material in relation to any structured products in any jurisdiction where action for that purpose is required. No offers, sales, re-sales, transfers or deliveries of any structured products, or distribution of any offering material relating to structured products, may be made in or from any jurisdiction except in circumstances which will result in compliance with any applicable laws and regulations and will not impose any obligations on the Issuer or the Guarantor.

United States of America

The structured products and the Guarantee have not been and will not be registered under the Securities Act or the securities laws of any state or other jurisdiction of the United States. Trading in the structured products has not been and will not be approved by the U.S. Securities and Exchange Commission or any state securities commission or on an exchange or board of trade or otherwise by the United States Commodity Futures Trading Commission under the United States Commodity Exchange Act, as amended. The structured products, or interests therein, may not at any time be offered, sold, transferred, delivered, traded or exercised, directly or indirectly, within the United States or to, or for the account or benefit of, U.S. persons. Offers, sales, transfers, trading or delivery of the structured products or interests therein in the United States or to, or for the account or benefit of, U.S. persons may constitute a violation of United States laws governing securities and commodities trading unless made in compliance with the registration requirements of the Securities Act or pursuant to an exemption therefrom. In addition, hedging transactions involving the structured products may not be conducted other than in compliance with the Securities Act. The Issuer will not offer, sell, transfer, deliver, trade or exercise, directly or indirectly, the structured products or interests therein at any time within the United States or to, or for the account or benefit of, U.S. persons. Each person, including any dealer participating in the distribution of the structured products, who purchases structured products, whether in an offering, in the secondary market or otherwise, is deemed to have represented to and agreed with the Issuer, on its behalf and on behalf of any investor accounts for which it is purchasing the structured products, that it has not and will not offer, sell, transfer, deliver, trade or exercise, directly or indirectly, the structured products or interests therein at any time within the United States or to, or for the account or benefit of, U.S. persons. Each distributor, if any, will have sent to each dealer to which it sells structured products a confirmation or other notice describing the restrictions on offers, sales, transfers, trading or delivery of structured products within the United States or to, or for the account or benefit of, U.S. persons. As used in this section “**United States**” means the United States of America, its territories or possessions, any state of the United States, the District of Columbia or any other enclave of the United States government, its agencies or instrumentalities, and “**U.S. person**” means (i) any person who is a U.S. person as defined in Regulation S under the Securities Act or (ii) any person or entity other than one of the following:

- (i) a natural person who is not a resident of the United States;
- (ii) a partnership, corporation or other entity, other than an entity organised principally for passive investment, organised under the laws of a jurisdiction other than the United States and which has its principal place of business in a jurisdiction other than the United States;
- (iii) an estate or trust, the income of which is not subject to United States income tax regardless of source;

- (iv) an entity organised principally for passive investment such as a pool, investment company or other similar entity, provided that units of participation in the entity held by U.S. persons represent in the aggregate less than 10% of the beneficial interest in the entity, and that such entity was not formed principally for the purpose of facilitating investment by U.S. persons; or
- (v) a pension plan for the employees, officers or principals of an entity organised and with its principal place of business outside the United States.

In addition, unless otherwise specified in the Launch Announcement and Supplemental Listing Document relating to a series of structured products, each purchaser (or transferee) and any person directing such purchase (or transfer) will represent and warrant, or will be deemed to have represented and warranted, on each day from the date on which the purchaser (or transferee) acquires the structured products through and including the date on which the purchaser (or transferee) disposes of its interest in the structured products, that the purchaser (or transferee) is not (i) an “employee benefit plan” (as defined in Section 3(3) of Title I of the Employee Retirement Income Security Act of 1974, as amended (“**ERISA**”)) that is subject to the fiduciary responsibility provisions of ERISA, (ii) a “plan” that is subject to Section 4975 of the Internal Revenue Code of 1986, as amended (the “**Code**”), (iii) any entity whose underlying assets include “plan assets” by reason of any such employee plan’s or plan’s investment in the entity, or (iv) a governmental, church, non-U.S. or other plan that is subject to any law or regulation that is substantially similar to the provisions of Section 406 of ERISA or Section 4975 of the Code (each of (i), (ii), (iii) and (iv) a “**Benefit Plan Investor**”), or any person acting on behalf of or investing the assets of a Benefit Plan Investor.

Each purchaser acknowledges that the Issuer and the dealers will rely upon the truth and accuracy of the foregoing representations and agreements, and agrees that if any of the representations or warranties deemed to have been made by such purchaser by its purchase of the structured products are no longer accurate, it shall promptly notify the Issuer and the relevant dealer. If acquiring the structured products as a fiduciary or agent for one or more investor accounts, each purchaser represents that it has sole investment discretion with respect to each such account and full power to make the foregoing representations and agreements on behalf of each such account.

No ownership by U.S. persons

The structured products and the Guarantee may not be legally or beneficially owned, directly or indirectly, by U.S. persons at any time. Each holder and each beneficial owner of a structured product hereby represents, as a condition to purchasing or owning the structured product or any beneficial interest therein, that neither it nor any person for whose account or benefit the structured products are being purchased is located in the United States, is a U.S. person or was solicited to purchase the structured products while present in the United States. Each holder and each beneficial owner of a structured product hereby agrees not to offer, sell, transfer, deliver, trade or exercise, directly or indirectly, any of the structured products or interests therein at any time in the United States or to, or for the account or benefit of any U.S. person.

European Economic Area

Each dealer will be deemed to have represented and agreed that, it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available any structured products which are the subject of the offering as contemplated by this Base Listing Document to any retail investor in the European Economic Area. For the purposes of this provision:

- (a) the expression “**retail investor**” means a person who is one (or more) of the following:
 - i. a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, “**MiFID II**”); or

- ii. a customer within the meaning of Directive (EU) 2016/97 (as amended, the Insurance Distribution Directive), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or
 - iii. not a qualified investor as defined in Regulation (EU) 2017/1129 (as amended and superseded, the “**Prospectus Regulation**”); and
- (b) the expression “**offer**” includes the communication in any form and by any means of sufficient information on the terms of the offer and the structured products to be offered so as to enable an investor to decide to purchase or subscribe for the structured products.

United Kingdom

Each dealer will be deemed to have represented and agreed that, it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available any structured products which are the subject of the offering as contemplated by this Base Listing Document to any retail investor in the United Kingdom. For the purposes of this provision:

- (a) the expression “**retail investor**” means a person who is one (or more) of the following:
- i. a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 (“**EUWA**”); or
 - ii. a customer within the meaning of the provisions of the Financial Services and Markets Act, as amended (the “**FSMA**”) and any rules or regulations made under the FSMA to implement Directive (EU) 2016/97, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA; or
 - iii. not a qualified investor as defined in Article 2 of Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the EUWA; and
- (b) the expression an “**offer**” includes the communication in any form and by any means of sufficient information on the terms of the offer and the structured products to be offered so as to enable an investor to decide to purchase or subscribe for the structured products.

Each dealer will be deemed to have represented and agreed that:

- (a) in respect to structured products having a maturity of less than one year: (i) it is a person whose ordinary activities involve it in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of its business; and (ii) it has not offered or sold and will not offer or sell any structured products other than to persons whose ordinary activities involve them in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of their businesses or who it is reasonable to expect will acquire, hold, manage or dispose of investments (as principal or agent) for the purposes of their businesses where the issue of the structured products would otherwise constitute a contravention of Section 19 of the FSMA by the Issuer;
- (b) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of any structured products in circumstances in which Section 21(1) of the FSMA does not apply to the Issuer or the Guarantor; and

- (c) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to any structured products in, from or otherwise involving the United Kingdom.

People’s Republic of China

Neither the Base Listing Document nor any launch announcement and supplemental listing document (including any addendum thereto) in connection with the structured products has been or will be registered, circulated, published or distributed in the People’s Republic of China (for the purpose of this document, excluding the Hong Kong Special Administrative Region, the Macau Special Administrative Region and the Taiwan area) (the “**PRC**”). Accordingly, the structured products may not be offered or sold or delivered, or offered or sold or delivered to any person for reoffering or resale or redelivery, in any such case directly or indirectly (i) by means of any advertisement, invitation, document or activity which is directed at, or the contents of which are likely to be accessed or read by, the public in the PRC or (ii) to any person within the PRC other than permitted by and in full compliance with the relevant laws and regulations of the PRC.

Japan

The structured products have not been and will not be registered under the Financial Instruments and Exchange Acts of Japan (Law No. 25 of 1948, as amended, the “**Financial Instruments and Exchange Act**”). Accordingly, each dealer has agreed and each further dealer to be appointed in respect of the structured products will be required to agree, that it will not offer or sell any structured products, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organised under the laws of Japan) or to others for re-offering or re-sale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan except pursuant to an exemption from the registration requirements of, and otherwise in compliance with the Financial Instruments and Exchange Act and any other applicable laws, regulations and ministerial guidelines of Japan.

Additional

The offer and sale of structured products will also be subject to such other restrictions and requirements as may be set out in the relevant launch announcement and supplemental listing document.

Persons interested in acquiring structured products should inform themselves and obtain appropriate professional advice as to (i) the legal requirements within the countries of their nationality, residence, ordinary residence or domicile for such acquisition; (ii) any foreign exchange restrictions or exchange control requirements which they might encounter on the acquisition of structured products or their redemption; or (iii) the acquisition, holding or disposal of structured products.

ANNEX 4

A BRIEF GUIDE TO CREDIT RATINGS

Information set out in this Annex 4 is based on, extracted or reproduced from the website of S&P at <https://www.spglobal.com/ratings/en/> and the website of Moody's at <https://www.moodys.com> as at the day immediately preceding the date of this base listing document. Information appearing on those websites does not form part of this base listing document, and we accept no responsibility for the accuracy or completeness of the information appearing on those websites, except that we have accurately extracted and reproduced such information in this Annex 4 and take responsibility for such extraction and reproduction. We have not separately verified such information. There can be no assurance that such information will not be revised by the relevant rating agency in the future and we have no responsibility to notify you of such change. If you are unsure about any information provided in this Annex 4 and/or what a credit rating means, you should seek independent professional advice.

What is a credit rating?

A credit rating is a forward looking opinion by a credit rating agency of a company's overall ability to meet its financial obligations. The focus is on the company's capacity to pay its debts as they become due. The rating does not necessarily apply to any specific obligation.

What do the credit ratings mean?

Below are guidelines issued by S&P and Moody's on what each of their investment-grade ratings means.

S&P long-term issuer credit ratings

AAA

An obligor rated 'AAA' has extremely strong capacity to meet its financial commitments. 'AAA' is the highest issuer credit rating assigned by S&P.

AA

An obligor rated 'AA' has very strong capacity to meet its financial commitments. It differs from the highest-rated obligors only to a small degree.

A

An obligor rated 'A' has strong capacity to meet its financial commitments but is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligors in higher-rated categories.

BBB

An obligor rated 'BBB' has adequate capacity to meet its financial commitments. However, adverse economic conditions or changing circumstances are more likely to weaken the obligor's capacity to meet its financial commitments.

Plus (+) or minus (-)

The above ratings (except for 'AAA') may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within the rating categories.

Please refer to https://www.standardandpoors.com/en_US/web/guest/article/-/view/sourceId/504352 (in English version only) for further details.

Moody's long-term ratings definitions

Aaa

Obligations rated Aaa are judged to be of the highest quality, with minimal risk.

Aa

Obligations rated Aa are judged to be of high quality and are subject to very low credit risk.

A

Obligations rated A are considered upper medium-grade and are subject to low credit risk.

Baa

Obligations rated Baa are subject to moderate credit risk. They are considered medium-grade and as such may possess speculative characteristics.

Modifiers "1", "2" and "3"

Moody's appends numerical modifiers 1, 2 and 3 to each of the above generic rating classifications (except for Aaa). The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category.

Please refer to <https://ratings.moody's.io/ratings> (in English version only) for further details.

Rating Outlooks

A rating outlook is an opinion regarding the likely rating direction over the medium term. A rating outlook issued by S&P or Moody's will usually indicate whether the rating direction is likely to be "positive", "negative", "stable" or "developing". Please refer to the abovementioned websites of the relevant credit rating agencies for further details regarding rating outlooks published by the relevant credit rating agencies.

ANNEX 5

EXTRACT OF THE ISSUER'S INTERIM REPORT FOR THE SIX-MONTH PERIOD ENDED 30 JUNE 2024

This information in this Annex 5 has been extracted from our interim report for the six months ended 30 June 2024. References to page numbers in this Annex 5 are to the pages in our interim report and not to the pages in this document.

Please refer to the first addendum to the 2024 BLD dated 18 April 2024 for the issuer's financial statements as of 31 December 2023 and 2022 and for each of the two years in the period ended 31 December 2023 and the audit report on such financial statements.

MORGAN STANLEY ASIA PRODUCTS LIMITED

CONDENSED STATEMENT OF COMPREHENSIVE INCOME Six months ended 30 June 2024

	Notes	Six months ended 30 June 2024 US\$'000 (unaudited)	Six months ended 30 June 2023 US\$'000 (unaudited)
Net trading expense	2	(540)	(667)
Other revenue	3	2,728	2,971
Total non-interest revenues		<u>2,188</u>	<u>2,304</u>
Interest income	4	<u>489</u>	<u>584</u>
Net revenues		<u>2,677</u>	<u>2,888</u>
Non-interest expense:			
Other expense	5	(2,677)	(2,888)
RESULT BEFORE INCOME TAX		<u>—</u>	<u>—</u>
Income tax	6	<u>—</u>	<u>—</u>
RESULT AND TOTAL COMPREHENSIVE INCOME FOR THE PERIOD		<u><u>—</u></u>	<u><u>—</u></u>

All results were derived from continuing operations.

The notes on pages 14 to 40 form an integral part of the condensed financial statements.

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the year ended December 31, 2024

Commission File Number 1-11758

Morgan Stanley

(Exact name of Registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)	1585 Broadway New York, NY 10036 (Address of principal executive offices, including Zip Code)	36-3145972 (I.R.S. Employer Identification No.)	(212) 761-4000 (Registrant's telephone number, including area code)
Securities registered pursuant to Section 12(b) of the Act:			
Title of each class	Trading Symbol(s)	Name of exchange on which registered	
Common Stock, \$0.01 par value	MS	New York Stock Exchange	
Depository Shares, each representing 1/1,000th interest in a share of Floating Rate Non-Cumulative Preferred Stock, Series A, \$0.01 par value	MS/PA	New York Stock Exchange	
Depository Shares, each representing 1/1,000th interest in a share of Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series E, \$0.01 par value	MS/PE	New York Stock Exchange	
Depository Shares, each representing 1/1,000th interest in a share of Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series F, \$0.01 par value	MS/PF	New York Stock Exchange	
Depository Shares, each representing 1/1,000th interest in a share of Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series I, \$0.01 par value	MS/PI	New York Stock Exchange	
Depository Shares, each representing 1/1,000th interest in a share of Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series K, \$0.01 par value	MS/PK	New York Stock Exchange	
Depository Shares, each representing 1/1,000th interest in a share of 4.875% Non-Cumulative Preferred Stock, Series L, \$0.01 par value	MS/PL	New York Stock Exchange	
Depository Shares, each representing 1/1,000th interest in a share of 4.250% Non-Cumulative Preferred Stock, Series O, \$0.01 par value	MS/PO	New York Stock Exchange	
Depository Shares, each representing 1/1,000th interest in a share of 6.500% Non-Cumulative Preferred Stock, Series P, \$0.01 par value	MS/PP	New York Stock Exchange	
Depository Shares, each representing 1/1,000th interest in a share of 6.625% Non-Cumulative Preferred Stock, Series Q, \$0.01 par value	MS/PQ	New York Stock Exchange	
Global Medium-Term Notes, Series A, Fixed Rate Step-Up Senior Notes Due 2026 of Morgan Stanley Finance LLC (and Registrant's guarantee with respect thereto)	MS/26C	New York Stock Exchange	
Global Medium-Term Notes, Series A, Floating Rate Notes Due 2029 of Morgan Stanley Finance LLC (and Registrant's guarantee with respect thereto)	MS/29	New York Stock Exchange	

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes No

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files). Yes No

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company Emerging growth company

If an emerging growth company, indicate by check mark if the Registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the Registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the Registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the Registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

As of June 30, 2024, the aggregate market value of the common stock of the Registrant held by non-affiliates of the Registrant was approximately \$151,625,027,283. This calculation does not reflect a determination that persons are affiliates for any other purposes.

As of January 31, 2025, there were 1,612,855,585 shares of the Registrant's common stock, \$0.01 par value, outstanding.

Documents Incorporated by Reference: Portions of the Registrant's definitive proxy statement for its 2025 annual meeting of shareholders are incorporated by reference in Part III of this Form 10-K.

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ANNUAL REPORT ON FORM 10-K
For the year ended December 31, 2024

Morgan Stanley

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Forward-Looking Statements

We have included in or incorporated by reference into this report, and from time to time may make in our public filings, press releases or other public statements, certain statements, including, without limitation, those under “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” “Quantitative and Qualitative Disclosures about Risk” and “Legal Proceedings” that may constitute “forward-looking statements” within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. In addition, our management may make forward-looking statements to analysts, investors, representatives of the media and others. These forward-looking statements are not historical facts and represent only our beliefs regarding future events, many of which, by their nature, are inherently uncertain and beyond our control.

The nature of our business makes predicting the future trends of our revenues, expenses and net income difficult. The risks and uncertainties involved in our businesses could affect the matters referred to in such statements, and it is possible that our actual results may differ, possibly materially, from the anticipated results indicated in these forward-looking statements. Important factors that could cause actual results to differ from those in the forward-looking statements include, without limitation:

- the effect of market conditions, particularly in the global equity, fixed income, currency, credit and commodities markets, including corporate, commercial and residential mortgage lending, real estate and energy markets;
- the level of individual investor participation in the global markets, as well as the level and mix of client assets;
- the flow of investment capital into or from AUM;
- the level and volatility of equity, fixed income and commodity prices, interest rates, inflation and currency values, other market indices or other market factors, such as market liquidity;
- the availability and cost of both credit and capital, as well as the credit ratings assigned to our unsecured short-term and long-term debt;
- technological changes instituted by us, our competitors or counterparties, and technological risks, including risks associated with emerging technologies, business continuity and related operational risks, including breaches or other disruptions of our or a third party’s (or third-parties thereof) operations or systems;
- risk associated with cybersecurity threats, including data protection and cybersecurity risk management;
- our ability to effectively manage our capital and liquidity, including under stress tests designed by our banking regulators;
- the impact of current, pending and future legislation or changes thereto, regulation (including capital, leverage, funding, liquidity, consumer protection, and recovery and resolution requirements) and our ability to address such requirements;
- uncertainty concerning fiscal or monetary policies established by central banks and financial regulators, government shutdowns, debt ceilings or funding;
- changes to global trade policies, tariffs, trade sanctions and investment restrictions;
- legal and regulatory actions, including litigation and enforcement, and other non-financial risks in the U.S. and worldwide;
- changes in tax laws and regulations globally;
- the effectiveness of our risk management processes and related controls;
- our ability to effectively respond to an economic downturn, or other market disruptions;
- the effect of social, economic, and political conditions and geopolitical events, including as a result of government shutdowns, changes as a result of global elections, including changes in U.S. presidential administrations or Congress, sovereign risk, acts of war or aggression, and terrorist activities or military actions;
- the actions and initiatives of current and potential competitors, as well as governments, central banks, regulators and self-regulatory organizations;
- our ability to provide innovative products and services and execute our strategic initiatives, and costs related thereto, including with respect to the operational or technological integration related to such innovative and strategic initiatives;
- the performance and results of our acquisitions, divestitures, joint ventures, partnerships, minority stakes or strategic alliances, or other strategic arrangements and related integrations;
- investor, consumer and business sentiment and confidence in the financial markets;
- our reputation and the general perception of the financial services industry;
- our ability to retain, integrate and attract qualified employees or successfully transition key roles;
- climate-related incidents and other sustainability matters, and global pandemics; and
- other risks and uncertainties detailed under “Business—Competition,” “Business—Supervision and Regulation,” “Risk Factors” and elsewhere throughout this report.

Accordingly, you are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date on which they are made. We undertake no obligation to update publicly or revise any forward-looking statements to reflect the impact of circumstances or events that arise after the dates they are made, whether as a result of new information, future events or otherwise, except as required by applicable law. You should, however, consult further disclosures we may make in future filings of our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K and any amendments thereto or in future press releases or other public statements.

Available Information

We file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission (“SEC”). The SEC maintains a website, www.sec.gov, that contains annual, quarterly and current reports, proxy and information statements, and other information that issuers file electronically with the SEC. Our electronic SEC filings are available to the public at the SEC’s website.

Our website is www.morganstanley.com. You can access our Investor Relations webpage at www.morganstanley.com/about-us-ir. We make available free of charge, on or through our Investor Relations webpage, our proxy statements, annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports filed or furnished pursuant to the Securities Exchange Act of 1934, as amended (“Exchange Act”), as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. We also make available, through our Investor Relations webpage, via a link to the SEC’s website, statements of beneficial ownership of our equity securities filed by our directors, officers, 10% or greater shareholders and others under Section 16 of the Exchange Act.

You can access information about our corporate governance at www.morganstanley.com/about-us-governance, our sustainability initiatives at www.morganstanley.com/about-us/sustainability-at-morgan-stanley, and our commitment to diversity and inclusion at www.morganstanley.com/about-us/diversity. Our webpages include:

- Amended and Restated Certificate of Incorporation;
- Amended and Restated Bylaws;
- Charters for our Audit Committee, Compensation, Management Development and Succession Committee, Governance and Sustainability Committee, Operations and Technology Committee, and Risk Committee;
- Corporate Governance Policies;
- Policy Regarding Corporate Political Activities;
- Policy Regarding Shareholder Rights Plan;
- Equity Ownership Commitment;
- Code of Ethics and Business Conduct;
- Code of Conduct;
- Integrity Hotline Information;
- Environmental and Social Policies; and
- 2023 ESG Report.

Our Code of Ethics and Business Conduct applies to all directors, officers and employees, including our Chief Executive Officer, Chief Financial Officer and Deputy Chief Financial Officer. We will post any amendments to the Code of Ethics and Business Conduct and any waivers that are required to be disclosed by the rules of either the SEC or the New York Stock Exchange LLC on our website. You can request a copy of these documents, excluding exhibits, at no cost, by contacting Investor Relations, 1585 Broadway, New York, NY 10036 (212-761-4000). The information on our website is not incorporated by reference into this report.

Business

Overview

We are a global financial services firm that, through our subsidiaries and affiliates, advises, and originates, trades, manages and distributes capital for governments, institutions and individuals. We were originally incorporated under the laws of the State of Delaware in 1981, and our predecessor companies date back to 1924. We are a financial holding company (“FHC”) regulated by the Board of Governors of the Federal Reserve System (“Federal Reserve”) under the Bank Holding Company Act of 1956, as amended (“BHC Act”). We conduct our business from our headquarters in and around New York City, our regional offices and branches throughout the U.S. and our principal offices in London, Frankfurt, Tokyo, Hong Kong and other world financial centers. Unless the context otherwise requires, the terms “Morgan Stanley,” the “Firm,” “us,” “we” and “our” mean Morgan Stanley (the “Parent Company”) together with its consolidated subsidiaries. See the “Glossary of Common Terms and Acronyms” for the definition of certain terms and acronyms used throughout the 2024 Form 10-K.

Financial information concerning us, our business segments and geographic regions for each of the years ended December 31, 2024, December 31, 2023, and December 31, 2022 is included in “Financial Statements and Supplementary Data.”

Business Segments

We are a global financial services firm that maintains significant market positions in each of our business segments: Institutional Securities, Wealth Management and Investment Management. Through our subsidiaries and affiliates, we provide a wide variety of products and services to a large and diversified group of clients and customers, including corporations, governments, financial institutions and individuals. Additional information related to our business segments, respective clients, and products and services provided is included under “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

Competition

All aspects of our businesses are highly competitive, and we expect them to remain so. We compete in the U.S. and globally for clients, market share and human talent. Operating within the financial services industry on a global basis presents, among other things, technological, risk management, regulatory, infrastructure and other challenges that require effective resource allocation in order for us to remain competitive. Our competitive position depends on a number of factors, including our reputation, client experience, the quality and consistency of our long-term investment performance, innovation, execution, relative pricing and other factors, including entering into new or expanding current businesses as a result of acquisitions and other strategic initiatives. Our ability to sustain or improve our competitive

position also depends substantially on our ability to continue to attract and retain highly qualified employees while managing compensation and other costs. We compete with commercial banks, global investment banks, regional banks, broker-dealers, private banks, registered investment advisers, digital investing platforms, traditional and alternative asset managers, financial technology firms and other companies offering financial and ancillary services in the U.S. and globally. In addition, restrictive laws and regulations applicable to certain global financial services institutions, which have been increasing in complexity and volume, may prohibit us from engaging in certain transactions, impose more stringent capital and liquidity requirements, and increase costs, and can put us at a competitive disadvantage to competitors in certain businesses not subject to these same requirements. See also “Supervision and Regulation” herein and “Risk Factors.”

There is increased competition in the U.S. and globally driven by established financial services firms and emerging firms, including non-financial companies and business models focusing on technology innovation, competing for the same clients and assets, or offering similar products and services to retail and institutional customers. It is also possible that competition may become even more intense as we continue to compete with financial or other institutions that may be, or may become, larger, or better capitalized, or may have a stronger local presence and longer operating history in certain geographies or products. Many of these firms have the ability to offer a wide range of products and services through different platforms that may enhance their competitive position and could result in additional pricing pressure on our businesses.

Our ability to access capital at competitive rates (which is generally impacted by, among other things, our credit spreads and ratings) and to commit and deploy capital efficiently, particularly in our more capital-intensive businesses within our Institutional Securities business segment, including underwriting and sales, financing and market-making activities, also affects our competitive position. We expect clients to continue to request that we provide loans or lending commitments in connection with certain investment banking activities.

We also continue to experience price competition in our Institutional Securities business segment’s products. In particular, the ability to execute securities, derivatives and other financial instrument trades electronically on exchanges, swap execution facilities and other automated trading platforms, and the introduction and application of new technologies will likely continue the pressure on our revenues. The trend toward direct access to automated, electronic markets will likely continue as additional markets move to automated trading platforms.

Our Wealth Management business segment is primarily in the U.S., and our ability to effectively compete against many of our competitors across different channels (i.e., advisory led,

workplace and digital direct) is affected by multiple factors including our brand and reputation, the breadth, depth and pricing of our product offerings and our technology supporting evolving client needs.

Within our Investment Management business segment, our ability to compete successfully is affected by several factors, including our reputation, quality of investment professionals, performance of investment strategies or product offerings relative to peers and appropriate benchmark indices, advertising and sales promotion efforts, fee levels, the effectiveness of and access to distribution channels and investment pipelines, the types of products offered, and regulatory restrictions specific to FHCs. Our investment products, including alternative investment products, compete with investments offered by other investment managers, including by investment managers who may be subject to less stringent legal and regulatory regimes than us. For certain products and geographies, we have experienced and will also likely continue to experience competitive pressures in our Investment Management business segment as other investment managers and distributors continue to put downward pressure on fees.

Supervision and Regulation

As a major financial services firm, we are subject to extensive regulation by U.S. federal and state regulatory agencies and securities exchanges and by regulators and exchanges in each of the major markets where we conduct our business.

We continue to monitor the changing political, tax and regulatory environment. While it is likely that there will be changes in the way major financial institutions are regulated in both the U.S. and other markets in which we operate, it remains difficult to predict the exact impact these changes will have on our business, financial condition, results of operations and cash flows for a particular future period. We expect to remain subject to extensive supervision and regulation.

Financial Holding Company

Consolidated Supervision. We operate as a bank holding company (“BHC”) and FHC under the BHC Act and are subject to comprehensive consolidated supervision, regulation and examination by the Federal Reserve. In particular, we are subject to (among other things): significant regulation and supervision; intensive scrutiny of our businesses and plans for expansion of those businesses; limitations on activities; a systemic risk regime that imposes heightened capital and liquidity requirements; restrictions on activities and investments imposed by a section of the BHC Act added by the Dodd-Frank Wall Street Reform and Consumer Protection Act (“Dodd-Frank Act”) referred to as the “Volcker Rule,” and comprehensive derivatives regulation. In addition, the Consumer Financial Protection Bureau (“CFPB”) has primary rulemaking, enforcement and examination authority over us

and our subsidiaries with respect to federal consumer protection laws.

Scope of Permitted Activities. The BHC Act limits the activities of BHCs and FHCs and grants the Federal Reserve authority to limit our ability to conduct activities. We must obtain the Federal Reserve’s approval before engaging in certain banking and other financial activities both in the U.S. and internationally.

The BHC Act grandfathers “activities related to the trading, sale or investment in commodities and underlying physical properties,” provided that we were engaged in “any of such activities as of September 30, 1997 in the U.S.” and provided that certain other conditions that are within our reasonable control are satisfied. We currently engage in our commodities activities pursuant to the BHC Act grandfather exemption, as well as other authorities under the BHC Act.

Activities Restrictions under the Volcker Rule. The Volcker Rule prohibits banking entities, including us and our affiliates, from engaging in certain proprietary trading activities, as defined in the Volcker Rule, subject to exemptions for underwriting, market-making, risk-mitigating hedging and certain other activities. The Volcker Rule also prohibits certain investments and relationships by banking entities with covered funds, as defined in the Volcker Rule, subject to a number of exemptions and exclusions.

Capital Requirements. The Federal Reserve establishes capital requirements largely based on the Basel III capital standards established by the Basel Committee on Banking Supervision (“Basel Committee”), including well-capitalized standards, for large BHCs and evaluates our compliance with such requirements. The Office of the Comptroller of the Currency (“OCC”) establishes similar capital requirements and standards for Morgan Stanley Bank, N.A. (“MSBNA”) and Morgan Stanley Private Bank, National Association (“MSPBNA”) (together, our “U.S. Bank Subsidiaries”).

The Federal Reserve, Federal Deposit Insurance Corporation (“FDIC”) and the OCC (collectively, “U.S. banking agencies”) have proposed a comprehensive set of revisions to their capital requirements based on changes to the Basel III capital standards finalized by the Basel Committee. The impact on us of any revisions to the capital requirements is uncertain and depends on the adoption of final rulemakings by the U.S. banking agencies. For additional information, see “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements—Regulatory Developments and Other Matters—Basel III Endgame Proposal.”

In addition, many of our regulated subsidiaries are subject to regulatory capital requirements, including regulated subsidiaries registered as swap dealers with the U.S. Commodity Futures Trading Commission (“CFTC”) or conditionally registered as security-based swap dealers with

the SEC or registered as broker-dealers or futures commission merchants.

For more information about the specific capital requirements applicable to us and our U.S. Bank Subsidiaries, as well as our subsidiaries that are broker-dealers, swap dealers and security-based swap dealers, see “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements” and Note 16 to the financial statements.

Capital Planning, Stress Tests and Capital Distributions. The Federal Reserve has adopted capital planning and stress test requirements for large BHCs, including Morgan Stanley. For more information about our capital planning and stress test requirements, see “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements.”

In addition, the Federal Reserve, the OCC and the FDIC have the authority to prohibit or limit the payment of dividends by the banking organizations they supervise, including us and our U.S. Bank Subsidiaries, if, in the banking regulator’s opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization. For information about the Federal Reserve’s restrictions on capital distributions for large BHCs, see “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements—Capital Plans, Stress Tests and the Stress Capital Buffer.” All of these policies and other requirements could affect our ability to pay dividends and/or repurchase stock or require us to provide capital assistance to our U.S. Bank Subsidiaries under circumstances that we would not otherwise decide to do.

Liquidity Requirements. In addition to capital regulations, the U.S. banking agencies have adopted liquidity and funding standards, including the LCR, the NSFR, liquidity stress testing and associated liquidity reserve requirements.

For more information, see “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Balance Sheet—Regulatory Liquidity Framework.”

Systemic Risk Regime. Under rules issued by the Federal Reserve, large BHCs, including Morgan Stanley, must conduct internal liquidity stress tests, maintain unencumbered highly liquid assets to meet projected net cash outflows for 30 days over the range of liquidity stress scenarios used in internal stress tests, and comply with various liquidity risk management requirements. These large BHCs also must comply with a range of risk management and corporate governance requirements.

The Federal Reserve also imposes single-counterparty credit limits (“SCCL”) for large banking organizations. U.S. global systemically important banks (“G-SIBs”), including us, are

subject to a limit of 15% of Tier 1 capital for aggregate net credit exposures to any “major counterparty” (defined to include other U.S. G-SIBs, foreign G-SIBs and non-bank systemically important financial institutions supervised by the Federal Reserve). In addition, we are subject to a limit of 25% of Tier 1 capital for aggregate net credit exposures to any other unaffiliated counterparty.

The Federal Reserve may establish additional prudential standards for large BHCs, including with respect to an early remediation framework, contingent capital, enhanced public disclosures and limits on short-term debt, including off-balance sheet exposures. See “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements—Total Loss-Absorbing Capacity, Long-Term Debt and Clean Holding Company Requirements.”

If the Federal Reserve or the Financial Stability Oversight Council determines that a BHC with \$250 billion or more in consolidated assets poses a “grave threat” to U.S. financial stability, the institution may be, among other things, restricted in its ability to merge or offer financial products and/or required to terminate activities and dispose of assets. See also “Capital Requirements” and “Liquidity Requirements” and “Resolution and Recovery Planning” herein.

Resolution and Recovery Planning. We are required to submit once every two years to the Federal Reserve and the FDIC a resolution plan that describes our strategy for a rapid and orderly resolution under the U.S. Bankruptcy Code in the event of our material financial distress or failure. Interim updates are required in certain limited circumstances, including material mergers or acquisitions or fundamental changes to our resolution strategy.

Our preferred resolution strategy, which is set out in our most recent resolution plan, is an SPOE strategy, which generally contemplates the provision of adequate capital and liquidity by the Parent Company to certain of its subsidiaries so that such subsidiaries have the resources necessary to implement the resolution strategy after the Parent Company has filed for bankruptcy.

Our next resolution plan submission will be a targeted resolution plan in July 2025. Further, we submit an annual recovery plan to the Federal Reserve that outlines the steps that management could take over time to generate or conserve financial resources in times of prolonged financial stress.

Certain of our domestic and foreign subsidiaries are also subject to resolution and recovery planning requirements in the jurisdictions in which they operate. The FDIC currently requires certain insured depository institutions (“IDI”), including our U.S. Bank Subsidiaries, to submit full resolution plans every two years and interim targeted information at certain times between full resolution plan submissions that describe the IDI’s strategy for a rapid and orderly resolution in the event of material financial distress or

failure of the IDI. Submission of interim targeted information by our U.S. Bank Subsidiaries generally will not be required during a year which the Parent Company is required to submit a resolution plan to the Federal Reserve and FDIC. The first submission for our U.S. Bank Subsidiaries under this rule will be in 2026. In addition, the OCC requires IDIs with assets of \$100 billion or more, including our U.S. Bank Subsidiaries, to develop recovery plans detailing the actions they would take to remain a going concern when they experience considerable financial or non-financial stress, but have not deteriorated to the point that resolution is imminent. Our U.S. Bank Subsidiaries are required to develop a recovery plan by January 2026.

In addition, certain financial companies, including BHCs such as the Firm and certain of its subsidiaries, can be subject to a resolution proceeding under the orderly liquidation authority, with the FDIC being appointed as receiver, provided that determination of extraordinary financial distress and systemic risk is made by the U.S. Treasury Secretary in consultation with the U.S. president. Regulators have adopted certain orderly liquidation authority implementing regulations and may expand or clarify these regulations in the future. If we were subject to the orderly liquidation authority, the FDIC would have considerable powers, including: the power to remove directors and officers responsible for our failure and to appoint new directors and officers; the power to assign our assets and liabilities to a third party or bridge financial company without the need for creditor consent or prior court review; the ability to differentiate among our creditors, including treating certain creditors within the same class better than others, subject to a minimum recovery right on the part of disfavored creditors to receive at least what they would have received in bankruptcy liquidation; and broad powers to administer the claims process to determine distributions from the assets of the receivership. The FDIC has indicated that it expects to use an SPOE strategy if the FDIC were to implement the orderly liquidation authority for a U.S. G-SIB.

Regulators have also taken and proposed various actions to facilitate an SPOE strategy under the U.S. Bankruptcy Code, the orderly liquidation authority or other resolution regimes.

For more information about our resolution plan-related submissions and associated regulatory actions, see “Risk Factors—Legal, Regulatory and Compliance Risk,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements—Total Loss-Absorbing Capacity, Long-Term Debt and Clean Holding Company Requirements” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements—Resolution and Recovery Planning.”

Institutional Securities and Wealth Management

U.S. Bank Subsidiaries. Our U.S. Bank Subsidiaries are FDIC-insured depository institutions subject to supervision, regulation and examination by the OCC and are subject to the OCC’s risk governance guidelines, which establish heightened standards for a large IDI’s risk governance framework and the oversight of that framework by the IDI’s board of directors. Our U.S. Bank Subsidiaries are also subject to prompt corrective action standards, which require the relevant federal banking regulator to take prompt corrective action with respect to a depository institution if that institution does not meet certain capital adequacy standards. In addition, BHCs, such as Morgan Stanley, are required to serve as a source of strength to their U.S. bank subsidiaries and commit resources to support these subsidiaries in the event such subsidiaries are in financial distress. Our U.S. Bank Subsidiaries’ business activities are generally limited to supporting our Institutional Securities and Wealth Management business segments.

Our U.S. Bank Subsidiaries are subject to Sections 23A and 23B of the Federal Reserve Act, which impose restrictions on certain transactions with affiliates, including any extension of credit to, or purchase of assets from, an affiliate. These restrictions limit the total amount of credit exposure that our U.S. Bank Subsidiaries may have to any one affiliate and to all affiliates and require collateral for those exposures. Section 23B requires affiliate transactions to be on market terms.

As commonly controlled FDIC-insured depository institutions, each of our U.S. Bank Subsidiaries could be responsible for any loss to the FDIC from the failure of the other U.S. Bank Subsidiary.

Broker-Dealer and Investment Adviser Regulation. Our primary U.S. broker-dealer subsidiaries, Morgan Stanley & Co. LLC (“MS&Co.”) and Morgan Stanley Smith Barney LLC (“MSSB”) are registered broker-dealers with the SEC and in all 50 states, the District of Columbia, Puerto Rico and the U.S. Virgin Islands and are members of various self-regulatory organizations, including the Financial Industry Regulatory Authority (“FINRA”), and various securities exchanges and clearing organizations. Broker-dealers are subject to laws and regulations covering all aspects of the securities business, including sales and trading practices, securities offerings, publication of research reports, use of customers’ funds and securities, capital structure, risk management controls in connection with market access, recordkeeping and retention, and the conduct of their directors, officers, representatives and other associated persons. Broker-dealers are also regulated by securities administrators in those states where they do business. Our significant broker-dealer subsidiaries are members of the Securities Investor Protection Corporation.

MSSB is also a registered investment adviser with the SEC. MSSB’s relationship with its investment advisory clients is

subject to the fiduciary and other obligations imposed on investment advisers. The SEC and other supervisory bodies generally have broad administrative powers to address non-compliance, including the power to restrict or limit MSSB from carrying on its investment advisory and other asset management activities.

The Firm is subject to various regulations that affect broker-dealer sales practices and customer relationships, including the SEC's "Regulation Best Interest," which requires broker-dealers to act in the "best interest" of retail customers at the time a recommendation is made without placing the financial or other interests of the broker-dealer ahead of the interest of the retail customer.

Margin lending by our broker-dealers is regulated by the Federal Reserve's restrictions on lending in connection with purchases and short sales of securities. Our broker-dealers are also subject to maintenance and other margin requirements imposed under FINRA and other self-regulatory organization rules.

Our U.S. broker-dealer subsidiaries are subject to the SEC's net capital rule and the net capital requirements of various exchanges, other regulatory authorities and self-regulatory organizations. For more information about these requirements, see Note 16 to the financial statements.

Research Regulation. In addition to research-related regulations currently in place in the U.S. and other jurisdictions, regulators continue to focus on research conflicts of interest and may impose additional regulations.

Futures Activities and Certain Commodities Activities Regulation. MS&Co. and E*TRADE Futures LLC, as futures commission merchants, and MSSB, as an introducing broker, are subject to net capital requirements of, and certain of their activities are regulated by, the CFTC and the National Futures Association ("NFA"). MS&Co. is also subject to requirements of, and regulation by, the CME Group, in its capacity as MS&Co.'s designated self-regulatory organization, and various commodity futures exchanges of which MS&Co. is a member. Rules and regulations of the CFTC, NFA, the Joint Audit Committee and commodity futures exchanges address obligations related to, among other things, customer asset protections, including rules and regulations governing the segregation of customer funds, the use by futures commission merchants of customer funds, the margining of customer accounts and documentation entered into by futures commission merchants with their customers, record-keeping and reporting obligations of futures commission merchants and introducing brokers, risk disclosure and risk management. Our commodities activities are subject to extensive laws and regulations in the U.S. and abroad.

Derivatives Regulation. We are subject to comprehensive regulation of our derivatives businesses, including regulations that impose margin requirements, public and regulatory

reporting, central clearing and mandatory trading on regulated exchanges or execution facilities for certain types of swaps and security-based swaps (collectively, "Swaps").

CFTC and SEC rules require registration of swap dealers and security-based swap dealers, respectively, and impose numerous obligations on such registrants, including adherence to business conduct standards for all in-scope Swaps. We have registered a number of U.S. and non-U.S. swap dealers and conditionally registered a number of U.S. and non-U.S. security-based swap dealers. Swap dealers and security-based swap dealers regulated by a prudential regulator are subject to uncleared Swap margin requirements and minimum capital requirements established by the prudential regulators. Swap dealers and security-based swap dealers not subject to regulation by a prudential regulator are subject to uncleared Swap margin requirements and minimum capital requirements established by the CFTC and SEC, respectively. In some cases, the CFTC and SEC permit non-U.S. swap dealers and security-based swap dealers that do not have a prudential regulator to comply with applicable non-U.S. uncleared Swap margin and minimum capital requirements instead of direct compliance with CFTC or SEC requirements.

Investment Management

Many of the subsidiaries engaged in our investment management activities are registered as investment advisers with the SEC. Many aspects of our investment management activities are also subject to federal and state laws and regulations in place primarily for the protection of the investor or client. These laws and regulations generally grant supervisory agencies and bodies broad administrative powers, including the power to limit or restrict us from carrying on our investment management activities in the event that we fail to comply with such laws and regulations.

In addition, certain of our subsidiaries are U.S. registered broker-dealers and act as distributors to our proprietary mutual funds and as placement agents to certain private investment funds managed by our Investment Management business segment. Certain of our affiliates are registered as commodity trading advisors and/or commodity pool operators, or are operating under certain exemptions from such registration pursuant to CFTC rules and other guidance, and have certain responsibilities with respect to each pool they advise. Our investment management activities are subject to additional laws and regulations, including restrictions on sponsoring or investing in, or maintaining certain other relationships with, covered funds, as defined by the Volcker Rule, subject to certain limited exemptions. See also "Financial Holding Company—Activities Restrictions under the Volcker Rule," "Institutional Securities and Wealth Management—Broker-Dealer and Investment Adviser Regulation," "Institutional Securities and Wealth Management—Regulation of Futures Activities and Certain Commodities Activities," and "Institutional Securities and Wealth Management—Derivatives Regulation" herein and "Non-U.S. Regulation" herein for a discussion of other

regulations that impact our Investment Management business activities.

U.S. Consumer Protection

We are subject to supervision and regulation by the CFPB with respect to U.S. federal consumer protection laws. Federal consumer protection laws to which we are subject include the Gramm-Leach-Bliley Act's privacy provisions, Equal Credit Opportunity Act, Home Mortgage Disclosure Act, Electronic Fund Transfer Act, Fair Credit Reporting Act, Real Estate Settlement Procedures Act, Truth in Lending Act and Truth in Savings Act, all of which are enforced by the CFPB. We are also subject to certain federal consumer protection laws enforced by the OCC, including the Servicemembers Civil Relief Act. Furthermore, we are subject to certain state consumer protection laws, and under the Dodd-Frank Act, state attorneys general and other state officials are empowered to enforce certain federal consumer protection laws and regulations. These federal and state consumer protection laws apply to a range of our activities.

Non-U.S. Regulation

Our businesses are regulated extensively by non-U.S. regulators, including governments, central banks and regulatory bodies, securities exchanges, commodity exchanges, and self-regulatory organizations, especially in those jurisdictions in which we maintain an office. Certain regulators have prudential, business conduct and other authority over us or our subsidiaries, as well as powers to limit or restrict us from engaging in certain businesses or to conduct administrative proceedings that can result in censures, fines, asset seizures and forfeitures, the issuance of cease-and-desist orders, or the suspension or expulsion of a regulated entity, its affiliates or its employees. Certain of our subsidiaries are subject to capital, liquidity, leverage and other prudential requirements that are applicable under non-U.S. law.

Firmwide Financial Crimes Program

Our Financial Crimes program is coordinated and implemented on an enterprise-wide basis and supports our financial crime prevention efforts across all regions and business units. The program includes anti-money laundering ("AML"), economic sanctions ("Sanctions"), anti-boycott, anti-corruption, anti-tax evasion, and government and political activities compliance programs and aligned business-line risk functions.

In the U.S., the Bank Secrecy Act, as amended by the USA PATRIOT Act of 2001 and the Anti-Money Laundering Act of 2020, imposes significant obligations on financial institutions to detect and deter money laundering and terrorist financing activity, including requiring banks, broker-dealers, futures commission merchants, introducing brokers and mutual funds to develop and implement AML programs, verify the identity of customers that maintain accounts, and

monitor and report suspicious activity to appropriate law enforcement or regulatory authorities. Outside of the U.S., applicable laws, rules and regulations similarly require designated types of financial institutions to implement AML programs.

We are also subject to Sanctions, such as regulations and economic sanctions programs administered by the U.S. government, including the U.S. Treasury Department's Office of Foreign Assets Control ("OFAC") and the U.S. Department of State, and similar sanctions programs imposed by foreign governments or global or regional multilateral organizations. In addition, we are subject to anti-corruption laws, such as the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act, in the jurisdictions in which we operate. Anti-corruption laws generally prohibit offering, promising, giving or authorizing others to give anything of value, either directly or indirectly, to a government official or private party in order to influence official action or otherwise gain an unfair business advantage, such as to obtain or retain business.

Cyber and Information Security Risk Management and Protection of Client Information

The financial services industry faces increased global regulatory focus regarding cyber and information security risk management practices. Many aspects of our businesses are subject to cybersecurity legal, regulatory and disclosure requirements enacted by U.S. federal and state governments and other non-U.S. jurisdictions. These requirements are generally aimed at codifying basic cybersecurity protections and mandating data breach notification requirements.

Our businesses are also subject to increasing privacy and data protection legal requirements concerning the use and protection of certain personal information with regard to clients, employees and others. These requirements impose mandatory privacy and data protection obligations, including providing for individual rights, enhanced governance and accountability requirements, and significant fines and litigation risk for noncompliance. In addition, several jurisdictions have enacted or proposed personal and other data localization requirements and restrictions on cross-border transfer of personal and other data that may restrict our ability to conduct business in those jurisdictions or create additional financial and regulatory burdens to do so.

Numerous jurisdictions have passed laws, rules and regulations in these areas and many are considering new or updated ones that could impact our businesses, particularly as the application, interpretation and enforcement of these laws, rules and regulations are often uncertain and evolving. Many aspects of our businesses are subject to legal requirements concerning the use and protection of certain customer and other information, as well as the privacy and cybersecurity laws referenced above. We have adopted measures designed to comply with these and related applicable requirements in all relevant jurisdictions.

For additional information on our cybersecurity strategy and processes, see “Quantitative and Qualitative Disclosures about Risk—Operational Risk—Cybersecurity.”

Human Capital

Employees and Culture

Our employees are our most important asset. With offices in 42 countries, we had approximately 80 thousand employees across the globe as of December 31, 2024, whom we depend on to build value for our clients and shareholders. We are committed to a meritocracy based on the principles of rigor, humility and partnership. To facilitate talent attraction and retention, we strive to make Morgan Stanley a diverse and inclusive workplace with a strong culture and opportunities for our employees to grow and develop in their career. We support our employees with competitive compensation, benefits, and health and wellbeing programs.

Our core values guide decision-making aligned with the expectations of our employees, clients, shareholders, regulators, directors and the communities in which we operate. These guiding values—*Put Clients First, Do the Right Thing, Lead with Exceptional Ideas, Commit to Diversity and Inclusion, and Give Back*—are at the heart of our workplace culture and underpin our success. Our Code of Conduct is central to our expectation that employees embody our values. Every new hire and every employee annually is required to certify to their understanding of and adherence to the Code of Conduct. We also invite employee feedback on our culture and workplace through our ongoing employee engagement surveys. For a further discussion of the culture, values and conduct of employees, see “Quantitative and Qualitative Disclosures about Risk—Risk Management.”

Talent Development and Employee Representation

We are committed to the development of our workforce and supporting mobility and career growth. Our talent development programs are designed to provide employees with the resources to help them achieve their career goals, build management skills and lead their organizations. We believe supporting employee development and growth contributes to long-term retention. We continue to offer leadership programs to support employees as they progress in their career at the Firm.

Meritocracy is at the heart of Morgan Stanley’s talent development. We believe a workforce that represents the societies in which we live and work, and our global client base, is integral to Morgan Stanley’s continued success. Furthermore, we believe that an inclusive workplace is in the best interests of our employees and clients. We continue to invest in efforts to recruit, advance and retain a talented and diverse workforce through a holistic approach that centers on professional development, wellness and a culture that allows every employee to thrive.

Compensation, Financial and Employee Wellbeing

We provide responsible and effective compensation programs that reinforce our values and culture through four key objectives: deliver pay for sustainable performance, attract and retain top talent, align with shareholder interests and mitigate excessive risk-taking. In addition to salaries, these programs (which vary by location) include annual bonuses, retirement savings plans with matching contributions, an employee stock purchase plan, student loan refinancing and a financial wellbeing program. To promote equitable rewards for all employees, we have enhanced our practices to support fair and consistent compensation and rewards decisions based on merit, perform ongoing reviews of compensation decisions and conduct regular assessments of our rewards structure.

Our employees’ health is also central to our ongoing success. We support the physical, mental and financial wellbeing of our global workforce and their families by offering programs focusing on awareness, prevention and access. Offerings vary by location and include: health care and insurance benefits, mental health resources, flexible spending and health savings accounts, paid time off, flexible work schedules, family leave, child and elder care resources, financial help with fertility, adoption and surrogacy, and tuition assistance, among many others. On-site services in our principal locations include health centers, mental health counseling, fitness centers and physical therapy.

In 2024, we further enhanced our benefits offerings, introducing a new medical plan administrator and option, and broader benefits decision support for employees and their families. Our Global Wellbeing Board, comprised of senior management from across the Firm’s businesses and geographies, continues to shape and advance our wellbeing strategy with a focus on harmonizing our global benefit programs. This year, we expanded our mental health and wellbeing training program, now available to all businesses Firmwide. For additional detail on our human capital programs and initiatives, see “Human Capital” in our 2023 ESG Report (found on our website). The reports and information elsewhere on our website are not incorporated by reference into, and do not form any part of, this Annual Report.

Human Capital Metrics

Category	Metric	At December 31, 2024
Employees	Americas	53
	Asia	17
	EMEA	10
Culture	Employee engagement ¹	% Proud to work at Morgan Stanley
		92 %
Employee Representation	Global gender representation	% Women
		40 %
	% Women officer ²	29 %
	U.S. ethnic diversity representation	% Ethnically diverse ³
	% Ethnically diverse officer ^{2,3}	28 %
Retention	Voluntary attrition in 2024	% Global
		9 %
	Tenure	Management Committee average length of service (years)
	23	
		All employees average length of service (years)
		7
Compensation	Compensation and benefits	Total compensation and benefits expense in 2024 (millions)
		\$ 26,178

1. The percentage disclosed is based on the 2023 biennial employee engagement survey results, which reflect responses from 89% of employees.
2. Officer includes Managing Directors, Executive Directors and Vice Presidents.
3. U.S. ethnically diverse designations align with the Equal Employment Opportunity Commission's ethnicity and race categories and include American Indian or Native Alaskan, Asian, Black or African American, Hispanic or Latino, Native Hawaiian or Pacific Islander, and two or more races.

Information about Our Executive Officers

The executive officers of Morgan Stanley and their age and titles as of February 21, 2025 are set forth below. Business experience is provided in accordance with SEC rules.

Mandell L. Crawley (49). Executive Vice President (since February 2021) and Chief Client Officer of Morgan Stanley (since January 2025). Chief Human Resources Officer (February 2021 to January 2025). Head of Private Wealth Management (June 2017 to January 2021). Chief Marketing Officer (September 2014 to June 2017). Head of National Business Development and Talent Management for Wealth Management (June 2011 to September 2014). Divisional Business Development Officer (May 2010 to June 2011). Regional Business Development Officer (May 2009 to May 2010). Head of Field Sales and Marketing (February 2008 to May 2009). Head of Fixed Income Capital Markets Sales and Distribution for Wealth Management (April 2004 to February 2008).

Eric F. Grossman (58). Executive Vice President and Chief Legal Officer of Morgan Stanley (since January 2012) and Chief Administrative Officer (since July 2022). Global Head of Legal (September 2010 to January 2012). Global Head of Litigation (January 2006 to September 2010) and General Counsel of the Americas (May 2009 to September 2010). General Counsel of Wealth Management (November 2008 to September 2010). Partner at the law firm of Davis Polk & Wardwell LLP (June 2001 to December 2005).

Edward Pick (56). Chairman of the Board of Directors of Morgan Stanley (since January 2025) and Chief Executive

Officer of Morgan Stanley (since January 2024). Co-President and Co-Head of Corporate Strategy (June 2021 to December 2023). Head of Institutional Securities (July 2018 to December 2023). Global Head of Sales and Trading (October 2015 to July 2018). Head of Global Equities (March 2011 to October 2015). Co-Head of Global Equities (April 2009 to March 2011). Co-Head of Global Capital Markets (July 2008 to April 2009). Co-Head of Global Equity Capital Markets (December 2005 to July 2008).

Michael A. Pizzi (50). Executive Vice President and Head of Technology and Operations (since January 2025), and Head of U.S. Banks and Head of Technology of Morgan Stanley (from January 2023 to January 2025). Chairman and CEO of Morgan Stanley Private Bank, National Association and Morgan Stanley Bank, N.A. (from June 2021 to January 2025). Head of Digital Direct and Co-Head of Equity Administration for Wealth Management (from October 2020 to June 2021). Chief Executive Officer of E*TRADE Financial Corporation (from August 2019 to October 2020) prior to its acquisition by Morgan Stanley in 2020.

Andrew M. Saperstein (58). Co-President of Morgan Stanley (since June 2021). Head of Wealth Management (April 2019 to December 2023). Co-Head of Wealth Management (January 2016 to April 2019). Co-Chief Operating Officer of Institutional Securities (March 2015 to January 2016). Head of Investment Products and Services (June 2012 to March 2015).

Daniel A. Simkowitz (59). Co-President of Morgan Stanley (since January 2024). Head of Investment Management (October 2015 to December 2023) and Co-Head of Corporate Strategy (June 2021 to December 2023). Co-Head of Global Capital Markets (March 2013 to September 2015). Chairman of Global Capital Markets (November 2009 to March 2013). Managing Director in Global Capital Markets (December 2000 to November 2009).

Charles A. Smith (58). Executive Vice President and Chief Risk Officer of Morgan Stanley (since May 2023). Head of Institutional Securities Business Development (March 2017 to May 2023). Chief Financial Officer of Institutional Securities (August 2012 to March 2017). President of Morgan Stanley Bank, N.A. and Morgan Stanley Private Bank, National Association (September 2011 to August 2012). Head of Firm Strategy and Execution (May 2008 to September 2011). Managing Director in the Investment Banking Division (December 2005 to May 2008).

Sharon Yeshaya (45). Executive Vice President and Chief Financial Officer of Morgan Stanley (since June 2021). Head of Investor Relations (June 2016 to May 2021). Chief of Staff in the Office of the Chairman and CEO (January 2015 to May 2016). Co-Head of New Product Origination for Derivative Structured Products (December 2012 to December 2014).

Risk Factors

For a discussion of the risks and uncertainties that may affect our future results and strategic objectives, see “Forward-Looking Statements” preceding “Business” and “Return on Tangible Common Equity Goal” in “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

Market Risk

Market risk refers to the risk that a change in the level of one or more market prices, rates, spreads, indices, volatilities, correlations or other market factors, such as market liquidity, will result in losses for a position or portfolio. We have direct exposure to market risk. In addition, market risk may also impact our clients and markets in a manner that may indirectly impact us. For more information on how we monitor and manage market risk, see “Quantitative and Qualitative Disclosures about Risk—Market Risk.”

Our results of operations may be materially affected by market fluctuations and by global financial market and economic conditions and other factors.

Our results of operations have been in the past and may, in the future, be materially affected by global financial market and economic conditions, including, in particular, by periods of low or slowing economic growth in the United States and other major markets, both directly and indirectly through their impact on client activity levels. These include the level and volatility of equity, fixed income and commodity prices; the level, term structure and volatility of interest rates; inflation, currency values and unemployment rates; the level of other market indices, fiscal or monetary policies established by governments, central banks and financial regulators; and uncertainty concerning the future path of interest rates, government shutdowns, debt ceilings or funding, which may be driven by economic conditions, recessionary fears, market uncertainty or lack of confidence among investors and clients due to the effects of widespread events such as global pandemics, natural disasters, climate-related incidents, acts of war or aggression, geopolitical instability, changes as a result of global elections, including changes in U.S. presidential administrations or Congress, changes to global trade policies, supply chain complications and the implementation of tariffs, protectionist trade policies, trade sanctions or investment restrictions and other factors, or a combination of these or other factors.

The results of our Institutional Securities business segment, particularly results relating to our involvement in primary and secondary markets for all types of financial products, are subject to substantial market fluctuations due to a variety of factors that we cannot control or predict with great certainty. These fluctuations impact results by causing variations in business flows and activity and in the fair value of securities and other financial products. Fluctuations also occur due to the level of global market activity, which, among other things,

can be impacted by market uncertainty or lack of investor and client confidence due to unforeseen economic, geopolitical or market conditions that in turn affect the size, number and timing of investment banking client assignments and transactions and the realization of returns from our principal investments.

Periods of unfavorable market or economic conditions, including equity market levels and the level and pace of changes in interest rates and asset valuation, may have adverse impacts on the level of individual investor confidence and participation in the global markets and/or the level of and mix of client assets, including deposits. This could also impact the level of net new asset flows and/or flows into fee-based assets. Any of these factors could negatively impact the results of our Wealth Management business segment.

Substantial market fluctuations or divergence in asset performance could also cause variations in the value of our investments in our funds, the flow of investment capital into or from AUM, and the way customers allocate capital among money market, equity, fixed income or other investment alternatives, which could negatively impact the results of our Investment Management business segment.

The value of our financial instruments may be materially affected by market fluctuations. Market volatility, illiquid market conditions and disruptions in the markets may make it difficult to value and monetize certain of our financial instruments, particularly during periods of market uncertainty or displacement. Subsequent valuations in future periods, in light of factors then prevailing, may result in significant changes in the value of these instruments and may adversely impact historical or prospective fees and performance-based income (also known as incentive fees, which include carried interest) in respect of certain businesses. In addition, at the time of any sales and settlements of these financial instruments, the price we ultimately realize will depend on the demand and liquidity in the market at that time and may be materially lower than their current fair value. Any of these factors could cause a decline in the value of our financial instruments, which may adversely affect our results of operations in future periods.

In addition, financial markets are susceptible to severe events evidenced by rapid depreciation in asset values accompanied by a reduction in asset liquidity. Under these extreme conditions, hedging and other risk management strategies may not be as effective at mitigating trading losses as they would be under more normal market conditions. Moreover, under these conditions, market participants are particularly exposed to trading strategies employed by many market participants simultaneously and on a large scale, which could lead to increased individual counterparty risk for our businesses. Although our risk management and monitoring processes seek to quantify and mitigate risk to more extreme market moves, severe market events have historically been difficult to predict, and we could realize significant losses if extreme market events were to occur.

Significant changes to interest rates could adversely affect our results of operations.

Our net interest income is sensitive to changes in interest rates, generally resulting in higher net interest income in higher interest rate scenarios and lower net interest income in lower interest rate scenarios. The level and pace of interest rate changes, along with other developments, such as pricing changes to certain deposit types due to various competitive dynamics and alternative cash-equivalent products available to depositors, have in the past impacted, and could again impact, client preferences for cash allocation and the pace of reallocation of client balances, resulting in changes in the deposit mix and associated interest expense, as well as client demand for loans. These factors have in the past adversely affected, and may in the future adversely affect, our results of operations, including our net interest income.

Holding large and concentrated positions may expose us to losses.

Concentration of risk may reduce revenues or result in losses in our market-making, investing, underwriting (including block trading) and lending businesses (including margin lending) in the event of unfavorable market movements. We commit substantial amounts of capital to these businesses, which often results in our taking large positions in the securities of, or making large loans to, a particular issuer or issuers in a particular industry, country or region. In the event we hold a concentrated position larger than those held by competitors, we may incur larger losses. For further information regarding our country risk exposure, see also “Quantitative and Qualitative Disclosures about Risk—Country Risk.”

Credit Risk

Credit risk refers to the risk of loss arising when a borrower, counterparty or issuer does not meet its financial obligations to us. For more information on how we monitor and manage credit risk, see “Quantitative and Qualitative Disclosures about Risk—Credit Risk.”

We are exposed to the risk that third parties that are indebted to us will not perform their obligations.

We incur significant credit risk exposure through our Institutional Securities business segment. This risk may arise from a variety of business activities, including, but not limited to: extending credit to clients through various lending commitments; entering into swap or other derivative contracts under which counterparties have obligations to make payments to us; acting as clearing broker for listed and over-the-counter derivatives whereby we guarantee client performance to clearinghouses; providing short- or long-term funding that is secured by physical or financial collateral, including, but not limited to, real estate and marketable securities, whose value may at times be insufficient to fully cover the loan repayment amount; posting margin and/or

collateral and other commitments to clearinghouses, clearing agencies, exchanges, banks, securities firms and other financial counterparties; and investing and trading in securities and loan pools, whereby the value of these assets may fluctuate based on realized or expected defaults on the underlying obligations or loans.

We also incur credit risk in our Wealth Management business segment lending to mainly individual investors, including, but not limited to, margin- and securities-based loans collateralized by securities, residential mortgage loans, including home equity lines of credit (“HELOCs”), and structured loans to ultra-high net worth clients, that are in most cases secured by various types of collateral whose value may at times be insufficient to fully cover the loan repayment amount, including marketable securities, private investments, commercial real estate and other financial assets.

Our valuations related to, and reserves for losses on, credit exposures rely on complex models, estimates and subjective judgments about the future. While we believe current valuations and reserves adequately address our perceived levels of risk, future economic conditions, including inflation and changes in real estate and other asset values, that differ from or are more severe than forecast, inaccurate models or assumptions, or external factors, such as geopolitical events, changes in international trade policies, global pandemics or natural disasters, could lead to inaccurate measurement of or deterioration of credit quality of our borrowers and counterparties or the value of collateral and result in unexpected losses. We may also incur higher-than-anticipated credit losses as a result of (i) disputes with counterparties over the valuation of collateral or (ii) actions taken by other lenders that may negatively impact the valuation of collateral. In cases where we foreclose on collateral, sudden declines in the value or liquidity of collateral may result in significant losses to us despite our (i) credit monitoring, (ii) over-collateralization, (iii) ability to call for additional collateral or (iv) ability to force repayment of the underlying obligation, especially where there is a single type of collateral supporting the obligation. In addition, in the longer term, climate change may have a negative impact on the financial condition of our clients, which may decrease revenues from those clients and increase the credit risk associated with loans and other credit exposures to those clients. Certain of our credit exposures may be concentrated by counterparty, product, sector, portfolio, industry or geographic region. Although our models and estimates account for correlations among related types of exposures, a change in the market or economic environment for a concentrated product or an external factor impacting a concentrated counterparty, sector, portfolio, industry or geographic region may result in credit losses in excess of amounts forecast. For further information regarding our country risk exposure, see also “Quantitative and Qualitative Disclosures about Risk—Country Risk.”

In addition, as a clearing member of several central counterparties, we are responsible for the defaults or misconduct of our customers and could incur financial losses

in the event of default by other clearing members. Although we regularly review our credit exposures, default risk may arise from events or circumstances that are difficult to detect or foresee.

A default by a large financial institution could adversely affect financial markets.

The commercial soundness of many financial institutions and certain other large financial services firms may be closely interrelated as a result of credit, trading, clearing or other relationships among such entities. Increased centralization of trading activities through particular clearinghouses, central agents or exchanges may increase our concentration of risk with respect to these entities. As a result, concerns about, or a default or threatened default by, one or more such entities could lead to significant market-wide liquidity and credit problems, losses or defaults by other institutions, or require financial commitments to multilateral actions intended to support market stability. This is sometimes referred to as systemic risk and may adversely affect financial intermediaries, such as clearinghouses, clearing agencies, exchanges, banks and securities firms, with which we interact on a daily basis and, therefore, could adversely affect us. See also “Systemic Risk Regime” under “Business—Supervision and Regulation—Financial Holding Company.”

Operational Risk

Operational risk refers to the risk of loss, or of damage to our reputation, resulting from inadequate or failed processes or systems, human factors (e.g., inappropriate or unlawful conduct) or external events (e.g., cyberattacks or third-party vulnerabilities) that may manifest as, for example, loss of information, business disruption, theft and fraud, legal, regulatory and compliance risks, or damage to physical assets. We may experience operational risk across the full scope of our business activities, including revenue-generating activities and support and control groups (e.g., information technology (“IT”) and trade processing). Legal, regulatory and compliance risk is included in the scope of operational risk and is discussed below under “Legal, Regulatory and Compliance Risk.” For more information on how we monitor and manage operational risk, see “Quantitative and Qualitative Disclosures about Risk—Operational Risk.”

We are subject to operational risks, including a failure, breach or other disruption of our operations or security systems or those of our third parties (or third parties thereof), as well as human error or malfeasance, which could adversely affect our businesses or reputation.

Our businesses are highly dependent on our ability to process and report, on a daily basis, a large number of transactions across numerous and diverse markets in many currencies. We may introduce new products or services or change processes or reporting, including in connection with new regulatory requirements, or integration of processes or systems of

acquired companies, resulting in new operational risk that we may not fully appreciate or identify.

The trend toward direct access to automated, electronic markets, and the move to more automated trading platforms has resulted in the use of increasingly complex technology that relies on the continued effectiveness of the programming code and integrity of the data to process the trades. We rely on the ability of our employees, our consultants, our internal systems and systems at technology centers maintained by unaffiliated third parties to operate our different businesses and process a high volume of transactions. Unusually high trading volumes or site usage could cause our systems to operate at an unacceptably slow speed or even fail. Disruptions to, destruction of, instability of or other failure to effectively maintain our IT systems or external technology that allows our clients and customers to use our products and services (including our self-directed brokerage platform and mobile services) could harm our business and our reputation.

As a major participant in the global capital markets, we face the risk of incorrect valuation or risk management of our trading positions due to flaws in data, models, electronic trading systems or processes, or due to fraud or cyberattacks. We also face the risk of operational failure or disruption of any of the clearing agents, exchanges, clearinghouses or other financial intermediaries we use to facilitate our lending, securities and derivatives transactions. In addition, in the event of a breakdown or improper operation or disposal of our, or a direct or indirect third party’s (or third parties thereof) systems, processes or information assets, or improper or unauthorized action by third parties, including consultants and subcontractors or our employees, we have received in the past and may receive in the future regulatory sanctions, and could suffer financial loss, an impairment to our liquidity position, a disruption of our businesses or damage to our reputation.

In addition, the interconnectivity of multiple financial institutions with central agents, exchanges and clearinghouses, and the increased importance of these entities, increases the risk that an operational failure at one institution or entity may cause an industrywide operational failure that could materially impact our ability to conduct business. Furthermore, the concentration of Firm and personal information held by a small number of third parties increases the risk that a breach or disruption at a key third party may cause an industrywide event that could significantly increase the cost and risk of conducting business. These risks may be heightened to the extent that we rely on third parties that are concentrated in a geographic area.

There can be no assurance that our or our third parties’ business contingency and security response plans fully mitigate all potential risks to us. Our ability to conduct business may be adversely affected by a disruption in the infrastructure that supports our businesses and the communities where we are located. This may include a disruption involving physical site access; software flaws and

vulnerabilities; cybersecurity incidents; terrorist activities; political unrest; disease pandemics; catastrophic events; climate-related incidents and natural disasters (such as earthquakes, tornadoes, floods, hurricanes and wildfires); electrical outages; environmental hazards; computer servers; internet outages; client access to our digital platforms and mobile applications; communication platforms or other services we use; new technologies (such as generative artificial intelligence); and our employees or third parties with whom we conduct business. Although we and the third parties with whom we conduct business employ backup systems for data, those backup systems may be unavailable following a disruption, the affected data may not have been backed up or may not be recoverable from the backup, the backup systems may not process data as accurately or efficiently as the primary systems or the backup data may be costly to recover, any of which could adversely affect our business.

Notwithstanding evolving technology and technology-based risk and control systems, our businesses ultimately rely on people, including our employees and those of our third parties (or third parties thereof). As a result of human error or engagement in violations of applicable policies, laws, rules or procedures, certain errors or violations are not always discovered immediately by our technological processes or by our controls and other procedures that are intended to prevent and detect such errors or violations. These can include calculation or input errors, inadvertent or duplicate payments, mistakes in addressing emails or other communications, errors in software or model development or implementation, or errors in judgment, as well as intentional efforts to disregard or circumvent applicable policies, laws, rules or procedures. Our use of new technologies may be undermined by such human errors or misconduct due to undetected flaws or biases in the algorithms or data utilized by such technologies. Human errors and malfeasance, even if promptly discovered and remediated, can result in material losses and liabilities for us, and negatively impact our reputation in the future.

We conduct business in various jurisdictions outside the U.S., including jurisdictions that may not have comparable levels of protection for their corporate assets, such as intellectual property, trademarks, trade secrets, know-how, and customer information and records. The protection afforded in those jurisdictions may be less established and/or predictable than in the U.S. or other jurisdictions in which we operate. As a result, there may also be heightened risks associated with the potential theft of their data, technology and intellectual property in those jurisdictions by domestic or foreign actors, including private parties and those affiliated with or controlled by state actors. Additionally, we are subject to complex and evolving U.S. and international laws and regulations governing areas such as cybersecurity, privacy and data governance, transfer and protection, which may differ and potentially conflict, in various jurisdictions. Any theft of data, technology or intellectual property may negatively impact our operations and reputation, including disrupting the business activities of our subsidiaries, affiliates,

joint ventures or clients conducting business in those jurisdictions.

A cyberattack, information or security breach or a technology failure of ours or a third party could adversely affect our ability to conduct our business or manage our exposure to risk, or result in disclosure or misuse of personal, confidential or proprietary information and otherwise adversely impact our results of operations, liquidity and financial condition, as well as cause reputational harm.

Cybersecurity risks for financial institutions have significantly increased in recent years, in part because of the proliferation of new technologies; the use of the internet, mobile telecommunications and cloud technologies to conduct financial transactions; and the increased sophistication and activities of organized crime, hackers, terrorists, nation-states, state-sponsored actors and other parties. Any of these parties may also attempt to fraudulently induce employees, customers, clients, vendors or other third parties or users of our systems to disclose sensitive information in order to gain access to our networks, systems or data or those of our employees or clients, and such parties may see their effectiveness enhanced by the use of artificial intelligence. Global events and geopolitical instability have also led to increased nation-state targeting of financial institutions in the U.S. and abroad.

Information security risks may also derive from human error, fraud or malice on the part of our employees or third parties, software bugs, server malfunctions, software or hardware failure or other technological failure. For example, human error has led to the loss of the Firm's physical data-bearing devices in the past. These risks may be heightened by several factors, including remote work, reliance on new technologies (such as generative artificial intelligence) or as a result of the integration of acquisitions and other strategic initiatives that may subject us to new technology, customers or third-party providers. In addition, third parties with whom we do business or share information, and each of their service providers, our regulators and the third parties with whom our customers and clients share information used for authentication, may also be sources of cybersecurity and information security risks, particularly where these activities are beyond our security and control systems. There is no guarantee that the measures we take will provide absolute security or recoverability given that the techniques used in cyberattacks are complex, frequently change and are difficult to anticipate.

Like other financial services firms, the Firm, its third-party providers and its clients continue to be the subject of unauthorized access attacks; mishandling, loss, theft or misuse of information; computer viruses or malware; cyberattacks designed to obtain confidential information, destroy data, disrupt or degrade service, sabotage systems or networks, impede our ability to execute or confirm settlement of transactions or cause other damage; ransomware; denial of

service attacks; data breaches; social engineering attacks; phishing attacks; and other events. There can be no assurance that such unauthorized access, mishandling or misuse of information, or cybersecurity incidents will not occur in the future and they could occur more frequently and on a more significant scale.

We maintain a significant amount of personal and confidential information on our customers, clients and certain counterparties that we are required to protect under various state, federal and international data protection and privacy laws. These laws may be in conflict with one another or courts and regulators may interpret them in ways that we had not anticipated or that adversely affect our business. A cyberattack, information or security breach, or a technology failure of ours or of a third party could jeopardize our or our clients', employees', partners', vendors' or counterparties' personal, confidential, proprietary or other information processed and stored in, and transmitted through, our and our third parties' computer systems and networks. Furthermore, such events could cause interruptions or malfunctions in our, our clients', partners', vendors', counterparties' or third parties' operations, as well as the unauthorized release, gathering, monitoring, misuse, loss or destruction of personal, confidential, proprietary and other information of ours, our employees, our customers or of other third parties. Any of these events could result in reputational damage with our clients and the market, client dissatisfaction, additional costs to us to maintain and update our operational and security systems and infrastructure, violation of the applicable data protection and privacy laws, regulatory investigations and enforcement actions, litigation exposure, or fines or penalties, any of which could adversely affect our business, financial condition or results of operations.

Given our global footprint and the high volume of transactions we process; the large number of clients, partners, vendors and counterparties we interact with to conduct business; and the increasing sophistication of cyberattacks; a cyberattack or information or security breach could occur and persist for an extended period of time without detection. It could take considerable time for us to determine the scope, extent, amount and type of information compromised, and the impact of such an attack may not be fully understood. During such time, we would not necessarily know the extent of the harm or how best to remediate it, and certain errors or actions could be repeated or compounded before they are discovered and remediated, if at all, all or any of which would further increase the costs and consequences of a cyberattack or information security incident.

While many of our agreements with partners and third parties include indemnification provisions, we may not be able to recover sufficiently, or at all, under such provisions to adequately offset any losses we may incur. In addition, although we maintain insurance coverage that may, subject to policy terms and conditions, cover certain aspects of cyber and information security risks, such insurance coverage may be insufficient to cover any or all losses we may incur, and we

cannot be sure that such insurance will continue to be available to us on commercially reasonable terms, or at all, or that our insurers will not deny coverage as to any future claim.

We continue to make investments with a view toward maintaining and enhancing our cybersecurity, resilience and information security posture, including investments in technology and associated technology risk management activities. The cost of managing cybersecurity and information security risks and attacks, along with complying with new, increasingly expansive and evolving regulatory requirements, could adversely affect our results of operations and business.

Liquidity Risk

Liquidity risk refers to the risk that we will be unable to finance our operations due to a loss of access to the capital markets or difficulty in liquidating our assets. Liquidity risk also encompasses our ability (or perceived ability) to meet our financial obligations without experiencing significant business disruption or reputational damage that may threaten our viability as a going concern, as well as the associated funding risks triggered by the market or idiosyncratic stress events that may negatively affect our liquidity and may impact our ability to raise new funding or the cost of new funding. For more information on how we monitor and manage liquidity risk, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources" and "Quantitative and Qualitative Disclosures about Risk—Liquidity Risk."

Liquidity is essential to our businesses and we rely on external sources to finance a significant portion of our operations.

Liquidity is essential to our businesses. Our liquidity could be negatively affected by our inability to raise funding in the long-term or short-term debt capital markets, our inability to access the secured lending markets, our inability to attract and retain deposits, or unanticipated outflows of cash or collateral by customers or clients. Factors that we cannot control, such as volatility and disruption of the financial markets or negative views about the financial services industry generally, including concerns regarding fiscal matters in the U.S. and other geographic areas, could impair our ability to raise funding.

In addition, our ability to raise funding could be impaired if investors, depositors or lenders develop a negative perception of our long-term or short-term financial prospects due to factors such as an incurrence of large trading, credit or operational losses, a downgrade by the rating agencies, a decline in the level of our business activity, if regulatory authorities take significant action against us or our industry, or if we discover significant employee misconduct or illegal activity.

If we are unable to raise funding using the methods described above, we would likely need to utilize other funding sources or finance or liquidate unencumbered assets, such as our investment portfolios or trading assets, to meet maturing liabilities or other obligations. We may be unable to sell some of our assets or we may have to sell assets at a discount to market value, either of which could adversely affect our results of operations, cash flows and financial condition.

Our borrowing costs and access to the debt capital markets depend on our credit ratings.

The cost and availability of unsecured financing generally are impacted by (among other things) our long-term and short-term credit ratings. The rating agencies continue to monitor certain Firm-specific and industrywide factors that are important to the determination of our credit ratings. These include governance, capital adequacy, the level and quality of earnings, liquidity and funding, risk appetite and management, asset quality, strategic direction, business mix, regulatory or legislative changes, macroeconomic environment and perceived levels of support, and it is possible that the rating agencies could downgrade our ratings and those of similar institutions.

Our credit ratings also can have an adverse impact on certain trading revenues, particularly in those businesses where longer-term counterparty performance is a key consideration, such as OTC and other derivative transactions, including credit derivatives and interest rate swaps. In connection with certain OTC trading agreements and certain other agreements associated with our Institutional Securities business segment, we may be required to provide additional collateral to, or immediately settle any outstanding liability balance with, certain counterparties in the event of a credit rating downgrade.

Termination of our trading agreements could cause us to sustain losses and impair our liquidity by requiring us to find other sources of financing or to make significant payments in the form of cash or securities. The additional collateral or termination payments that may occur in the event of a future credit rating downgrade vary by contract and can be based on ratings by Moody's Investors Service, Inc., S&P Global Ratings and/or other rating agencies. See also "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Credit Ratings—Incremental Collateral or Terminating Payments."

We are a holding company and depend on payments from our subsidiaries.

The Parent Company has no business operations and depends on dividends, distributions, loans and other payments from its subsidiaries to fund dividend payments and to fund all payments on its obligations, including debt obligations. Regulatory restrictions, tax restrictions or elections and other legal restrictions may limit our ability to transfer funds freely, either to or from our subsidiaries. In particular, many of our

subsidiaries, including our bank and broker-dealer subsidiaries, are subject to laws, regulations and self-regulatory organization rules that, in certain circumstances, limit, as well as permit regulatory bodies to block or reduce, the flow of funds to the Parent Company, or that prohibit such transfers or dividends altogether, including steps to "ring fence" entities by regulators outside the U.S. to protect clients and creditors of such entities.

These laws, regulations and rules may hinder our ability to access funds that we may need to make payments on our obligations. Furthermore, as a BHC, we may become subject to a prohibition or to limitations on our ability to pay dividends. The U.S. banking agencies have the authority, and under certain circumstances the duty, to prohibit or to limit the payment of dividends or other capital actions by the banking organizations they supervise, including us and our U.S. Bank Subsidiaries. See "We may be prevented from paying dividends or taking other capital actions because of regulatory constraints or revised regulatory capital requirements" under "Legal, Regulatory and Compliance Risk" herein.

Our liquidity and financial condition have in the past been, and in the future could be, adversely affected by U.S. and international markets and economic conditions.

Our ability to raise funding in the long-term or short-term debt capital markets or the equity markets, or to access secured lending markets, has in the past been, and could in the future be, adversely affected by conditions in the U.S. and international markets and economies.

In particular, our cost and availability of funding in the past have been, and may in the future be, adversely affected by illiquid credit markets, interest rates and wider credit spreads. Significant turbulence in the U.S., the E.U. and other international markets and economies could adversely affect our liquidity and financial condition and the willingness of certain counterparties and customers to do business with us.

Legal, Regulatory and Compliance Risk

Legal, regulatory and compliance risk includes the risk of legal or regulatory sanctions; material financial loss, including fines, penalties, judgments, damages and/or settlements; limitations on our business; or loss to reputation we may suffer as a result of our failure to comply with laws, regulations, rules, related self-regulatory organization standards and codes of conduct applicable to our business activities. This risk also includes contractual and commercial risk, such as the risk that a counterparty's performance obligations will be unenforceable. It also includes compliance with AML, terrorist financing and anti-corruption rules and regulations. For more information on how we monitor and manage legal, regulatory and compliance risk, see "Quantitative and Qualitative Disclosures about Risk—Legal, Regulatory and Compliance Risk."

The financial services industry is subject to extensive regulation, and changes in regulation will impact our business.

Like other major financial services firms, we are subject to extensive regulation by U.S. federal and state regulatory agencies and securities exchanges, and by regulators and exchanges in each of the major markets where we conduct our business, including an increasing number of complex sanctions and disclosure regimes. These laws and regulations, which may continue to increase in volume and complexity, significantly affect the way and costs of doing business and can restrict the scope of our existing businesses and limit our ability to expand our product offerings and pursue certain investments.

The Firm and its employees are subject to wide-ranging regulation and supervision, which, among other things, subject us to intensive scrutiny of our businesses and any plans for expansion of those businesses through acquisitions or otherwise, limitations on activities, a systemic risk regime that imposes heightened capital and liquidity and funding requirements, including the global implementation of capital standards established by the Basel Committee, and other enhanced prudential standards, resolution regimes and resolution planning requirements, requirements for maintaining minimum amounts of TLAC and external long-term debt, restrictions on activities and investments imposed by the Volcker Rule, comprehensive derivatives regulation, interest rate benchmark requirements, commodities regulation, market structure regulation, consumer protection regulation, AML, terrorist financing and anti-corruption rules and regulations, tax regulations and interpretations, antitrust laws, trade and transaction reporting obligations, requirements related to preventing the misuse of confidential information, including material non-public information, record-keeping requirements, broadened fiduciary obligations and disclosure requirements.

New laws, rules, regulations and guidelines, as well as ongoing implementation of, our efforts to comply with, and/or changes to laws, rules, regulations and guidelines, including changes in the breadth, application, interpretation or enforcement of laws, rules, regulations and guidelines, could materially impact the profitability of our businesses and the value of assets we hold, impact our income tax provision and effective tax rate, expose us to additional theories of liability and additional costs, require changes to business practices or force us to discontinue businesses, adversely affect our ability to pay dividends and repurchase our stock or require us to raise capital, including in ways that may adversely impact our shareholders or creditors.

In addition, regulatory requirements that are imposed by foreign policymakers and regulators may be inconsistent or conflict with regulations that we are subject to in the U.S. and may adversely affect us.

The application of regulatory requirements and strategies in the U.S. or other jurisdictions to facilitate the orderly resolution of large financial institutions may pose a greater risk of loss for our security holders and subject us to other restrictions.

We are required to submit once every two years to the Federal Reserve and the FDIC a resolution plan that describes our strategy for a rapid and orderly resolution under the U.S. Bankruptcy Code in the event of material financial distress or failure. If the Federal Reserve and the FDIC were to jointly determine that our resolution plan submission was not credible or would not facilitate an orderly resolution, and if we were unsuccessful in addressing any deficiencies identified by the regulators, we or any of our subsidiaries may be subject to more stringent capital, leverage or liquidity requirements or restrictions on our growth, activities or operations, or after a two-year period, we may be required to divest assets or operations.

In addition, provided that certain procedures are met, we can be subject to a resolution proceeding under the orderly liquidation authority under Title II of the Dodd-Frank Act with the FDIC being appointed as receiver instead of being resolved under the U.S. Bankruptcy Code. The FDIC's power under the orderly liquidation authority to disregard the priority of creditor claims and treat similarly situated creditors differently in certain circumstances, subject to certain limitations, could adversely impact holders of our unsecured debt. See "Business—Supervision and Regulation" and "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements."

Further, because both our resolution plan contemplates an SPOE strategy under the U.S. Bankruptcy Code and the FDIC has indicated that it expects to use an SPOE strategy through which it may apply its orderly liquidation authority powers for a U.S. G-SIB, we believe that the application of an SPOE strategy is the reasonably likely outcome if either our resolution plan were implemented or a resolution proceeding were commenced under the orderly liquidation authority. An SPOE strategy generally contemplates the provision of adequate capital and liquidity by the Parent Company to certain of its subsidiaries so that such subsidiaries have the resources necessary to implement the resolution strategy, and the Parent Company has entered into a secured amended and restated support agreement with such entities, pursuant to which it would provide such capital and liquidity to such entities.

In addition, a wholly owned, direct subsidiary of the Parent Company, Morgan Stanley Holdings LLC ("Funding IHC"), serves as a resolution funding vehicle. The Parent Company has transferred, and has agreed to transfer on an ongoing basis, certain assets to the Funding IHC. In the event of a resolution scenario, the Parent Company would be obligated to contribute all of its material assets that can be contributed under the terms of the amended and restated support

agreement (other than shares in subsidiaries of the Parent Company and certain other assets) to the Funding IHC. The Funding IHC would be obligated to provide capital and liquidity, as applicable, to certain supported subsidiaries, pursuant to the terms of the secured amended and restated support agreement.

The obligations of the Parent Company and of the Funding IHC, respectively, under the amended and restated support agreement are in most cases secured on a senior basis by the assets of the Parent Company (other than shares in subsidiaries of the Parent Company and certain other assets), and the assets of the Funding IHC, as applicable. As a result, claims of certain supported subsidiaries, including the Funding IHC, against the assets of the Parent Company with respect to such secured assets are effectively senior to unsecured obligations of the Parent Company.

Although an SPOE strategy, whether applied pursuant to our resolution plan or in a resolution proceeding under the orderly liquidation authority, is intended to result in better outcomes for creditors overall, there is no guarantee that the application of an SPOE strategy, including the provision of support to the Parent Company's supported subsidiaries pursuant to the secured amended and restated support agreement, will not result in greater losses for holders of our securities compared with a different resolution strategy for us.

Regulators have taken and proposed various actions to facilitate an SPOE strategy under the U.S. Bankruptcy Code, the orderly liquidation authority and other resolution regimes. For example, the Federal Reserve requires top-tier BHCs of U.S. G-SIBs, including the Firm, to maintain adequate TLAC, including equity and eligible long-term debt, in order to ensure that such institutions have enough loss-absorbing resources at the point of failure to be recapitalized through the conversion of debt to equity or otherwise by imposing losses on eligible TLAC where the SPOE strategy is used. The combined implication of the SPOE resolution strategy and the TLAC requirement is that our losses will be imposed on the holders of eligible long-term debt and other forms of eligible TLAC issued by the Parent Company before any losses are imposed on the creditors of our supported subsidiaries without requiring taxpayer or government financial support.

In addition, certain jurisdictions, including the U.K. and E.U. jurisdictions, have implemented changes to resolution regimes to provide resolution authorities with the ability to recapitalize a failing entity organized in such jurisdiction by writing down certain unsecured liabilities or converting certain unsecured liabilities into equity. Such "bail-in" powers are intended to enable the recapitalization of a failing institution by allocating losses to its shareholders and unsecured creditors. This may increase the overall level of capital and liquidity required by us on a consolidated basis and may result in limitations on our ability to efficiently distribute capital and liquidity among our affiliated entities, including in times of stress. Non-U.S. regulators are also considering requirements that certain subsidiaries of large financial institutions maintain minimum

amounts of TLAC that would pass losses up from the subsidiaries to the Parent Company and, ultimately, to security holders of the Parent Company in the event of failure.

We may be prevented from paying dividends or taking other capital actions because of regulatory constraints or revised regulatory capital requirements.

We are subject to comprehensive consolidated supervision, regulation and examination by the Federal Reserve, including with respect to regulatory capital requirements, stress testing and capital planning. We submit, on at least an annual basis, a capital plan to the Federal Reserve describing proposed dividend payments to shareholders, proposed repurchases of our outstanding securities and other proposed capital actions that we intend to take. Our ability to take capital actions described in the capital plan is dependent on, among other factors, the results of supervisory stress tests conducted by the Federal Reserve and our compliance with regulatory capital requirements imposed by the Federal Reserve.

In addition, the Federal Reserve may change regulatory capital requirements to impose higher requirements that restrict our ability to take capital actions or may modify or impose other regulatory standards or restrictions that increase our operating expenses or constrain our ability to take capital actions. For additional information, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources."

The financial services industry faces substantial litigation and is subject to extensive regulatory and law enforcement investigations, and we may face damage to our reputation and legal liability.

As a global financial services firm, we face the risk of investigations and proceedings by governmental and self-regulatory organizations in all countries in which we conduct our business. These investigations and proceedings, as well as the amount of penalties and fines sought, continue to impact the financial services industry. Certain U.S. and international governmental entities have brought criminal actions against, or have sought criminal convictions, pleas, deferred prosecution agreements or non-prosecution agreements from financial institutions. Significant regulatory or law enforcement action against us could materially adversely affect our business, reputation, financial condition or results of operations, and increase our exposure to civil litigation.

Investigations and proceedings initiated by these authorities may result in adverse judgments, settlements, fines, penalties, disgorgement, restitution, forfeiture, injunctions or other relief, and have included and may in the future include requirements that the Firm admit certain conduct, which may result in increased exposure to civil litigation. In addition, these measures have caused and may in the future cause collateral consequences. For example, such matters could impact our ability to engage in, or impose limitations on, certain of our businesses.

As part of the resolution of certain investigations and proceedings, the Firm has been and may in the future be required to undertake certain measures and failure to do so may result in adverse consequences, such as further investigations or proceedings—both civil and criminal—and additional penalties, fines, judgments or other relief.

The Dodd-Frank Act also provides compensation to whistleblowers who present the SEC or CFTC with information related to securities or commodities law violations that leads to a successful enforcement action. As a result of this compensation, it is possible we could face an increased number of investigations by the SEC or CFTC.

We have been named, from time to time, as a defendant in various legal actions, including arbitrations, class actions and other litigation, as well as investigations or proceedings brought by regulatory agencies, arising in connection with our activities as a global diversified financial services institution. Certain of the actual or threatened legal or regulatory actions include claims for substantial compensatory and/or punitive damages or claims for indeterminate amounts of damages, or may result in material penalties, fines or other results adverse to us.

In some cases, the third-party entities that would otherwise be the primary defendants in such cases are bankrupt, in financial distress or may not honor applicable indemnification obligations. In other cases, including antitrust litigation, we may be subject to claims for joint and several liability with other defendants for treble damages or other relief related to alleged conspiracies involving other institutions. Like any large corporation, we are also subject to risk from potential employee misconduct, including noncompliance with policies, laws, rules and regulations, and improper use or disclosure of confidential information, or improper sales practices or other conduct.

We may be responsible for representations and warranties associated with commercial and residential real estate loans and may incur losses in excess of our reserves.

We originate loans secured by commercial and residential properties. Further, we securitize and trade in a wide range of commercial and residential real estate and real estate-related assets and products. In connection with these activities, we have provided, or otherwise agreed to be responsible for, certain representations and warranties. Under certain circumstances, we may be required to repurchase such assets or make other payments related to such assets if such representations and warranties were breached, and may incur losses as a result. We have also made representations and warranties in connection with our role as an originator of certain loans that we securitized in CMBS and RMBS. For additional information, see Note 14 to the financial statements.

A failure to address conflicts of interest appropriately could adversely affect our businesses and reputation.

As a global financial services firm that provides products and services to a large and diversified group of clients, including corporations, governments, financial institutions and individuals, we face potential conflicts of interest in the normal course of business. For example, potential conflicts can occur when there is a divergence of interests between us and a client, among clients, between an employee on the one hand and us or a client on the other, or situations in which we may be a creditor of a client. Moreover, we utilize multiple brands and business channels, including those resulting from our acquisitions, and continue to enhance the collaboration across business segments, which may heighten the potential conflicts of interest or the risk of improper sharing of information.

We have policies, procedures and controls that are designed to identify and address potential conflicts of interest, and we utilize various measures, such as the use of disclosure, to manage these potential conflicts. However, identifying and mitigating potential conflicts of interest can be complex and challenging and can become the focus of media and regulatory scrutiny. Indeed, actions that merely appear to create a conflict can put our reputation at risk even if the likelihood of an actual conflict has been mitigated. It is possible that potential conflicts could give rise to litigation or enforcement actions, which may lead to our clients being less willing to enter into transactions in which a conflict may occur and could adversely affect our businesses and reputation.

Our regulators also have the ability to scrutinize our activities for potential conflicts of interest, including through detailed examinations of specific transactions. For example, our status as a BHC supervised by the Federal Reserve subjects us to direct Federal Reserve scrutiny with respect to transactions between our U.S. Bank Subsidiaries and their affiliates. Further, the Volcker Rule subjects us to regulatory scrutiny regarding certain transactions between us and our clients.

Risk Management

Our risk management strategies, models and processes may not be fully effective in mitigating our risk exposures in all market environments or against all types of risk, which could result in unexpected losses.

We have devoted significant resources to develop our risk management strategies, models and processes, including our use of various risk models for assessing market, credit, liquidity and operational exposures and hedging strategies, stress testing and other analysis capabilities, and expect to continue to do so in the future. Nonetheless, our risk management capabilities may not be fully effective in mitigating our risk exposure in all market environments or against all types of risk, including risks that are unidentified or unanticipated.

As our businesses change and grow, including through acquisitions and the introduction and application of new technologies, such as artificial intelligence, and the markets in which we operate evolve, our risk management strategies, models and processes may not always adapt with those changes. Some of our methods of managing risk are based upon our use of observed historical market behavior and management's judgment. As a result, these methods may not predict future risk exposures, which could be significantly greater than the historical measures indicate.

In addition, many models we use are based on assumptions or inputs regarding correlations among prices of various asset classes or other market indicators and, therefore, cannot anticipate sudden, unanticipated or unidentified market or economic movements, such as the impact of a pandemic or a sudden geopolitical conflict, which could cause us to incur losses.

Management of market, credit, liquidity, operational, model, legal, regulatory and compliance risks requires, among other things, policies and procedures to record properly and verify a large number of transactions and events, and these policies and procedures may not be fully effective. Our trading risk management strategies and techniques also seek to balance our ability to profit from trading positions with our exposure to potential losses.

While we employ a broad and diversified set of risk monitoring and risk mitigation techniques, those techniques and the judgments that accompany their application cannot anticipate every economic and financial outcome or the timing of such outcomes. For example, to the extent that our trading or investing activities involve less liquid trading markets or are otherwise subject to restrictions on sales or hedging, we may not be able to reduce our positions and, therefore, reduce our risk associated with such positions. We may, therefore, incur losses in the course of our trading or investing activities. For more information on how we monitor and manage market and certain other risks and related strategies, models and processes, see "Quantitative and Qualitative Disclosures about Risk—Market Risk."

Climate change manifesting as physical or transition risks could result in increased costs and risks and adversely affect our operations, businesses and clients.

There continues to be increasing concern over the risks of climate change and related sustainability matters. The physical risks of climate change include harm to people and property arising from acute, climate-related events, such as floods, hurricanes, heatwaves, droughts and wildfires, and chronic, longer-term shifts in climate patterns, such as higher global average temperatures, rising sea levels and long-term droughts. Such events could disrupt our operations or those of our clients or third parties on which we rely, including through direct damage to physical assets and indirect impacts from supply chain disruption and market volatility. These events could impact the ability of certain of our clients or

customers to repay their obligations, reduce the value of collateral, increase costs, including the cost or availability of insurance coverage, and result in other adverse effects.

The transition risks of climate change include policy, legal, technology and market changes. Examples of these transition risks include changes in consumer and business sentiment, related technologies, shareholder preferences and any additional regulatory and legislative requirements, including increased disclosure or regulation of carbon emissions. These risks could increase our expenses and adversely impact our strategies. Negative impacts to certain of our clients, such as decreased profitability and asset write-downs, could also lead to increased credit and liquidity risk to us.

In addition, our reputation and client relationships may be adversely impacted as a result of our, or our clients', involvement in certain practices that may have, or are associated with having, an adverse impact on climate change. Legislative or regulatory change regarding climate-related risks, including inconsistent requirements and uncertainties, could result in loss of revenue, or increased credit, market, liquidity, regulatory, compliance, reputational and other risks and costs.

Our ability to achieve our climate-related targets and commitments and the way we go about this could also result in reputational harm as a result of public sentiment, legislative and regulatory scrutiny (including from U.S. federal and state governments and foreign policymakers and regulators), litigation and reduced investor and stakeholder confidence. If we are unable to achieve our objectives relating to climate change or our current response to climate change is perceived to be ineffective or insufficient, or the way we respond is perceived negatively, our business and reputation may suffer.

The risks associated with, and the perspective of regulators, governments, shareholders, employees and other stakeholders regarding climate change, as well as geopolitical events, continue to evolve rapidly, making it difficult to assess the ultimate impact on us of climate-related risks and uncertainties. As climate risk is interconnected with other risks, we have developed and continue to enhance processes to embed climate risk considerations into our risk management practices and governance structures. Despite our risk management practices, the unpredictability surrounding the timing and severity of climate-related events, and societal or political changes in reaction to them, make it difficult to predict, identify, monitor and mitigate climate risks.

In addition, the methodologies and data used to manage and monitor climate risk continue to evolve. Current approaches utilize information and estimates that have been derived from information or factors released by third-party sources, which may not reflect the latest or most accurate data. Climate-related data, particularly greenhouse gas emissions for clients and counterparties, remains limited in availability and varies in quality. Certain third-party information may also change

over time as methodologies evolve and are refined. While we believe this information is the best available at the time, we may only be able to complete limited validation. Furthermore, modeling capabilities and methodologies to analyze climate-related risks, although improving, remain nascent and emerging and are subject to uncertainty due to limited historical trend information and the absence of standardized and comprehensive data. These and other factors could cause results to differ materially, which could impact our ability to manage climate-related risks.

Competitive Environment

We face strong competition from financial services firms and others, which could lead to pricing pressures that could materially adversely affect our revenues and profitability.

The financial services industry and all aspects of our businesses are intensely competitive, and we expect them to remain so. We compete with commercial banks, global investment banks, regional banks, broker-dealers, wire houses, private banks, registered investment advisers, digital investing platforms, traditional and alternative asset managers, financial technology firms and other companies offering financial and ancillary services in the U.S. and globally. We compete on the basis of several factors, including transaction execution, capital or access to capital, products and services, innovation, technology, reputation, risk appetite and price.

We have experienced, and will likely continue to experience, increased competition in the U.S. and globally driven by established financial services firms and emerging firms, including non-financial companies and business models focusing on technology innovation, competing for the same clients and assets, or offering similar products and services to retail and institutional customers. It is also possible that competition may become even more intense as we continue to compete with financial or other institutions that may be, or will become, larger, or better capitalized, or may have a stronger local presence and longer operating history in certain geographies or products.

We have experienced, and may continue to experience, pricing pressures as a result of these factors and as some of our competitors seek to obtain market share by reducing prices and fees, paying higher interest rates on deposits, eliminating commissions or other fees or otherwise providing more favorable terms of business. In addition, certain of our competitors may be subject to different and, in some cases, less stringent, legal and regulatory regimes than we are, thereby putting us at a competitive disadvantage. For more information regarding the competitive environment in which we operate, see “Business—Competition” and “Business—Supervision and Regulation.”

Automated trading markets and the introduction and application of new technologies may adversely affect our business and may increase competition.

We continue to experience price competition in some of our businesses. In particular, the ability to execute securities, derivatives and other financial instrument trades electronically on exchanges, swap execution facilities and other automated trading platforms, and the introduction and application of new technologies, including generative artificial intelligence, will likely continue the pressure on revenues. The trend toward direct access to automated, electronic markets will likely continue as additional markets move to more automated trading platforms. We have experienced, and will likely continue to experience, competitive pressures in these and other areas in the future.

Our ability to retain and attract qualified employees is critical to the success of our business and the failure to do so may materially adversely affect our performance.

Our people are our most important asset. We compete with various other companies in attracting and retaining qualified and skilled personnel. If we are unable to continue to attract, integrate and retain highly qualified employees or successfully transition key roles, or do so at levels or in forms necessary to maintain our competitive position, our performance, including our competitive position and results of operations, could be materially adversely affected. Our ability to attract and retain qualified and skilled personnel depends on numerous factors, some of which are outside of our control.

Compensation costs required to attract and retain employees may increase or the competitive market for talent may further intensify due to factors such as low unemployment, a strong job market and changes in employees’ expectations, concerns and preferences. The financial industry has experienced, and may continue to experience, more stringent regulation of employee compensation than other industries, which may or may not impact competitors. These more stringent regulations have shaped our compensation practices, which could have an adverse effect on our ability to hire or retain the most qualified employees.

International Risk

We are subject to numerous political, economic, legal, tax, operational, franchise and other risks as a result of our international operations that could adversely impact our businesses in many ways.

We are subject to numerous political, economic, legal, tax, operational, franchise and other risks that are inherent in operating in many countries, including risks of possible nationalization, expropriation, price controls, capital controls, exchange controls, increased taxes and levies, cybersecurity, data transfer and outsourcing restrictions, regulatory scrutiny regarding the use of new technologies, prohibitions on certain

types of foreign and capital market activities, limitations on cross-border listings and other restrictive governmental actions, as well as the outbreak of hostilities or political and governmental instability, including tensions between China and the U.S., the expansion or escalation of hostilities between Russia and Ukraine or in the Middle East, or the initiation or escalation of hostilities or terrorist activity around the world and the potential associated impacts on global and local economies and our operations. In many countries, the laws and regulations applicable to the securities and financial services industries and multinational corporations are uncertain, evolving and subject to sudden change or may be inconsistent with U.S. law. It may also be difficult for us to determine the exact requirements of local laws in every market or adapt to changes in law, which could adversely impact our businesses. Our inability to remain in compliance with local laws in a particular market could have a significant and negative effect not only on our business in that market but also on our reputation generally. We are also subject to the risk that transactions we structure might not be legally enforceable in all cases.

Various emerging market countries have experienced severe political, economic or financial disruptions, including significant devaluations of their currencies, defaults or potential defaults on sovereign debt, capital and currency exchange controls, high rates of inflation and low or negative growth rates in their economies. Crime and corruption, as well as issues of security and personal safety, also exist in certain of these countries. These conditions could adversely impact our businesses and increase volatility in financial markets generally.

A disease pandemic or other widespread health emergencies, natural disasters, climate-related incidents, terrorist activities or military actions, or social or political tensions, could create economic and financial disruptions in emerging markets or in other areas of the global economy that could adversely affect our businesses, or could lead to operational difficulties, including travel limitations and supply chain complications, that could impair our ability to manage or conduct our businesses around the world.

As a U.S. company, we are required to comply with the economic sanctions and embargo programs administered by OFAC and similar multinational bodies and governmental agencies worldwide, which may be inconsistent with local law. We and certain of our subsidiaries are also subject to applicable AML and/or anti-corruption laws in the U.S., as well as in the jurisdictions in which we operate, including the Bank Secrecy Act, the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act. A violation of a sanction, embargo program, AML or anti-corruption law could subject us, and individual employees, to a regulatory enforcement action, as well as significant civil and criminal penalties.

Acquisition, Divestiture and Joint Venture Risk

We may be unable to fully capture the expected value from acquisitions, divestitures, joint ventures, partnerships, minority stakes or strategic alliances, and certain acquisitions may subject our business to new or increased risk.

In connection with past or future acquisitions, divestitures, joint ventures, partnerships, minority stakes or strategic alliances (including with Mitsubishi UFJ Financial Group, Inc. (“MUFG”)), we face numerous risks and uncertainties in combining, transferring, separating or integrating the relevant businesses and systems that may present operational and other risks, including the need to combine or separate accounting, data processing, technology and other systems, management controls and legal entities, and to integrate relationships with clients, trading counterparties and business partners. Certain of these strategic initiatives, and integration thereof, may cause us to incur incremental expenses and may also require incremental financial, management and other resources.

In the case of joint ventures, partnerships and minority stakes, we are subject to additional risks and uncertainties because we may be dependent upon, and subject to liability, losses or franchise and reputational damage relating to systems, controls and personnel that are not under our control, and conflicts or disagreements between us and any of our partners may negatively impact the benefits to be achieved by the relevant partnerships.

There is no assurance that any of our acquisitions, divestitures or investments will be successfully integrated or disaggregated or yield all of the positive benefits and synergies anticipated. If we are not able to integrate or disaggregate successfully our past and future acquisitions or dispositions, including aligning the processes, policies and procedures of the acquired entities with our standards, there is a risk that our results of operations, financial condition and cash flows may be materially and adversely affected.

Certain of our business initiatives, including expansions of existing businesses or the introduction of new products, may change our client or account profile or bring us into contact, directly or indirectly, with individuals and entities that are not within our traditional client and counterparty base and may expose us to new asset classes, services, competitors and new markets. These business activities expose us to new and enhanced risks, greater regulatory scrutiny of these activities, increased credit-related, sovereign, compliance and operational risks, as well as franchise and reputational concerns regarding the manner in which these assets are being operated or held, or services are being delivered.

For more information regarding the regulatory environment in which we operate, see also “Business—Supervision and Regulation.”

Cybersecurity

For a discussion of cybersecurity, see “Quantitative and Qualitative Disclosures about Risk— Operational Risk— Cybersecurity.”

Management’s Discussion and Analysis of Financial Condition and Results of Operations

Introduction

Morgan Stanley is a global financial services firm that maintains significant market positions in each of its business segments—Institutional Securities, Wealth Management and Investment Management. Morgan Stanley, through its subsidiaries and affiliates, provides a wide variety of products and services to a large and diversified group of clients and customers, including corporations, governments, financial institutions and individuals. Unless the context otherwise requires, the terms “Morgan Stanley,” “Firm,” “us,” “we” or “our” mean Morgan Stanley (the “Parent Company”) together with its consolidated subsidiaries. See the “Glossary of Common Terms and Acronyms” for the definition of certain terms and acronyms used throughout this Form 10-K. For an analysis of 2023 results compared with 2022 results, see Part II, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the annual report on Form 10-K for the year ended December 31, 2023 filed with the SEC.

A description of the clients and principal products and services of each of our business segments is as follows:

Institutional Securities provides a variety of products and services to corporations, governments, financial institutions and ultra-high net worth clients. Investment Banking services consist of capital raising and financial advisory services, including the underwriting of debt, equity securities and other products, as well as advice on mergers and acquisitions, restructurings and project finance. Our Equity and Fixed Income businesses include sales, financing, prime brokerage, market-making, Asia wealth management services and certain business-related investments. Lending activities include originating corporate loans and commercial real estate loans, providing secured lending facilities, and extending securities-based and other financing to clients. Other activities include research.

Wealth Management provides a comprehensive array of financial services and solutions to individual investors and small to medium-sized businesses and institutions. Wealth Management covers: financial advisor-led brokerage, custody, administrative and investment advisory services; self-directed brokerage services; financial and wealth planning services; workplace services, including stock plan administration; securities-based lending, residential and commercial real estate loans and other lending products; banking; and retirement plan services.

Investment Management provides a broad range of investment strategies and products that span geographies, asset classes, and public and private markets to a diverse group of clients across institutional and intermediary channels. Strategies and products, which are offered through a variety of investment vehicles, include equity, fixed income, alternatives and solutions, and liquidity and overlay services. Institutional clients include defined benefit/defined contribution plans, foundations, endowments, government entities, sovereign wealth funds, insurance companies, third-party fund sponsors and corporations. Individual clients are generally served through intermediaries, including affiliated and non-affiliated distributors.

Management’s Discussion and Analysis includes certain metrics that we believe to be useful to us, investors, analysts and other stakeholders by providing further transparency about, or an additional means of assessing, our financial condition and operating results. Such metrics, when used, are defined and may be different from or inconsistent with metrics used by other companies.

The results of operations in the past have been, and in the future may continue to be, materially affected by: competition; legislative, legal and regulatory developments; and other risk factors. These factors also may have an adverse impact on our ability to achieve our strategic objectives. Additionally, the discussion of our results of operations herein may contain forward-looking statements. These statements, which reflect management’s beliefs and expectations, are subject to risks and uncertainties that may cause actual results to differ materially. For a discussion of the risks and uncertainties that may affect our future results, see “Forward-Looking Statements”, “Business—Competition”, “Business—Supervision and Regulation”, “Risk Factors” and “Liquidity and Capital Resources—Regulatory Requirements” herein.

Management’s Discussion and Analysis

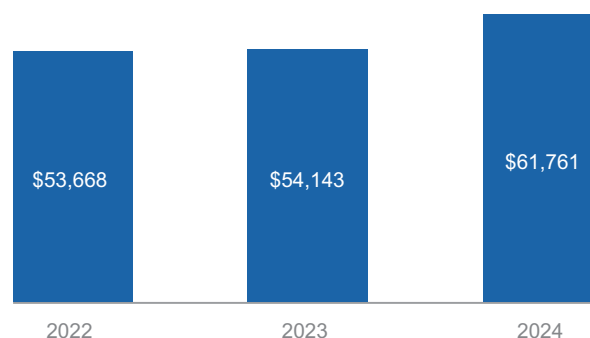
Executive Summary

Overview of Financial Results

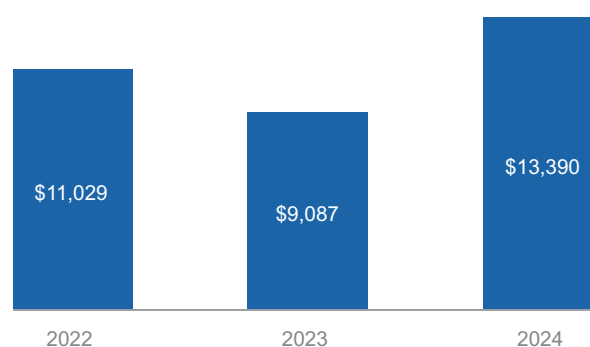
Consolidated Results—Full Year Ended December 31, 2024

- The Firm reported net revenues of \$61.8 billion and net income of \$13.4 billion, reflecting strong results across our business segments.
- The Firm delivered ROE of 14.0% and ROTCE of 18.8% (see “Selected Non-GAAP Financial Information” herein).
- The Firm expense efficiency ratio was 71% compared to 77% in the prior year, reflecting higher revenues and expense discipline. In the prior year, the ratio was negatively impacted by specific severance costs of \$353 million, integration-related expenses of \$293 million, an FDIC special assessment of \$286 million and higher legal expenses related to a \$249 million settlement in connection with resolutions of investigations into the Firm’s blocks business. (See “Expenses” herein for more information).
- The Firm accreted \$5.6 billion of Common Equity Tier 1 capital while supporting clients and returning capital to shareholders. At December 31, 2024, the Firm’s Standardized Common Equity Tier 1 capital ratio was 15.9%.
- Institutional Securities net revenues of \$28.1 billion reflect higher results across businesses and regions on higher client activity and improved market conditions.
- Wealth Management delivered net revenues of \$28.4 billion, reflecting higher Asset management and Transactional revenues. The pre-tax margin was 27.2%. Fee-based asset flows were \$123 billion and the business added net new assets of \$252 billion.
- Investment Management reported net revenues of \$5.9 billion, primarily driven by asset management revenues on higher average AUM.

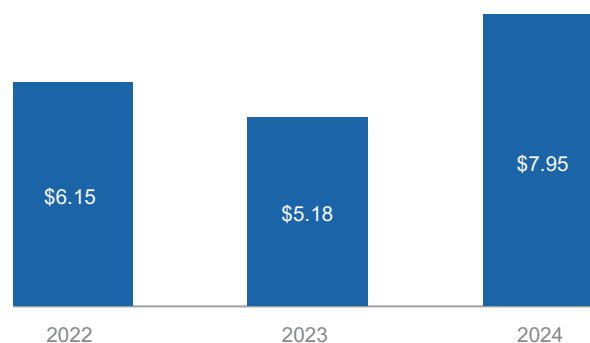
Net Revenues
(\$ in millions)



Net Income Applicable to Morgan Stanley
(\$ in millions)



Earnings per Diluted Common Share



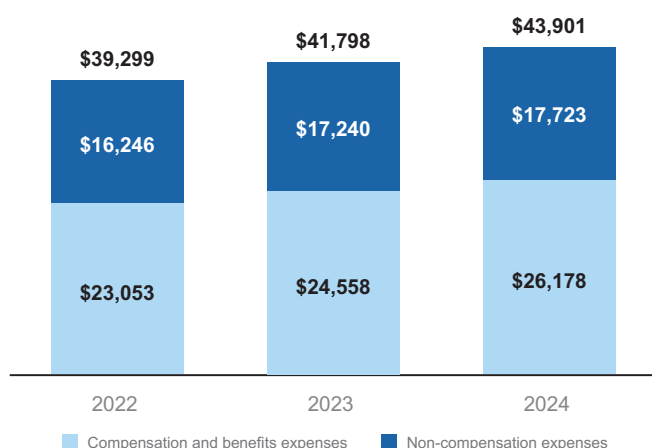
2024 Compared with 2023

- We reported net revenues of \$61.8 billion in 2024, which increased by 14% compared with \$54.1 billion in 2023. Net income applicable to Morgan Stanley was \$13.4 billion in 2024, which increased by 47% compared with \$9.1 billion in 2023. Diluted earnings per common share was \$7.95 in 2024, which increased by 53% compared with \$5.18 in 2023.

Management’s Discussion and Analysis

Non-Interest Expenses

(\$ in millions)



- Compensation and benefits expenses of \$26,178 million in 2024 increased 7% from the prior year, primarily due to an increase in the formulaic payout to Wealth Management representatives and higher discretionary incentive compensation, both on higher revenues, partially offset by lower severance costs.

In 2023, Compensation and benefits expenses included severance costs of \$353 million, primarily associated with a specific Firmwide reduction in workforce during the second quarter of 2023. We recorded severance costs of \$220 million in the Institutional Securities business segment, \$105 million in the Wealth Management business segment, and \$28 million in the Investment Management business segment for 2023.

In 2022, Compensation and benefits expenses included severance costs of \$133 million, associated with a specific Firmwide reduction in workforce during the fourth quarter of 2022. We recorded severance costs of \$88 million in the Institutional Securities business segment, \$30 million in the Wealth Management business segment, and \$15 million in the Investment Management business segment for 2022. These specific reductions in workforce occurred across the Firm’s business segments and geographic regions, impacted approximately 4% and 1% of the Firm’s global workforce in 2023 and 2022, respectively, and resulted from the Firm’s review of its global workforce, operating expenses and the business environment following the acquisitions of E*TRADE Financial Corporation (“E*TRADE”) and Eaton Vance Corp. (“Eaton Vance”), rather than a change in strategy or exit of businesses. These costs were primarily incurred in the Americas and EMEA, with the majority in the Americas.

- Non-compensation expenses of \$17,723 million in 2024 increased 3% from the prior year, primarily driven by higher execution-related expenses and increased technology spend, partially offset by lower legal expenses and lower FDIC special assessment cost.

In 2023, integration-related expenses were \$293 million, of which \$201 million related to the integration of E*TRADE within the Wealth Management business segment and \$92 million related to the integration of Eaton Vance within the Investment Management business segment. In 2022, integration-related expenses were \$470 million, of which \$357 million related to the integration of E*TRADE within the Wealth Management business segment and \$113 million related to the integration of Eaton Vance within the Investment Management business segment. Integration-related expenses primarily included non-compensation expenses such as information technology expense related to the consolidation of platforms, and professional fees related to changes in legal entity structures and the integration of clients, within both Wealth Management and Investment Management business segments. Integration-related activities were substantially completed as of December 31, 2023.

Provision for Credit Losses

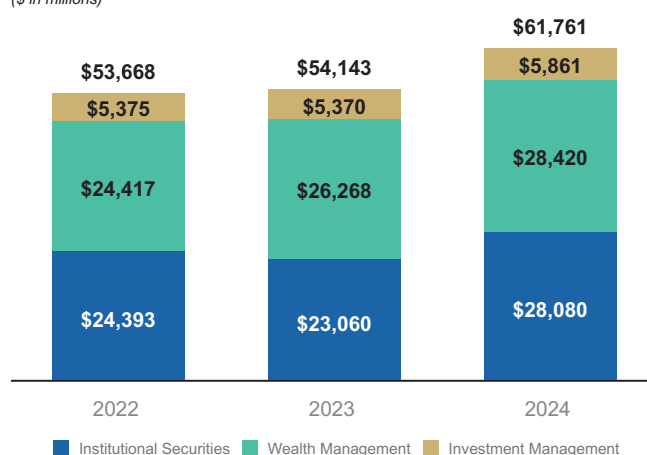
The Provision for credit losses on loans and lending commitments of \$264 million in 2024 was primarily related to certain specific commercial real estate loans and growth in the corporate loan portfolio, partially offset by improvements in the macroeconomic outlook. The Provision for credit losses on loans and lending commitments of \$532 million in 2023 was primarily related to credit deterioration in the commercial real estate sector, including provisions for certain specific loans, mainly in the office portfolio, and modest growth in certain other loan portfolios.

For further information on the Provision for credit losses, see “Credit Risk” herein.

Business Segment Results

Net Revenues by Segment¹

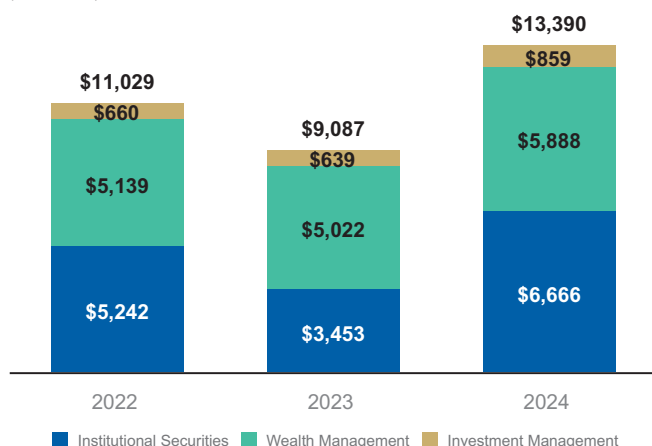
(\$ in millions)



Management’s Discussion and Analysis

Net Income Applicable to Morgan Stanley by Segment¹

(\$ in millions)

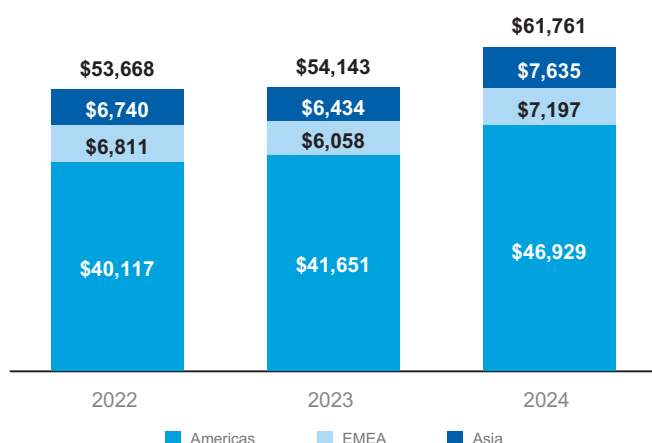


1. The amounts in the charts represent the contribution of each business segment to the total of the applicable financial category and may not sum to the total presented on top of the bars due to intersegment eliminations. See Note 22 to the financial statements for details of intersegment eliminations.

- Institutional Securities net revenues of \$28,080 million in 2024 increased 22% from the prior year, reflecting higher results across businesses, particularly in Equity and underwriting results within Investment Banking.
- Wealth Management net revenues of \$28,420 million in 2024 increased 8% from the prior year, primarily reflecting higher Asset management revenues and Transactional revenues, partially offset by lower Net interest income.
- Investment Management net revenues of \$5,861 million in 2024 increased 9% from the prior year, primarily reflecting higher Asset management and related fees and higher Performance-based income and other revenues.

Net Revenues by Region¹

(\$ in millions)



1. For a discussion of how the geographic breakdown of net revenues is determined, see Note 22 to the financial statements.

- Americas net revenues in 2024 increased 13% from the prior year, primarily driven by higher Asset management revenues within the Wealth Management business segment and higher results across businesses within the Institutional Securities business segment.

- EMEA net revenues in 2024 increased 19% from the prior year, primarily driven by higher results across businesses within the Institutional Securities business segment.
- Asia net revenues in 2024 increased 19% from the prior year, primarily driven by higher results from Equity and Investment Banking within the Institutional Securities business segment.

Selected Financial Information and Other Statistical Data

\$ in millions, except per share data	2024	2023	2022
Consolidated results			
Net revenues	\$ 61,761	\$ 54,143	\$ 53,668
Earnings applicable to Morgan Stanley common shareholders	\$ 12,800	\$ 8,530	\$ 10,540
Earnings per diluted common share	\$ 7.95	\$ 5.18	\$ 6.15
Consolidated financial measures			
Expense efficiency ratio ¹	71 %	77 %	73 %
ROE ²	14.0 %	9.4 %	11.2 %
ROTCE ^{2,3}	18.8 %	12.8 %	15.3 %
Pre-tax margin ⁴	28 %	22 %	26 %
Effective tax rate	23.1 %	21.9 %	20.7 %
Pre-tax margin by segment⁴			
Institutional Securities	31 %	19 %	28 %
Wealth Management	27 %	25 %	27 %
Investment Management	19 %	16 %	15 %

\$ in millions, except per share data, worldwide employees and client assets	At December 31, 2024	At December 31, 2023
Average liquidity resources for three months ended ⁵	\$ 345,440	\$ 314,504
Loans ⁶	\$ 246,814	\$ 226,828
Total assets	\$ 1,215,071	\$ 1,193,693
Deposits	\$ 376,007	\$ 351,804
Borrowings	\$ 288,819	\$ 263,732
Common equity	\$ 94,761	\$ 90,288
Tangible common equity ³	\$ 71,604	\$ 66,527
Common shares outstanding	1,607	1,627
Book value per common share ⁷	\$ 58.98	\$ 55.50
Tangible book value per common share ^{3,7}	\$ 44.57	\$ 40.89
Worldwide employees (in thousands)	80	80
Client assets ⁸ (in billions)	\$ 7,860	\$ 6,588

Capital ratios⁹		
Common Equity Tier 1 capital—Standardized	15.9 %	15.2 %
Tier 1 capital—Standardized	18.0 %	17.1 %
Common Equity Tier 1 capital—Advanced	15.7 %	15.5 %
Tier 1 capital—Advanced	17.8 %	17.4 %
Tier 1 leverage	6.9 %	6.7 %
SLR	5.6 %	5.5 %

1. The expense efficiency ratio represents total non-interest expenses as a percentage of net revenues.
2. ROE and ROTCE represent earnings applicable to Morgan Stanley common shareholders as a percentage of average common equity and average tangible common equity, respectively.
3. Represents a non-GAAP financial measure. See “Selected Non-GAAP Financial Information” herein.
4. Pre-tax margin represents income before provision for income taxes as a percentage of net revenues.
5. For a discussion of Liquidity resources, see “Liquidity and Capital Resources—Balance Sheet—Liquidity Risk Management Framework—Liquidity Resources” herein.
6. Includes loans held for investment, net of ACL, loans held for sale and also includes loans at fair value, which are included in Trading assets in the balance sheet.
7. Book value per common share and tangible book value per common share equal common equity and tangible common equity, respectively, divided by common shares outstanding.

Management’s Discussion and Analysis

8. Client assets represent the sum of Wealth Management client assets and Investment Management AUM. Certain Wealth Management client assets are invested in Investment Management products and are therefore also included in Investment Management’s AUM.
9. For a discussion of our capital ratios, see “Liquidity and Capital Resources—Regulatory Requirements” herein.

Economic and Market Conditions

The economic environment, client and investor confidence and overall market sentiment improved in 2024. While interest rates declined in recent months, elevated inflation, geopolitical risks including ongoing tensions in the Middle East, uncertainties surrounding government and policy developments in the markets we operate in and the timing and pace of further interest rate actions present ongoing risks to the economic environment. These factors have impacted, and could continue to impact capital markets and our businesses, as discussed further in “Business Segments” herein.

For more information on economic and market conditions, and the potential effects of geopolitical events and acts of war or aggression on our future results, refer to “Risk Factors” and “Forward-Looking Statements.”

Selected Non-GAAP Financial Information

We prepare our financial statements using U.S. GAAP. From time to time, we may disclose certain “non-GAAP financial measures” in this document or in the course of our earnings releases, earnings and other conference calls, financial presentations, definitive proxy statements and other public disclosures. A “non-GAAP financial measure” excludes, or includes, amounts from the most directly comparable measure calculated and presented in accordance with U.S. GAAP. We consider the non-GAAP financial measures we disclose to be useful to us, investors, analysts and other stakeholders by providing further transparency about, or an alternate means of assessing or comparing our financial condition, operating results and capital adequacy.

These measures are not in accordance with, or a substitute for, U.S. GAAP and may be different from or inconsistent with non-GAAP financial measures used by other companies. Whenever we refer to a non-GAAP financial measure, we will also generally define it or present the most directly comparable financial measure calculated and presented in accordance with U.S. GAAP, along with a reconciliation of the differences between the U.S. GAAP financial measure and the non-GAAP financial measure.

We present certain non-GAAP financial measures that exclude the impact of mark-to-market gains and losses, net of financing costs on DCP investments from net revenues. We also exclude the impact of mark-to-market gains and losses on DCP from compensation expenses. The impact of DCP investments and DCP are primarily reflected in our Wealth Management business segment results. These measures allow for better comparability of period-to-period underlying operating performance and revenue trends. By excluding the impact of these items, we are better able to describe the business drivers and resulting impact to net revenues and

corresponding change to the associated compensation expenses. For additional information on DCP, refer to “Other Matters” herein.

Tangible common equity is a non-GAAP financial measure that we believe analysts, investors and other stakeholders consider useful to allow for comparability to peers and of the period-to-period use of our equity. The calculation of tangible common equity represents common shareholders’ equity less goodwill and intangible assets net of allowable mortgage servicing rights deduction. In addition, we believe that certain ratios that utilize tangible common equity, such as return on average tangible common equity (“ROTCE”) and tangible book value per common share, also non-GAAP financial measures, are useful for evaluating the operating performance and capital adequacy of the business period-to-period, respectively. The calculation of ROTCE represents annualized earnings applicable to Morgan Stanley common shareholders as a percentage of average tangible common equity. The calculation of tangible book value per common share represents tangible common equity divided by common shares outstanding.

The principal non-GAAP financial measures presented in this document are set forth in the following tables.

Reconciliations from U.S. GAAP to Non-GAAP Consolidated Financial Measures

<i>\$ in millions</i>	2024	2023	2022
Net revenues	\$ 61,761	\$ 54,143	\$ 53,668
Adjustment for mark-to-market losses (gains) on DCP ¹	(363)	(434)	1,198
Adjusted Net revenues—non-GAAP	\$ 61,398	\$ 53,709	\$ 54,866
Compensation expense	\$ 26,178	\$ 24,558	\$ 23,053
Adjustment for mark-to-market losses (gains) on DCP ¹	(672)	(668)	716
Adjusted Compensation expense—non-GAAP	\$ 25,506	\$ 23,890	\$ 23,769
Wealth Management Net revenues	\$ 28,420	\$ 26,268	\$ 24,417
Adjustment for mark-to-market losses (gains) on DCP ¹	(239)	(282)	858
Adjusted Wealth Management Net revenues—non-GAAP	\$ 28,181	\$ 25,986	\$ 25,275
Wealth Management Compensation expense	\$ 15,207	\$ 13,972	\$ 12,534
Adjustment for mark-to-market losses (gains) on DCP ¹	(431)	(412)	530
Adjusted Wealth Management Compensation expense—non-GAAP	\$ 14,776	\$ 13,560	\$ 13,064

1. Net revenues and compensation expense are adjusted for DCP for both Firm and Wealth Management business segment. See “Other Matters” herein for more information.

<i>\$ in millions</i>	At December 31,		
	2024	2023	2022
Tangible equity			
Common equity	\$ 94,761	\$ 90,288	\$ 91,391
Less: Goodwill and net intangible assets	(23,157)	(23,761)	(24,268)
Tangible common equity—non-GAAP	\$ 71,604	\$ 66,527	\$ 67,123

\$ in millions	Average Monthly Balance		
	2024	2023	2022
Tangible equity			
Common equity	\$ 91,699	\$ 90,819	\$ 93,873
Less: Goodwill and net intangible assets	(23,482)	(24,013)	(24,789)
Tangible common equity—non-GAAP	\$ 68,217	\$ 66,806	\$ 69,084

Non-GAAP Financial Measures by Business Segment

\$ in billions	2024	2023	2022
Average common equity¹			
Institutional Securities	\$ 45.0	\$ 45.6	\$ 48.8
Wealth Management	29.1	28.8	31.0
Investment Management	10.8	10.4	10.6
ROE²			
Institutional Securities	14 %	7 %	10 %
Wealth Management	20 %	17 %	16 %
Investment Management	8 %	6 %	6 %
Average tangible common equity¹			
Institutional Securities	\$ 44.6	\$ 45.2	\$ 48.3
Wealth Management	15.5	14.8	16.3
Investment Management	1.1	0.7	0.8
ROTCE²			
Institutional Securities	14 %	7 %	10 %
Wealth Management	37 %	33 %	31 %
Investment Management	76 %	88 %	86 %

1. Average common equity and average tangible common equity for each business segment is determined using our Required Capital framework (see “Liquidity and Capital Resources—Regulatory Requirements—Attribution of Average Common Equity According to the Required Capital Framework” herein). The sums of the segments’ Average common equity and Average tangible common equity do not equal the Consolidated measures due to Parent Company equity.
2. The calculation of ROE and ROTCE by segment uses net income applicable to Morgan Stanley by segment less preferred dividends allocated to each segment, annualized as a percentage of average common equity and average tangible common equity, respectively, allocated to each segment.

Return on Tangible Common Equity Goal

We have an ROTCE goal of 20%. Our ROTCE goal is a forward-looking statement that is based on a normal market environment and may be materially affected by many factors.

See “Risk Factors” and “Forward-Looking Statements” herein for further information on market and economic conditions and their potential effects on our future operating results.

ROTCE represents a non-GAAP financial measure. For further information on non-GAAP measures, see “Selected Non-GAAP Financial Information” herein.

Business Segments

Substantially all of our operating revenues and operating expenses are directly attributable to our business segments. Certain revenues and expenses have been allocated to each business segment, generally in proportion to its respective net revenues, non-interest expenses or other relevant measures. See Note 22 to the financial statements for segment net revenues by income statement line item and information on intersegment transactions.

Net Revenues

Investment Banking

Investment banking revenues are derived from client engagements in which we act as an advisor, underwriter or distributor of capital.

Within the Institutional Securities business segment, these revenues are primarily composed of fees earned from underwriting equity and fixed income securities, syndicating loans and advisory services in relation to mergers and acquisitions, divestitures and corporate restructurings.

Within the Wealth Management business segment, these revenues are derived from the distribution of newly issued securities.

Trading

Trading revenues include the realized gains and losses from transactions in financial instruments, unrealized gains and losses from ongoing changes in the fair value of our positions, and gains and losses from financial instruments used to economically hedge compensation expense related to DCP.

Within the Institutional Securities business segment, Trading revenues arise from transactions in cash instruments and derivatives in which we act as a market maker for our clients. In this role, we stand ready to buy, sell or otherwise transact with customers under a variety of market conditions and to provide firm or indicative prices in response to customer requests. Our liquidity obligations can be explicit in some cases, and in others, customers expect us to be willing to transact with them. In order to most effectively fulfill our market-making function, we engage in activities across all of our trading businesses that include, but are not limited to:

- taking positions in anticipation of, and in response to, customer demand to buy or sell and—depending on the liquidity of the relevant market and the size of the position—to hold those positions for a period of time;
- building, maintaining and rebalancing inventory held to facilitate client activity through trades with other market participants;
- managing and assuming basis risk (risk associated with imperfect hedging) between risks incurred from the facilitation of client transactions and the standardized products available in the market to hedge those risks;
- trading in the market to remain current on pricing and trends; and
- engaging in other activities to provide efficiency and liquidity for markets.

In many markets, the realized and unrealized gains and losses from purchase and sale transactions will include any spreads between bids and offers. Certain fees received on loans carried at fair value and dividends from equity securities are also recorded in Trading revenues since they relate to positions carried at fair value.

Management's Discussion and Analysis

Within the Wealth Management business segment, Trading revenues primarily include revenues from customers' purchases and sales of fixed income instruments in which we act as principal, as well as gains and losses related to DCP investments.

Investments

Investments revenues are composed of realized and unrealized gains and losses derived from investments, including those associated with employee deferred compensation and co-investment plans. Estimates of the fair value of the investments that produce these revenues may involve significant judgment and may fluctuate significantly over time in light of business, market, economic and financial conditions, generally or in relation to specific transactions.

Within the Institutional Securities segment, gains and losses are primarily from business-related investments. Certain investments are subject to sale restrictions.

Within the Investment Management business segment, Investments revenues are primarily from performance-based fees in the form of carried interest, a portion of which is subject to reversal, and gains and losses from investments. The business is entitled to receive carried interest when the return in certain funds exceeds specified performance targets. Additionally, we consolidate certain sponsored Investment Management funds where revenues are primarily attributable to holders of noncontrolling interests.

Commissions and Fees

Commissions and fees result from arrangements in which the client is charged a fee for executing transactions related to securities, services related to sales and trading activities, and sales of other products.

Within the Institutional Securities business segment, commissions and fees include fees earned from market-making activities, such as executing and clearing client transactions on major stock and derivative exchanges, as well as from OTC derivatives.

Within the Wealth Management business segment, commissions and fees arise from client transactions including in equity securities, insurance products, mutual funds, alternative investments, futures and options. Wealth Management also earns revenues from order flow payments for directing customer orders to broker-dealers, exchanges and market centers for execution.

Asset Management

Asset management revenues include fees associated with the management and supervision of assets and the distribution of funds and similar products.

Within the Wealth Management business segment, Asset management revenues are related to advisory services

associated with fee-based assets, account service and administration, as well as distribution of products. These revenues are generally based on the net asset value of the account in which a client is invested.

Within the Investment Management business segment, Asset management revenues are primarily composed of fees received from investment vehicles on the basis of assets under management. Performance-based fees, not in the form of carried interest, are earned on certain products and separately managed accounts as a percentage of appreciation in value and, in certain cases, are based upon the achievement of performance criteria. These performance fees are generally recognized on a quarterly or annual basis.

Net Interest

Interest income and Interest expense are functions of the level and mix of total assets and liabilities, including Trading assets and Trading liabilities, Investment securities, Securities borrowed or purchased under agreements to resell, Securities loaned or sold under agreements to repurchase, Loans, Deposits and Borrowings.

Within the Institutional Securities business segment, Net interest is a function of market-making strategies, client activity, and the prevailing level, term structure and volatility of interest rates. Net interest is impacted by market-making, lending and financing activities as we generally earn interest on securities held by the Firm, Securities borrowed, Securities purchased under agreements to resell, Loans and margin loans, while Borrowings, Securities loaned and Securities sold under agreements to repurchase generally incur interest expense.

Within the Wealth Management business segment, Interest income is driven by assets held including Investment securities, Loans and margin loans. Interest expense is driven by Deposits and other funding.

Other

Other revenues for Institutional Securities include revenues and losses from equity method investments, fees earned in association with lending activities, mark-to-market gains and losses on loans and lending commitments held for sale, as well as gains and losses on economic derivative hedges associated with certain held-for-sale and held-for-investment loans and lending commitments.

Other revenues for Wealth Management include realized gains and losses on AFS securities, account handling fees, referral fees and other miscellaneous revenues.

Provision for Credit Losses

The Provision for credit losses includes the provision for credit losses for loans and lending commitments held for investment.

Management's Discussion and Analysis

Institutional Securities—Fixed Income and Equities

Fixed income and Equities net revenues are composed of Trading revenues, Commissions and fees, Asset management revenues, Net interest, and certain Investments and Other revenues directly attributable to those businesses. These revenues, which can be affected by a variety of interrelated factors, including market volumes, bid-offer spreads and the impact of market conditions on inventory held to facilitate client activity, as well as the effect of hedging activity, are viewed in the aggregate when assessing the performance and profitability of our businesses.

Following is a description of the revenue-generating activities within our equity and fixed income businesses, as well as how their results impact the income statement line items.

Equity—Financing. We provide financing, prime brokerage and fund administration services to our clients active in the equity markets through a variety of products, including margin lending, securities lending and swaps. Results from this business are largely driven by the difference between financing income earned and financing and liquidity costs incurred, which are reflected in Net interest for securities lending products, and in Trading revenues for derivative products. Fees for providing fund administration services are reflected in Asset management revenues.

Equity—Execution services. A significant portion of the results for this business is generated by commissions and fees from executing and clearing client transactions on major stock and derivative exchanges, as well as from OTC transactions. We make markets for our clients principally in equity-related securities and derivative products, including those that provide liquidity and are utilized for hedging. Market-making also generates gains and losses on inventory held to facilitate client activity, which are reflected in Trading revenues. Execution services also includes certain Investments and Other revenues.

*Fixed Income—*Within fixed income, we make markets in various flow and structured products in order to facilitate client activity as part of the following products and services:

- *Global macro products.* We make markets for our clients in interest rate, foreign exchange and emerging market products, including exchange-traded and OTC securities and derivative instruments. The results of this market-making activity are primarily driven by gains and losses from buying and selling positions to stand ready for and satisfy client demand and are recorded in Trading revenues.
- *Credit products.* We make markets in credit-sensitive products, such as corporate bonds and mortgage securities and other securitized products, and related derivative instruments. The values of positions in this business are sensitive to changes in credit spreads and interest rates, which result in gains and losses reflected in Trading revenues. We undertake lending activities, which include commercial mortgage lending, secured lending facilities and financing extended to sales and trading customers. Due

to the amount and type of the interest-bearing securities and loans making up this business, a significant portion of the results is also reflected in Net interest revenues.

- *Commodities products and Other.* We make markets in various commodity products related primarily to electricity, natural gas, oil and metals. These activities are primarily recorded in Trading revenues.

Fixed income also includes certain Investments and Other revenues.

Institutional Securities—Other Net Revenues

Other net revenues include impacts from certain treasury functions, such as liquidity and funding costs and gains and losses on economic hedges related to certain borrowings. Other net revenues also include mark-to-market gains and losses on held-for-sale corporate loans and lending commitments, as well as net interest and gain and losses on economic hedges associated with held-for-sale and held-for-investment corporate loans and lending commitments. Also included are gains and losses from financial instruments used to economically hedge compensation expense related to certain DCP, income and losses from the equity method investment related to our Japanese securities joint venture with MUFG, as well as Investments and Other revenues that are not directly attributable to Fixed income and Equities businesses.

Compensation Expense

Compensation and benefits expenses include base salaries and fixed allowances, formulaic programs, discretionary incentive compensation, amortization of deferred cash and equity awards, changes in the fair value of DCP investments, carried interest allocated to employees, severance costs, and other items such as health and welfare benefits. For additional information on DCP, refer to “Other Matters” herein.

The factors that drive compensation for our employees vary from period to period, from segment to segment and within a segment. For certain revenue-producing employees in the Wealth Management and Investment Management business segments, compensation is largely paid on the basis of formulaic payouts that link employee compensation to revenues. Compensation for other employees, including revenue-producing employees in the Institutional Securities business segment and employees in corporate support functions, include base salary and benefits and may also include incentive compensation that is determined following the assessment of the performance of the Firm, business unit and individual.

Income Taxes

The Income tax provision for our business segments is generally determined based on the revenues, expenses and activities directly attributable to each business segment. Certain items have been allocated to each business segment, generally in proportion to its respective net revenues or other relevant measures.

Management’s Discussion and Analysis

Institutional Securities

Income Statement Information

\$ in millions	2024	2023	2022	% Change	
				2024	2023
Revenues					
Advisory	\$ 2,378	\$ 2,244	\$ 2,946	6 %	(24)%
Equity	1,599	889	851	80 %	4 %
Fixed income	2,193	1,445	1,438	52 %	— %
Total Underwriting	3,792	2,334	2,289	62 %	2 %
Total Investment banking	6,170	4,578	5,235	35 %	(13)%
Equity	12,230	9,986	10,769	22 %	(7)%
Fixed income	8,418	7,673	9,022	10 %	(15)%
Other	1,262	823	(633)	53 %	N/M
Net revenues	28,080	23,060	24,393	22 %	(5)%
Provision for credit losses	202	401	211	(50)%	90 %
Compensation and benefits	8,669	8,369	8,246	4 %	1 %
Non-compensation expenses	10,460	9,814	9,221	7 %	6 %
Total non-interest expenses	19,129	18,183	17,467	5 %	4 %
Income before provision for income taxes	8,749	4,476	6,715	95 %	(33)%
Provision for income taxes	1,947	884	1,308	120 %	(32)%
Net income	6,802	3,592	5,407	89 %	(34)%
Net income applicable to noncontrolling interests	136	139	165	(2)%	(16)%
Net income applicable to Morgan Stanley	\$ 6,666	\$ 3,453	\$ 5,242	93 %	(34)%

Investment Banking

Investment Banking Volumes

\$ in billions	2024	2023	2022
Completed mergers and acquisitions ¹	\$ 628	\$ 677	\$ 881
Equity and equity-related offerings ^{2,3}	63	32	23
Fixed income offerings ^{2,4}	323	236	229

Source: LSEG Data & Risk Analytics (formerly known as Refinitiv) as of January 2, 2025. Transaction volumes may not be indicative of net revenues in a given period. In addition, transaction volumes for prior periods may vary from amounts previously reported due to the subsequent withdrawal, change in value or change in timing of certain transactions.

- Includes transactions of \$100 million or more. Based on full credit to each of the advisors in a transaction.
- Based on full credit for single book managers and equal credit for joint book managers.
- Includes Rule 144A issuances and registered public offerings of common stock, convertible securities and rights offerings.
- Includes Rule 144A and publicly registered issuances, non-convertible preferred stock, mortgage-backed and asset-backed securities, and taxable municipal debt. Excludes leveraged loans and self-led issuances.

Investment Banking Revenues

Net revenues of \$6,170 million in 2024 increased 35% compared with the prior year, reflecting an increase in underwriting and Advisory revenues.

- Advisory revenues increased primarily due to higher completed M&A transactions.
- Equity underwriting revenues increased primarily on higher initial public offerings and follow-on offerings.
- Fixed income underwriting revenues increased primarily reflecting higher bond issuances, non-investment grade loan issuances and securitized products revenues.

While Investment Banking results improved from the prior year, we continue to operate in a market environment with lower completed M&A activity relative to longer-term averages.

See “Investment Banking Volumes” herein.

Equity, Fixed Income and Other Net Revenues

Equity and Fixed Income Net Revenues

\$ in millions	2024				Total
	Trading	Fees ¹	Net Interest ²	All Other ³	
Financing	\$ 8,135	\$ 566	\$ (2,840)	\$ 17	\$ 5,878
Execution services	3,702	2,591	(291)	350	6,352
Total Equity	\$ 11,837	\$ 3,157	\$ (3,131)	\$ 367	\$ 12,230
Total Fixed income	\$ 8,464	\$ 394	\$ (730)	\$ 290	\$ 8,418

\$ in millions	2023				Total
	Trading	Fees ¹	Net Interest ²	All Other ³	
Financing	\$ 7,206	\$ 524	\$ (2,886)	\$ 66	\$ 4,910
Execution services	2,919	2,235	(190)	112	5,076
Total Equity	\$ 10,125	\$ 2,759	\$ (3,076)	\$ 178	\$ 9,986
Total Fixed income	\$ 7,848	\$ 375	\$ (975)	\$ 425	\$ 7,673

\$ in millions	2022				Total
	Trading	Fees ¹	Net Interest ²	All Other ³	
Financing	\$ 5,223	\$ 535	\$ (257)	\$ 36	\$ 5,537
Execution services	2,947	2,462	(81)	(96)	5,232
Total Equity	\$ 8,170	\$ 2,997	\$ (338)	\$ (60)	\$ 10,769
Total Fixed income	\$ 7,711	\$ 341	\$ 922	\$ 48	\$ 9,022

- Includes Commissions and fees and Asset management revenues.
- Includes funding costs, which are allocated to the businesses based on funding usage.
- Includes Investments and Other revenues.

Equity

Net revenues of \$12,230 million in 2024 increased 22% compared with the prior year, reflecting an increase in both Execution services and Financing, particularly in Asia and the Americas.

- Financing revenues increased primarily due to higher client activity and lower funding and liquidity costs.
- Execution services revenues increased primarily due to higher gains on inventory held to facilitate client activity and increased client activity in derivatives and cash equities.

Fixed Income

Net revenues of \$8,418 million in 2024 increased 10% compared with the prior year, reflecting an increase across businesses, particularly in Credit and Global macro products.

- Global macro products increased primarily due to lower losses on foreign exchange products and higher gains on rates products, on inventory held to facilitate client activity.
- Credit products revenues increased primarily due to higher lending and securitized products revenues and lower losses

Management's Discussion and Analysis

on inventory held to facilitate client activity in corporate credit products.

- Commodities products and other fixed income revenues were relatively unchanged.

Other Net Revenues

Other net revenues were \$1,262 million in 2024 compared with \$823 million in the prior year, primarily due to lower mark-to-market losses on corporate loans, inclusive of hedges, and higher net interest income and fees on corporate loans.

Provision for Credit Losses

In 2024, the Provision for credit losses on loans and lending commitments of \$202 million was primarily related to growth in the corporate loan portfolio and provisions for certain specific commercial real estate loans, partially offset by improvements in the macroeconomic outlook. The Provision for credit losses on loans and lending commitments of \$401 million in 2023 was primarily related to credit deterioration in the commercial real estate sector, including provisions for certain specific loans, mainly in the office portfolio, and modest growth in certain other loan portfolios.

For further information on the Provision for credit losses, see "Credit Risk" herein.

Non-Interest Expenses

Non-interest expenses of \$19,129 million in 2024 increased 5% compared with the prior year as a result of higher Non-compensation expenses and Compensation and benefits expenses.

- Compensation and benefits expenses increased primarily reflecting higher discretionary incentive compensation on higher revenues, partially offset by lower severance costs.
- Non-compensation expenses increased primarily reflecting higher execution-related expenses and increased technology spend, partially offset by lower legal expenses and lower FDIC special assessment cost.

Management’s Discussion and Analysis

Wealth Management

Income Statement Information

\$ in millions				% Change	
	2024	2023	2022	2024	2023
Revenues					
Asset management	\$16,501	\$14,019	\$13,872	18 %	1 %
Transactional ¹	3,864	3,556	2,473	9 %	44 %
Net interest	7,313	8,118	7,429	(10)%	9 %
Other ²	742	575	643	29 %	(11)%
Net revenues	28,420	26,268	24,417	8 %	8 %
Provision for credit losses					
	62	131	69	(53)%	90 %
Compensation and benefits	15,207	13,972	12,534	9 %	11 %
Non-compensation expenses	5,411	5,635	5,231	(4)%	8 %
Total non-interest expenses	20,618	19,607	17,765	5 %	10 %
Income before provision for income taxes	7,740	6,530	6,583	19 %	(1)%
Provision for income taxes	1,852	1,508	1,444	23 %	4 %
Net income applicable to Morgan Stanley	\$ 5,888	\$ 5,022	\$ 5,139	17 %	(2)%

1. Transactional includes Investment banking, Trading, and Commissions and fees revenues.
2. Other includes Investments and Other revenues.

Wealth Management Metrics

\$ in billions	At December 31,		At December 31,	
	2024	2023	2024	2023
Total client assets ¹	\$ 6,194	\$ 5,129		
U.S. Bank Subsidiary loans	\$ 160	\$ 147		
Margin and other lending ²	\$ 28	\$ 21		
Deposits ³	\$ 370	\$ 346		
Annualized weighted average cost of deposits ⁴				
Period end	2.73%	2.92%		
Period average	3.05%	2.43%		
<hr/>				
Net new assets	\$ 251.7	\$ 282.3	\$ 311.3	

1. Client assets represent those for which Wealth Management is providing services including financial advisor-led brokerage, custody, administrative and investment advisory services; self-directed brokerage and investment advisory services; financial and wealth planning services; workplace services, including stock plan administration, and retirement plan services. See “Advisor-Led Channel” and “Self-Directed Channel” herein for additional information.
2. Margin and other lending represents margin lending arrangements, which allow customers to borrow against the value of qualifying securities and other lending which includes non-purpose securities-based lending on non-bank entities.
3. Deposits reflect liabilities sourced from Wealth Management clients and other sources of funding on our U.S. Bank Subsidiaries. Deposits include sweep deposit programs, savings and other deposits, and time deposits.
4. Annualized weighted average represents the total annualized weighted average cost of the various deposit products. Amounts at December 31, 2024 include the effect of related hedging derivatives. Amounts at December 31, 2023 exclude the effect of related hedging derivatives, which did not have a material impact on the cost of deposits. The period end cost of deposits is based upon balances and rates as of December 31, 2024 and December 31, 2023. The period average is based on daily balances and rates for the period.

Net New Assets (NNA)

NNA represent client asset inflows, inclusive of interest, dividends and asset acquisitions, less client asset outflows, and exclude the impact of business combinations/divestitures and the impact of fees and commissions. The level of NNA in a given period is influenced by a variety of factors, including macroeconomic factors that impact client investment and spending behaviors, seasonality, our ability to attract and retain financial advisors and clients, capital market and corporate activities which may impact the amount of assets in certain client channels, and large idiosyncratic inflows and

outflows. These factors have had an impact on our NNA in recent periods. Should these factors continue, the growth rate of our NNA may be impacted.

Advisor-Led Channel

\$ in billions	At December 31,		At December 31,	
	2024	2023	2024	2023
Advisor-led client assets ¹	\$ 4,758	\$ 3,979		
Fee-based client assets ²	\$ 2,347	\$ 1,983		
Fee-based client assets as a percentage of advisor-led client assets	49%	50%		
<hr/>				
	2024	2023	2022	
Fee-based asset flows ³	\$ 123.1	\$ 109.2	\$ 162.8	

1. Advisor-led client assets represent client assets in accounts that have a Wealth Management representative assigned.
2. Fee-based client assets represent the amount of client assets where the basis of payment for services is a fee calculated on those assets.
3. Fee-based asset flows include net new fee-based assets (including asset acquisitions), net account transfers, dividends, interest and client fees, and exclude institutional cash management related activity. For a description of the Inflows and Outflows included in Fee-based asset flows, see Fee-based client assets herein.

Self-Directed Channel

	At December 31,		At December 31,	
	2024	2023	2024	2023
Self-directed assets (in billions) ¹	\$ 1,437	\$ 1,150		
Self-directed households (in millions) ²	8.3	8.1		
<hr/>				
	2024	2023	2022	
Daily average revenue trades (“DARTs”) (in thousands) ³	837	759	864	

1. Self-directed client assets represent active accounts which are not advisor led. Active accounts are defined as having at least \$25 in assets.
2. Self-directed households represent the total number of households that include at least one active account with self-directed assets. Individual households or participants that are engaged in one or more of our Wealth Management channels are included in each of the respective channel counts.
3. DARTs represent the total self-directed trades in a period divided by the number of trading days during that period.

Workplace Channel¹

	At December 31,		At December 31,	
	2024	2023	2024	2023
Workplace unvested assets (in billions) ²	\$ 475	\$ 416		
Number of participants (in millions) ³	6.6	6.6		

1. The workplace channel includes equity compensation solutions for companies, their executives and employees.
2. Stock plan unvested assets represent the market value of public company securities at the end of the period.
3. Stock plan participants represent total accounts with vested and/or unvested stock plan assets in the workplace channel. Individuals with accounts in multiple plans are counted as participants in each plan.

Net Revenues

Asset Management

Asset management revenues of \$16,501 million in 2024 increased 18% compared with the prior year, reflecting higher fee-based assets due to higher market levels and the cumulative impact of positive fee-based flows.

See “Fee-Based Client Assets Rollforwards” herein.

Transactional Revenues

Transactional revenues of \$3,864 million in 2024 increased 9% compared with the prior year, reflecting higher client activity particularly in equity-related transactions.

Management’s Discussion and Analysis

Net Interest

Net interest revenues of \$7,313 million in 2024 decreased 10% compared with the prior year, primarily due to lower average sweep deposits, partially offset by higher yields on our investment portfolio and lending growth.

The level and pace of interest rate changes and other macroeconomic factors have impacted client preferences for cash allocation to higher-yielding products and client demand for loans. These factors, along with other developments, such as pricing changes to certain deposit types due to various competitive dynamics, have impacted our net interest income. To the extent they persist, or other factors arise, such as central bank actions and changes in the path of interest rates, net interest income may be impacted in future periods.

Provision for Credit Losses

The Provision for credit losses on loans and lending commitments of \$62 million in 2024 was primarily related to certain specific commercial real estate and securities-based loans, and portfolio growth, partially offset by improvements in the macroeconomic outlook. The Provision for credit losses on loans and lending commitments of \$131 million in 2023 was primarily related to deteriorating conditions in the commercial real estate sector including provisions for certain specific loans, mainly in the office portfolio.

For further information on the Provision for credit losses, see “Credit Risk” herein.

Non-Interest Expenses

Non-interest expenses of \$20,618 million in 2024 increased 5% compared with the prior year, as a result of higher Compensation and benefits expenses, partially offset by lower Non-compensation expenses.

- Compensation and benefits expenses increased, primarily due to an increase in the formulaic payout to Wealth Management representatives on higher compensable revenues.
- Non-compensation expenses decreased, primarily driven by lower professional services and legal expenses and lower FDIC special assessment cost, partially offset by higher technology spend.

Fee-Based Client Assets Rollforwards

<i>\$ in billions</i>	At December 31, 2023	Inflows ¹	Outflows ²	Market Impact ³	At December 31, 2024
Separately managed ⁴	\$ 589	\$ 69	\$ (38)	\$ 99	\$ 719
Unified managed	501	120	(56)	48	613
Advisor	188	31	(35)	23	207
Portfolio manager	645	120	(88)	73	750
Subtotal	\$ 1,923	\$ 340	\$ (217)	\$ 243	\$ 2,289
Cash management	60	57	(59)	—	58
Total fee-based client assets	\$ 1,983	\$ 397	\$ (276)	\$ 243	\$ 2,347

<i>\$ in billions</i>	At December 31, 2022	Inflows ¹	Outflows ²	Market Impact ³	At December 31, 2023
Separately managed ⁴	\$ 501	\$ 70	\$ (23)	\$ 41	\$ 589
Unified managed	408	96	(56)	53	501
Advisor	167	29	(32)	24	188
Portfolio manager	552	98	(73)	68	645
Subtotal	\$ 1,628	\$ 293	\$ (184)	\$ 186	\$ 1,923
Cash management	50	60	(50)	—	60
Total fee-based client assets	\$ 1,678	\$ 353	\$ (234)	\$ 186	\$ 1,983

<i>\$ in billions</i>	At December 31, 2021	Inflows ^{1,5}	Outflows ²	Market Impact ³	At December 31, 2022
Separately managed ⁴	\$ 479	\$ 141	\$ (25)	\$ (94)	\$ 501
Unified managed	467	76	(50)	(85)	408
Advisor	211	29	(35)	(38)	167
Portfolio manager	636	94	(67)	(111)	552
Subtotal	\$ 1,793	\$ 340	\$ (177)	\$ (328)	\$ 1,628
Cash management	46	38	(34)	—	50
Total fee-based client assets	\$ 1,839	\$ 378	\$ (211)	\$ (328)	\$ 1,678

1. Inflows include new accounts, account transfers, deposits, dividends and interest.
2. Outflows include closed or terminated accounts, account transfers, withdrawals and client fees.
3. Market impact includes realized and unrealized gains and losses on portfolio investments.
4. Includes non-custody account values based on asset values reported on a quarter lag by third-party custodians.
5. Includes \$75 billion of fee-based assets acquired in an asset acquisition in the first quarter of 2022, reflected in Separately managed.

Average Fee Rates¹

<i>Fee rate in bps</i>	2024	2023	2022
Separately managed	12	12	12
Unified managed	91	92	94
Advisor	79	80	81
Portfolio manager	89	91	92
Subtotal	65	65	66
Cash management	6	6	6
Total fee-based client assets	63	64	65

1. Based on Asset management revenues related to advisory services associated with fee-based assets.

Asset management revenues within the Wealth Management segment are primarily generated from the following types of accounts:

- *Separately managed*—accounts by which third party and affiliated asset managers are engaged to manage clients’ assets with investment decisions made by the asset

Management's Discussion and Analysis

manager. Only one third-party asset manager strategy can be held per account.

- *Unified managed*—accounts that provide the client with the ability to combine separately managed accounts, mutual funds and exchange-traded funds, all in one aggregate account. Investment decisions and discretionary authority may be exercised by the client, financial advisor or portfolio manager. Also includes accounts that give the client the ability to systematically allocate assets across a wide range of mutual funds, for which the investment decisions are made by the client.
- *Advisor*—accounts where the investment decisions must be approved by the client, and the financial advisor must obtain approval each time a change is made to the account or its investments.
- *Portfolio manager*—accounts where a financial advisor has discretion (contractually approved by the client) to make ongoing investment decisions without the client's approval for each individual change.
- *Cash management*—accounts where the financial advisor provides discretionary cash management services to institutional clients, whereby securities or proceeds are invested and reinvested in accordance with the client's investment criteria. Generally, the portfolio will be invested in short-term fixed income and cash equivalent investments.

Investment Management

Income Statement Information

\$ in millions	2024	2023	2022	% Change	
				2024	2023
Revenues					
Asset management and related fees	\$ 5,627	\$ 5,231	\$ 5,332	8 %	(2)%
Performance-based income and other ¹	234	139	43	68 %	N/M
Net revenues	5,861	5,370	5,375	9 %	— %
Compensation and benefits	2,302	2,217	2,273	4 %	(2)%
Non-compensation expenses	2,422	2,311	2,295	5 %	1 %
Total non-interest expenses	4,724	4,528	4,568	4 %	(1)%
Income before provision for income taxes	1,137	842	807	35 %	4 %
Provision for income taxes	275	199	162	38 %	23 %
Net income	862	643	645	34 %	— %
Net income applicable to noncontrolling interests	3	4	(15)	(25)%	127 %
Net income applicable to Morgan Stanley	\$ 859	\$ 639	\$ 660	34 %	(3)%

1. Includes Investments and Trading, Net interest and Other revenues.

Net Revenues

Asset Management and Related Fees

Asset management and related fees of \$5,627 million in 2024 increased 8% compared with the prior year, primarily driven by higher average AUM on higher market levels.

Asset management revenues are influenced by the level, relative mix of AUM and related fee rates. While higher market levels drove increases in average AUM in the current year period, there were continued net outflows in the Equity asset class, which may be influenced by the structure and performance of our investment strategies and products relative to their benchmarks, offset by higher net inflows in the Alternatives and Solutions and Fixed Income asset classes reflecting client preferences. To the extent these conditions continue, we would expect our Asset management revenue to continue to be impacted.

See “Assets Under Management or Supervision” herein.

Performance-based Income and Other

Performance-based income and other revenues increased to \$234 million in 2024, from \$139 million in the prior year, primarily due to higher accrued carried interest in infrastructure and real estate funds, partially offset by lower accrued carried interest in certain private equity funds.

Non-Interest Expenses

Non-interest expenses of \$4,724 million in 2024 increased 4% from the prior year, as a result of higher Non-compensation and Compensation and benefits expenses.

- Compensation and benefits expenses increased primarily due to higher compensation associated with carried interest.
- Non-compensation expenses increased primarily due to higher distribution expenses on higher AUM.

Management's Discussion and Analysis

Assets Under Management or Supervision Rollforwards

<i>\$ in billions</i>	At Dec 31, 2023	Inflows ¹	Outflows ²	Market Impact ³	Other ⁴	At Dec 31, 2024
Equity	\$ 295	\$ 44	\$ (66)	\$ 49	\$ (10)	\$ 312
Fixed Income	171	69	(49)	7	(6)	192
Alternatives and Solutions	508	140	(108)	62	(9)	593
Long-Term AUM	\$ 974	\$ 253	\$ (223)	\$ 118	\$ (25)	\$ 1,097
Liquidity and Overlay Services	485	2,349	(2,268)	20	(17)	569
Total	\$ 1,459	\$ 2,602	\$ (2,491)	\$ 138	\$ (42)	\$ 1,666

<i>\$ in billions</i>	At Dec 31, 2022	Inflows ¹	Outflows ²	Market Impact ³	Other ^{4,5}	At Dec 31, 2023
Equity	\$ 259	\$ 40	\$ (57)	\$ 57	\$ (4)	\$ 295
Fixed Income	173	56	(62)	11	(7)	171
Alternatives and Solutions	431	108	(91)	57	3	508
Long-Term AUM	\$ 863	\$ 204	\$ (210)	\$ 125	\$ (8)	\$ 974
Liquidity and Overlay Services	442	2,282	(2,244)	20	(15)	485
Total	\$ 1,305	\$ 2,486	\$ (2,454)	\$ 145	\$ (23)	\$ 1,459

<i>\$ in billions</i>	At Dec 31, 2021	Inflows ¹	Outflows ²	Market Impact ³	Other ⁴	At Dec 31, 2022
Equity	\$ 395	\$ 56	\$ (74)	\$ (106)	\$ (12)	\$ 259
Fixed Income	207	66	(78)	(16)	(6)	173
Alternatives and Solutions	466	102	(83)	(47)	(7)	431
Long-Term AUM	\$ 1,068	\$ 224	\$ (235)	\$ (169)	\$ (25)	\$ 863
Liquidity and Overlay Services	497	2,224	(2,268)	(6)	(5)	442
Total	\$ 1,565	\$ 2,448	\$ (2,503)	\$ (175)	\$ (30)	\$ 1,305

- Inflows represent investments or commitments from new and existing clients in new or existing investment products, including reinvestments of client dividends and increases in invested capital. Inflows exclude the impact of exchanges, whereby a client changes positions within the same asset class.
- Outflows represent redemptions from clients' funds, transition of funds from the committed capital period to the invested capital period and decreases in invested capital. Outflows exclude the impact of exchanges, whereby a client changes positions within the same asset class.
- Market impact includes realized and unrealized gains and losses on portfolio investments. This excludes any funds where market impact does not impact management fees.
- Other contains both distributions and foreign currency impact for all periods. Distributions represent decreases in invested capital due to returns of capital after the investment period of a fund. It also includes fund dividends that the client has not reinvested. Foreign currency impact reflects foreign currency changes for non-U.S. dollar denominated funds.
- In 2023, our Retail Municipal and Corporate Fixed Income business ("FIMS") was combined with our Parametric retail customized solutions business. The impact of the change was a \$6 billion movement in AUM from Fixed Income to the Alternatives and Solutions asset class included in Other.

Average AUM

<i>\$ in billions</i>	2024	2023	2022
Equity	\$ 305	\$ 279	\$ 298
Fixed income	180	170	186
Alternatives and Solutions	557	466	435
Long-Term AUM Subtotal	1,042	915	919
Liquidity and Overlay Services	498	464	462
Total AUM	\$ 1,540	\$ 1,379	\$ 1,381

Average Fee Rates¹

<i>Fee rate in bps</i>	2024	2023	2022
Equity	71	71	70
Fixed income	36	35	35
Alternatives and Solutions	28	32	34
Long-Term AUM	42	44	46
Liquidity and Overlay Services	12	13	11
Total AUM	32	34	34

1. Based on Asset management revenues, net of waivers, excluding performance-based fees and other non-management fees. For certain non-U.S. funds, it includes the portion of advisory fees that the advisor collects on behalf of third-party distributors. The payment of those fees to the distributor is included in Non-compensation expenses in the income statement.

Asset management and other related fees within the Investment Management segment are primarily generated from Equity, Fixed Income and the following products:

Alternatives and Solutions. Includes products in fund of funds, real estate, infrastructure, private equity and credit strategies and multi-asset portfolios, as well as systematic strategies that create custom investment solutions.

Liquidity and Overlay Services. Includes liquidity fund products, as well as overlay services, which represent investment strategies that use passive exposure instruments to obtain, offset or substitute specific portfolio exposures, beyond those provided by the underlying holdings of the fund.

Supplemental Financial Information

U.S. Bank Subsidiaries

Our U.S. Bank Subsidiaries accept deposits, provide loans to a variety of customers, including large corporate and institutional clients, as well as high to ultra-high net worth individuals, and invest in securities. Lending activity in our U.S. Bank Subsidiaries from the Institutional Securities business segment primarily includes Secured lending facilities, Commercial and Residential real estate and Corporate loans. Lending activity in our U.S. Bank Subsidiaries from the Wealth Management business segment primarily includes Securities-based lending, which allows clients to borrow money against the value of qualifying securities, and Residential real estate loans.

For a further discussion of our credit risks, see “Quantitative and Qualitative Disclosures about Risk—Credit Risk” herein. For a further discussion about loans and lending commitments, see Notes 9 and 14 to the financial statements.

U.S. Bank Subsidiaries’ Supplemental Financial Information¹

<i>\$ in billions</i>	At December 31, 2024	At December 31, 2023
Investment securities:		
Available-for-sale at fair value	\$ 76.5	\$ 66.6
Held-to-maturity	47.8	51.4
Total Investment securities	\$ 124.3	\$ 118.0
Wealth Management loans²		
Residential real estate	\$ 66.6	\$ 60.3
Securities-based lending and Other ³	92.9	86.2
Total Wealth Management loans	\$ 159.5	\$ 146.5
Institutional Securities loans²		
Corporate	\$ 7.1	\$ 10.1
Secured lending facilities	50.2	40.8
Commercial and Residential real estate	10.5	10.7
Securities-based lending and Other	5.6	4.1
Total Institutional Securities loans	\$ 73.4	\$ 65.7
Total assets	\$ 434.8	\$ 396.1
Deposits ⁴	\$ 369.7	\$ 346.1

1. Amounts exclude transactions between the bank subsidiaries, as well as deposits from the Parent Company and affiliates.
2. Represents loans, net of ACL. For a further discussion of loans in the Wealth Management and Institutional Securities business segments, see “Quantitative and Qualitative Disclosures about Risk—Credit Risk” herein.
3. Other loans primarily include tailored lending. For a further discussion of Other loans, see “Quantitative and Qualitative Disclosures about Risk—Credit Risk” herein.
4. For further information on deposits, see “Liquidity and Capital Resources—Funding Management—Balance Sheet—Unsecured Financing” herein.

Other Matters

Deferred Cash-Based Compensation

The Firm sponsors a number of deferred cash-based compensation programs for current and former employees, which generally contain vesting, clawback and cancellation provisions.

Employees are permitted to allocate the value of their deferred awards among a menu of notional investments, whereby the value of their awards will track the performance of the referenced notional investments. The menu of investments, which is selected by the Firm, includes fixed income, equity, commodity and money market funds.

Compensation expense for DCP awards is calculated based on the notional value of the award granted, adjusted for changes in the fair value of the referenced investments that employees select. Compensation expense is recognized over the vesting period relevant to each separately vesting portion of deferred awards.

We invest directly, as principal, in financial instruments and other investments to economically hedge certain of our obligations under these DCP awards. Changes in the fair value of such investments, net of financing costs, are recorded in net revenues, and included in Transactional revenues in the Wealth Management business segment. Although changes in compensation expense resulting from changes in the fair value of the referenced investments will generally be offset by changes in the fair value of investments recognized in net revenues, there is typically a timing difference between the immediate recognition of gains and losses on our investments and the deferred recognition of the related compensation expense over the vesting period. While this timing difference may not be material to our Income before provision for income taxes in any individual period, it may impact the Wealth Management business segment reported ratios and operating metrics in certain periods due to potentially significant impacts to net revenues and compensation expenses. At December 31, 2024 and December 31, 2023, substantially all employee-referenced investments that subjected the Firm to price risk were economically hedged.

Amounts Recognized in Compensation Expense

<i>\$ in millions</i>	2024	2023	2022
Deferred cash-based awards	\$ 770	\$ 693	\$ 761
Return on referenced investments	672	668	(716)
Total recognized in compensation expense	\$ 1,442	\$ 1,361	\$ 45

Amounts Recognized in Compensation Expense by Segment

<i>\$ in millions</i>	2024	2023	2022
Institutional Securities	\$ 150	\$ 162	\$ (97)
Wealth Management	1,100	984	11
Investment Management	192	215	131
Total recognized in compensation expense	\$ 1,442	\$ 1,361	\$ 45

Management’s Discussion and Analysis

Projected Future Compensation Obligation¹

\$ in millions	
Award liabilities at December 31, 2024 ^{2,3}	\$ 5,658
Fully vested amounts to be distributed by the end of February 2025 ⁴	(772)
Unrecognized portion of prior awards at December 31, 2024 ³	1,590
2024 performance year awards granted in 2025 ³	432
Total⁵	\$ 6,908

1. Amounts relate to performance years 2024 and prior.
2. Balance is reflected in Other liabilities and accrued expenses in the balance sheet as of December 31, 2024.
3. Amounts do not include assumptions regarding forfeitures or assumptions about future market conditions with respect to referenced investments.
4. Distributions after February of each year are generally immaterial.
5. Of the total projected future compensation obligation, approximately 18% relates to Institutional Securities, approximately 74% relates to Wealth Management and approximately 8% relates to Investment Management.

The previous table presents a rollforward of the Firm’s estimated projected future compensation obligation for existing deferred cash-based compensation awards, exclusive of any assumptions about future market conditions with respect to referenced investments.

Projected Future Compensation Expense¹

\$ in millions	
Estimated to be recognized in:	
2025	\$ 623
2026	389
Thereafter	1,010
Total	\$ 2,022

1. Amounts relate to performance years 2024 and prior, and do not include assumptions regarding forfeitures or assumptions about future market conditions with respect to referenced investments.

The previous table sets forth an estimate of compensation expense associated with the projected future compensation obligation. Our projected future compensation obligation and expense for DCP for performance years 2024 and prior are forward-looking statements subject to uncertainty. Actual results may be materially affected by various factors, including, among other things: the performance of each participant’s referenced investments; changes in market conditions; participants’ allocation of their deferred awards; and participant cancellations or accelerations. See “Forward-Looking Statements” and “Risk Factors” for additional information.

For further information on the Firm’s deferred stock-based plans and carried interest compensation, which are excluded from the previous tables, see Notes 2 and 19 to the financial statements.

Accounting Development Updates

The Financial Accounting Standards Board has issued certain accounting updates that apply to us. Accounting updates not listed below were assessed and determined to be either not applicable or to not have a material impact on our financial condition or results of operations upon adoption.

We are currently evaluating the following accounting updates; however, we do not expect a material impact on our financial condition or results of operations upon adoption:

- *Disaggregation of Income Statement Expenses.* This update requires quantitative and qualitative disclosure of certain expense categories contained within their relevant expense lines in the income statement, including but not limited to: (1) employee compensation; (2) depreciation; and (3) intangible asset amortization. The update requires the disaggregation of these expense lines in a tabular format in the notes to the financial statements, including the separate disclosure of certain other expenses and gains or losses included within these expense lines which are required under existing U.S. GAAP, with all other expenses permitted to be disclosed in an “other items” category. Additionally, the update requires disclosure of the total amount and definition of the Firm’s selling expenses. The update is effective for annual periods beginning January 1, 2027, and interim reporting periods beginning January 1, 2028, with early adoption permitted.
- *Income Tax Disclosures.* This update enhances annual income tax disclosures primarily to further disaggregate disclosures related to the income tax rate reconciliation and income taxes paid. For the income tax rate reconciliation, this update requires (1) disclosure of specific categories of reconciling items (where applicable), and (2) providing additional information for reconciling items that meet a quantitative threshold. For income taxes paid (net of refunds), this update requires disclosure of amounts disaggregated by (1) federal, state, and foreign taxes; and (2) individual jurisdictions that meet a quantitative threshold. Additionally, the update requires disclosure of (1) income (or loss) before income taxes, disaggregated between domestic and foreign; and (2) income tax expense disaggregated by federal, state and foreign. The update is effective for annual periods beginning January 1, 2025, with early adoption permitted.

Critical Accounting Estimates

Our financial statements are prepared in accordance with U.S. GAAP, which requires us to make estimates and assumptions (see Note 1 to the financial statements). We believe that of our significant accounting policies (see Note 2 to the financial statements), the following policies involve a higher degree of judgment and complexity.

Management's Discussion and Analysis

Fair Value

Financial Instruments Measured at Fair Value

A significant number of our financial instruments are carried at fair value. The use of fair value to measure financial instruments is fundamental to our risk management practices and is our most critical accounting estimate. We make estimates regarding the valuation of assets and liabilities measured at fair value in preparing the financial statements. These assets and liabilities include, but are not limited to:

- Trading assets and Trading liabilities;
- Investment Securities—AFS;
- Certain Securities purchased under agreements to resell;
- Loans held-for-sale (measured at the lower of amortized cost or fair value);
- Certain Deposits, primarily certificates of deposit;
- Certain Securities sold under agreements to repurchase;
- Certain Other secured financings; and
- Certain Borrowings.

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (i.e., the exit price) in an orderly transaction between market participants at the measurement date.

In determining fair value, we use various valuation approaches. A hierarchy for inputs is used in measuring fair value that maximizes the use of observable prices and inputs, and minimizes the use of unobservable prices and inputs by requiring that the relevant observable inputs be used when available. The hierarchy is broken down into three levels: wherein Level 1 represents quoted prices in active markets, Level 2 represents valuations based on quoted prices in markets that are not active or for which all significant inputs are observable, and Level 3 consists of valuation techniques that incorporate significant unobservable inputs and, therefore, require the greatest use of judgment. The fair values for the substantial majority of our financial assets and liabilities carried at fair value are based on observable prices and inputs and are classified in level 1 or 2, of the fair value hierarchy. Level 3 financial assets represented 0.9% and 1.2% of our total assets, as of December 31, 2024 and December 31, 2023, respectively.

In periods of market disruption, the observability of prices and inputs, as well as market liquidity, may be reduced for many instruments, which could cause an instrument to be recategorized from Level 1 to Level 2 or from Level 2 to Level 3. In addition, a downturn in market conditions could lead to declines in the valuation of many instruments carried at fair value. Imprecision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. The Firm uses various methodologies and assumptions in the determination of fair value. The use of methodologies or assumptions different than those used by the Firm could result in a different estimate of fair value at the reporting date. For further information on the

definition of fair value, Level 1, Level 2, Level 3 and related valuation techniques, and quantitative information about and sensitivity of significant unobservable inputs used in Level 3 fair value measurements, see Notes 2 and 4 to the financial statements.

Where appropriate, valuation adjustments are made to account for various factors, such as liquidity risk (bid-ask adjustments), credit quality, model uncertainty, concentration risk and funding, in order to arrive at fair value. For a further discussion of valuation adjustments that we apply, see Note 2 to the financial statements.

Goodwill and Intangible Assets

Goodwill

We test goodwill for impairment on an annual basis as of July 1 and on an interim basis when certain events or circumstances exist. Evaluating goodwill for impairment requires management to make significant judgments, including, in part, the use of unobservable inputs that are subject to uncertainty. Goodwill impairment tests are performed at the reporting unit level, which is generally at the level of or one level below our business segments. Goodwill no longer retains its association with a particular acquisition once it has been assigned to a reporting unit. As such, all the activities of a reporting unit, whether acquired or organically developed, are available to support the value of the goodwill.

For both the annual and interim tests, we have the option to either (i) perform a quantitative impairment test or (ii) first perform a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, in which case the quantitative test would be performed.

When performing a quantitative impairment test, we compare the fair value of a reporting unit with its carrying amount, including goodwill. If the fair value of the reporting unit is less than its carrying amount, the goodwill impairment loss is equal to the excess of the carrying value over the fair value, limited by the carrying amount of goodwill allocated to that reporting unit.

The carrying value of each reporting unit is determined based on the capital allocated to the reporting unit. The estimated fair value of the reporting units is derived based on valuation techniques we believe market participants would use for each of the reporting units. The estimated fair value is generally determined by utilizing a discounted cash flow methodology. In certain instances, we may also utilize methodologies that incorporate price-to-book and price-to-earnings multiples of comparable companies.

The discounted cash flow methodology uses projected future cash flows based on the reporting units' earnings forecast. The discount rate used represents an estimate of the cost of equity for that reporting unit based on the Capital Asset Pricing Model.

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At each annual goodwill impairment testing date, each of our reporting units with goodwill had a fair value that was substantially in excess of its carrying value.

Intangible Assets

Intangible assets are initially recorded at cost, or in the situation where acquired as part of a business combination, at the fair value determined as part of the acquisition method of accounting. Subsequently, amortizable intangible assets are carried in the balance sheet at amortized cost, where amortization is recognized over their estimated useful lives. Indefinite-lived intangible assets are not amortized but are tested for impairment on an annual basis as of July 1 and on an interim basis when certain events or circumstances exist.

On a quarterly basis:

- All intangible assets are assessed for the presence of impairment indicators. Where such indicators are present, an evaluation for impairment is conducted.
- For amortizable intangible assets, an impairment loss exists if the carrying amount of the intangible asset is not recoverable and exceeds its fair value. The carrying amount of the intangible asset is not recoverable if it exceeds the sum of the expected undiscounted cash flows.
- For indefinite-lived intangible assets, an impairment exists if the carrying amount of the intangible asset exceeds its fair value.
- Amortizable intangible assets are assessed for any indication that the remaining useful life or the finite life classification should be revised. In such cases, the remaining carrying amount is amortized prospectively over the revised useful life, unless it is determined that the life of the intangible asset is indefinite, in which case the intangible asset is not amortized.
- Indefinite-lived intangible assets are assessed for any indication that the life of the intangible asset is no longer indefinite; in such cases, the carrying amount of the intangible asset is amortized prospectively over its remaining useful life.

The initial valuation of an intangible asset as part of the acquisition method of accounting and the subsequent valuation of intangible assets as part of an impairment assessment are subjective and based, in part, on inputs that are unobservable and can be subject to uncertainty. These inputs include, but are not limited to, forecasted cash flows, revenue growth rates, customer attrition rates and discount rates.

For both goodwill and intangible assets, to the extent an impairment loss is recognized, the loss establishes the new cost basis of the asset. Subsequent reversal of impairment losses is not permitted. For amortizable intangible assets, the new cost basis is amortized over the remaining useful life of that asset. Unanticipated declines in our revenue-generating capability, adverse market or economic events, and regulatory actions, could result in material impairment charges in future periods.

See Notes 2 and 10 to the financial statements for additional information about goodwill and intangible assets.

Legal and Regulatory Contingencies

In the normal course of business, we have been named, from time to time, as a defendant in various legal actions, including arbitrations, class actions and other litigation, arising in connection with our activities as a global diversified financial services institution.

Certain of the actual or threatened legal actions include claims for substantial compensatory and/or punitive damages or claims for indeterminate amounts of damages. In some cases, the third-party entities that are, or would otherwise be, the primary defendants in such cases are bankrupt, in financial distress, or may not honor applicable indemnification obligations. These actions have included, but are not limited to, antitrust claims, claims under various false claims act statutes, and matters arising from our sales and trading businesses and our activities in the capital markets.

We are also involved, from time to time, in other reviews, investigations and proceedings (both formal and informal) by governmental and self-regulatory agencies regarding our business, and involving, among other matters, sales, financing, prime brokerage, market-making activities, investment banking advisory services, capital markets activities, financial products or offerings sponsored, underwritten or sold by us, wealth and investment management services, and accounting and operational matters, certain of which may result in adverse judgments, settlements, fines, penalties, disgorgement, restitution, forfeiture, injunctions, limitations on our ability to conduct certain business, or other relief.

We contest liability and/or the amount of damages as appropriate in each pending matter. Where available information indicates that it is probable a liability had been incurred at the date of the financial statements and we can reasonably estimate the amount of that loss or the range of loss, we accrue an estimated loss by a charge to income.

In many legal proceedings and investigations, it is inherently difficult to determine whether any loss is probable or reasonably possible, or to estimate the amount of any loss. In addition, even where we have determined that a loss is probable or reasonably possible, or an exposure to loss or range of loss exists in excess of the liability already accrued with respect to a previously recognized loss contingency, we are often unable to reasonably estimate the amount of the loss or range of loss. It is particularly difficult to determine if a loss is probable or reasonably possible, or to estimate the amount of loss, where the factual record is being developed or contested or where plaintiffs or government entities seek substantial or indeterminate damages, restitution, forfeiture, disgorgement or penalties. Numerous issues may need to be resolved in an investigation or proceeding before a determination can be made that a loss or additional loss (or

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range of loss or range of additional loss) is probable or reasonably possible, or to estimate the amount of loss, including through potentially lengthy discovery or determination of important factual matters, determination of issues related to class certification, the calculation of damages or other relief, and consideration of novel or unsettled legal questions relevant to the proceedings or investigations in question.

Significant judgment is required in deciding when and if to make these accruals, and the actual cost of a legal claim or regulatory fine/penalty may ultimately be materially different from the recorded accruals.

See Note 14 to the financial statements for additional information on legal contingencies.

Income Taxes

We are subject to the income tax laws of the U.S., its states and municipalities and those of the foreign jurisdictions in which we have business operations. These tax laws are complex and subject to interpretation by the taxpayer and the relevant governmental taxing authorities. We must make judgments and interpretations about the application of these inherently complex tax laws and make estimates about certain items affecting taxable income when determining the provision for income taxes in the various tax jurisdictions.

Disputes over interpretations of the tax laws may be settled with the taxing authority upon examination or audit. We periodically evaluate the likelihood of assessments in each taxing jurisdiction resulting from current and subsequent years' examinations, and unrecognized tax benefits related to potential losses that may arise from tax audits are established in accordance with the relevant accounting guidance. Once established, unrecognized tax benefits are adjusted when there is more information available or when an event occurs requiring a change.

Our provision for income taxes is composed of current and deferred taxes. Current income taxes approximate taxes to be paid or refunded for the current period. Deferred income taxes reflect the net tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities and are measured using the applicable enacted tax rates and laws that will be in effect when such differences are expected to reverse.

Our deferred tax balances may also include deferred assets related to tax attribute carryforwards, such as net operating losses and tax credits that will be realized through reduction of future tax liabilities and, in some cases, are subject to expiration if not utilized within certain periods. We perform regular reviews to ascertain whether deferred tax assets are realizable. These reviews include management's estimates and assumptions regarding future taxable income and incorporate various tax-planning strategies, including

strategies that may be available to tax attribute carryforwards before they expire.

Once the deferred tax asset balances have been determined, we may record a valuation allowance against the deferred tax asset balances to reflect the amount we estimate is more likely than not to be realized at a future date. Both current and deferred income taxes may reflect adjustments related to our unrecognized tax benefits.

Significant judgment is required in estimating the consolidated provision for (benefit from) income taxes, current and deferred tax balances (including valuation allowance, if any), accrued interest or penalties and uncertain tax positions. Revisions in estimates and/or the actual costs of a tax assessment may ultimately be materially different from the recorded accruals and unrecognized tax benefits, if any.

See Note 2 to the financial statements for additional information on our significant assumptions, judgments and interpretations associated with the accounting for income taxes and Note 21 to the financial statements for additional information on our tax examinations.

Liquidity and Capital Resources

Our liquidity and capital policies are established and maintained by senior management, with oversight by the Asset/Liability Management Committee and our Board of Directors ("Board"). Through various risk and control committees, senior management reviews business performance relative to these policies, monitors the availability of alternative sources of financing, and oversees the liquidity, interest rate and currency sensitivity of our asset and liability position. Our Corporate Treasury department ("Treasury"), Firm Risk Committee, Asset/Liability Management Committee, and other committees and control groups assist in evaluating, monitoring and managing the impact that our business activities have on our balance sheet, liquidity and capital structure. Liquidity and capital matters are reported regularly to the Board and the Risk Committee of the Board.

Balance Sheet

We monitor and evaluate the composition and size of our balance sheet on a regular basis. Our balance sheet management process includes quarterly planning, business-specific thresholds, monitoring of business-specific usage versus key performance metrics and new business impact assessments.

We establish balance sheet thresholds at the consolidated and business segment levels. We monitor balance sheet utilization and review variances resulting from business activity and market fluctuations. On a regular basis, we review current performance versus established thresholds and assess the need to re-allocate our balance sheet based on business segment needs. We also monitor key metrics, including asset and liability size and capital usage.

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Total Assets by Business Segment

\$ in millions	At December 31, 2024			
	IS	WM	IM	Total
Assets				
Cash and cash equivalents	\$ 74,079	\$ 31,072	\$ 235	\$ 105,386
Trading assets at fair value	320,003	6,915	4,966	331,884
Investment securities	38,096	121,583	—	159,679
Securities purchased under agreements to resell	100,404	18,161	—	118,565
Securities borrowed	121,901	1,958	—	123,859
Customer and other receivables	47,321	37,196	1,641	86,158
Loans ¹	78,607	159,542	4	238,153
Goodwill	435	10,190	6,081	16,706
Intangible assets	27	2,939	3,487	6,453
Other assets ²	15,735	11,292	1,201	28,228
Total assets	\$ 796,608	\$ 400,848	\$17,615	\$ 1,215,071

\$ in millions	At December 31, 2023			
	IS	WM	IM	Total
Assets				
Cash and cash equivalents	\$ 72,928	\$ 16,172	\$ 132	\$ 89,232
Trading assets at fair value	353,841	7,962	5,271	367,074
Investment securities	39,212	115,595	—	154,807
Securities purchased under agreements to resell	90,701	20,039	—	110,740
Securities borrowed	119,823	1,268	—	121,091
Customer and other receivables	47,333	31,237	1,535	80,105
Loans ¹	72,110	146,526	4	218,640
Goodwill	424	10,199	6,084	16,707
Intangible assets	26	3,427	3,602	7,055
Other assets ²	14,108	12,743	1,391	28,242
Total assets	\$ 810,506	\$ 365,168	\$18,019	\$ 1,193,693

1. Amounts include loans held for investment, net of ACL, and loans held for sale but exclude loans at fair value, which are included in Trading assets in the balance sheet (see Note 9 to the financial statements).

2. Other assets primarily includes premises, equipment and software, ROU assets related to leases, other investments and deferred tax assets.

A substantial portion of total assets consists of cash and cash equivalents, liquid marketable securities and short-term receivables. In the Institutional Securities business segment, these arise from market-making, financing and prime brokerage activities, and in the Wealth Management business segment, these arise from banking activities, including management of the investment portfolio.

Liquidity Risk Management Framework

The primary goal of our Liquidity Risk Management Framework is to ensure that we have access to adequate funding across a wide range of market conditions and time horizons. The framework is designed to enable us to fulfill our financial obligations and support the execution of our business strategies.

The following principles guide our Liquidity Risk Management Framework:

- Sufficient liquidity resources, which consist of HQLA and cash deposits with banks ("Liquidity Resources") should be maintained to cover maturing liabilities and other planned and contingent outflows;
- Maturity profile of assets and liabilities should be aligned, with limited reliance on short-term funding;

- Source, counterparty, currency, region and term of funding should be diversified; and
- Liquidity Stress Tests should anticipate, and account for, periods of limited access to funding.

The core components of our Liquidity Risk Management Framework are the Required Liquidity Framework, Liquidity Stress Tests and Liquidity Resources, which support our target liquidity profile.

Required Liquidity Framework

Our Required Liquidity Framework establishes the amount of liquidity we must hold in both normal and stressed environments to ensure that our financial condition and overall soundness are not adversely affected by an inability (or perceived inability) to meet our financial obligations in a timely manner. The Required Liquidity Framework considers the most constraining liquidity requirement to satisfy all regulatory and internal limits at a consolidated and legal entity level.

Liquidity Stress Tests

We use Liquidity Stress Tests to model external and intercompany liquidity flows across multiple scenarios and a range of time horizons. These scenarios contain various combinations of idiosyncratic and systemic stress events of different severity and duration. The methodology, implementation, production and analysis of our Liquidity Stress Tests are important components of the Required Liquidity Framework.

The assumptions used in our various Liquidity Stress Test scenarios include, but are not limited to, the following:

- No government support;
- No access to equity and limited access to unsecured debt markets;
- Repayment of all unsecured debt maturing within the stress horizon;
- Higher haircuts for and significantly lower availability of secured funding;
- Additional collateral that would be required by trading counterparties, certain exchanges and clearing organizations related to credit rating downgrades;
- Additional collateral that would be required due to collateral substitutions, collateral disputes and uncalled collateral;
- Discretionary unsecured debt buybacks;
- Drawdowns on lending commitments provided to third parties; and
- Client cash withdrawals and reduction in customer short positions that fund long positions.

Liquidity Stress Tests are produced and results are reported at different levels, including major operating subsidiaries and major currencies, to capture specific cash requirements and cash availability across the Firm, including a limited number of asset sales in a stressed environment. The Liquidity Stress

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Tests assume that subsidiaries will use their own liquidity first to fund their obligations before drawing liquidity from the Parent Company and that the Parent Company will support its subsidiaries and will not have access to subsidiaries’ liquidity reserves. In addition to the assumptions underpinning the Liquidity Stress Tests, we take into consideration settlement risk related to intraday settlement and clearing of securities and financing activities.

At December 31, 2024 and December 31, 2023, we maintained sufficient Liquidity Resources to meet current and contingent funding obligations as modeled in our Liquidity Stress Tests.

Liquidity Resources

We maintain sufficient liquidity resources, which consist of HQLA and cash deposits with banks (“Liquidity Resources”), to cover daily funding needs and to meet strategic liquidity targets sized by the Required Liquidity Framework and Liquidity Stress Tests. We actively manage the amount of our Liquidity Resources considering the following components: unsecured debt maturity profile; balance sheet size and composition; funding needs in a stressed environment, inclusive of contingent cash outflows; legal entity, regional and segment liquidity requirements; regulatory requirements; and collateral requirements.

The amount of Liquidity Resources we hold is based on our risk appetite and is calibrated to meet various internal and regulatory requirements and to fund prospective business activities. The Liquidity Resources are primarily held within the Parent Company and its major operating subsidiaries. The Total HQLA values in the tables immediately following are different from Eligible HQLA, which, in accordance with the LCR rule, also takes into account certain regulatory weightings and other operational considerations.

Liquidity Resources by Type of Investment

\$ in millions	Average Daily Balance Three Months Ended	
	December 31, 2024	September 30, 2024
Cash deposits with central banks	\$ 58,493	\$ 48,848
Unencumbered HQLA securities ¹ :		
U.S. government obligations	161,952	171,663
U.S. agency and agency mortgage-backed securities	94,512	90,290
Non-U.S. sovereign obligations ²	22,646	24,011
Other investment grade securities	600	810
Total HQLA ¹	\$ 338,203	\$ 335,622
Cash deposits with banks (non-HQLA)	7,237	6,998
Total Liquidity Resources	\$ 345,440	\$ 342,620

- HQLA is presented prior to applying weightings and includes all HQLA held in subsidiaries.
- Primarily composed of unencumbered French, U.K., Japanese, Italian, German, and Spanish government obligations

Liquidity Resources by Non-Bank and Bank Legal Entities

\$ in millions	Average Daily Balance Three Months Ended	
	December 31, 2024	September 30, 2024
Non-Bank legal entities		
U.S.:		
Parent Company	\$ 71,981	\$ 76,366
Non-Parent Company	61,684	60,537
Total U.S.	133,665	136,903
Non-U.S.	61,432	63,965
Total Non-Bank legal entities	195,097	200,868
Bank legal entities		
U.S.	144,735	136,171
Non-U.S.	5,608	5,581
Total Bank legal entities	150,343	141,752
Total Liquidity Resources	\$ 345,440	\$ 342,620

Liquidity Resources may fluctuate from period to period based on the overall size and composition of our balance sheet, the maturity profile of our unsecured debt, and estimates of funding needs in a stressed environment, among other factors.

Regulatory Liquidity Framework

Liquidity Coverage Ratio and Net Stable Funding Ratio

We and our U.S. Bank Subsidiaries are required to maintain a minimum LCR and NSFR of 100%.

The LCR rule requires large banking organizations to have sufficient Eligible HQLA to cover net cash outflows arising from significant stress over 30 calendar days, thus promoting the short-term resilience of the liquidity risk profile of banking organizations. In determining Eligible HQLA for LCR purposes, weightings (or asset haircuts) are applied to HQLA, and certain HQLA held in subsidiaries is excluded.

The NSFR rule requires large banking organizations to maintain an amount of available stable funding, which is their regulatory capital and liabilities subject to standardized weightings, equal to or greater than their required stable funding, which is their projected minimum funding needs, over a one-year time horizon.

As of December 31, 2024, we and our U.S. Bank Subsidiaries are compliant with the minimum LCR and NSFR requirements of 100%.

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Liquidity Coverage Ratio

\$ in millions	Average Daily Balance Three Months Ended	
	December 31, 2024	September 30, 2024
Eligible HQLA		
Cash deposits with central banks	\$ 53,836	\$ 40,406
Securities ¹	213,394	234,710
Total Eligible HQLA	\$ 267,230	\$ 275,116
Net cash outflows	\$ 205,780	\$ 205,868
LCR	130 %	134 %

1. Primarily includes U.S. Treasuries, U.S. agency mortgage-backed securities, sovereign bonds and investment grade corporate bonds.

Net Stable Funding Ratio

\$ in millions	Average Daily Balance Three Months Ended	
	December 31, 2024	September 30, 2024
Available stable funding	\$ 616,689	\$ 610,727
Required stable funding	507,022	502,318
NSFR	122 %	122 %

Funding Management

We manage our funding in a manner that reduces the risk of disruption to our operations. We pursue a strategy of diversification of secured and unsecured funding sources (by product, investor and region) and attempt to ensure that the tenor of our liabilities equals or exceeds the expected holding period of the assets being financed. Our goal is to achieve an optimal mix of durable secured and unsecured financing.

We fund our balance sheet on a global basis through diverse sources. These sources include our equity capital, borrowings, bank notes, securities sold under agreements to repurchase, securities lending, deposits, letters of credit and lines of credit. We have active financing programs for both standard and structured products targeting global investors and currencies.

Treasury allocates interest expense to our businesses based on the tenor and interest rate profile of the assets being funded. Treasury similarly allocates interest income to businesses carrying deposit products and other liabilities across the businesses based on the characteristics of those deposits and other liabilities.

Secured Financing

The liquid nature of the marketable securities and short-term receivables arising principally from sales and trading activities in the Institutional Securities business segment provides us with flexibility in managing the composition of our balance sheet. Secured financing investors principally focus on the quality of the eligible collateral posted. Accordingly, we actively manage our secured financings based on the quality of the assets being funded.

We have established longer-tenor secured funding requirements for less liquid asset classes, for which funding

may be at risk in the event of a market disruption. We define highly liquid assets as government-issued or government-guaranteed securities with a high degree of fundability and less liquid assets as those that do not meet these criteria.

To further minimize the refinancing risk of secured financing for less liquid assets, we have established concentration limits to diversify our investor base and reduce the amount of monthly maturities for secured financing of less liquid assets. As a component of the Liquidity Risk Management Framework, we hold a portion of our Liquidity Resources against the potential disruption to our secured financing capabilities.

In general, we maintain a pool of liquid and easily fundable securities, which takes into account HQLA classifications consistent with LCR definitions, and other regulatory requirements, and provides a valuable future source of liquidity.

Collateralized Financing Transactions

\$ in millions	At December 31, 2024	At December 31, 2023
Securities purchased under agreements to resell and Securities borrowed	\$ 242,424	\$ 231,831
Securities sold under agreements to repurchase and Securities loaned	\$ 65,293	\$ 77,708
Securities received as collateral ¹	\$ 9,625	\$ 6,219

1. Included within Trading assets in the balance sheet.

\$ in millions	Average Daily Balance Three Months Ended	
	December 31, 2024	December 31, 2023
Securities purchased under agreements to resell and Securities borrowed	\$ 250,354	\$ 235,928
Securities sold under agreements to repurchase and Securities loaned	\$ 74,949	\$ 87,285

See “Total Assets by Business Segment” herein for additional information on the assets shown in the previous table and Notes 2 and 8 to the financial statements for additional information on collateralized financing transactions.

In addition to the collateralized financing transactions shown in the previous table, we engage in financing transactions collateralized by customer-owned securities, which are segregated in accordance with regulatory requirements. Receivables under these financing transactions, primarily margin loans, are included in Customer and other receivables in the balance sheet, and payables under these financing transactions, primarily to prime brokerage customers, are included in Customer and other payables in the balance sheet. Our risk exposure on these transactions is mitigated by collateral maintenance policies and the elements of our Liquidity Risk Management Framework.

Unsecured Financing

We view deposits and borrowings as stable sources of funding for unencumbered securities and non-security assets. Our unsecured financings include borrowings and certificates of

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deposit carried at fair value, which are primarily composed of: instruments whose payments and redemption values are linked to the performance of a specific index, a basket of stocks, a specific equity security, a commodity, a credit exposure or basket of credit exposures; and instruments with various interest rate-related features, including step-ups, step-downs and zero coupons. Also included are unsecured contracts that are not classified as OTC derivatives because they fail initial net investment criteria. As part of our asset/liability management strategy, when appropriate, we use derivatives to make adjustments to the interest rate risk profile of our borrowings (see Notes 6 and 13 to the financial statements).

Deposits

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Savings and demand deposits:		
Brokerage sweep deposits ¹	\$ 142,550	\$ 148,274
Savings and other	157,348	139,978
Total Savings and demand deposits	299,898	288,252
Time deposits ²	76,109	63,552
Total³	\$ 376,007	\$ 351,804

1. Amounts represent balances swept from client brokerage accounts.
2. Our Time deposits are predominantly brokered certificates of deposit.
3. Our deposits are primarily held in U.S. offices.

Deposits are primarily sourced from our Wealth Management clients and are considered to have stable, low-cost funding characteristics relative to other sources of funding. Each category of deposits presented above has a different cost profile and clients may respond differently to changes in interest rates and other macroeconomic conditions. Total deposits in 2024 increased primarily due to increases in Savings and Time deposits, partially offset by a reduction in Brokerage sweep deposits, largely due to net outflows to alternative cash equivalent and other investment products.

Borrowings by Maturity at December 31, 2024¹

<i>\$ in millions</i>	Parent Company	Subsidiaries	Total
Original maturities of one year or less	\$ —	\$ 4,512	\$ 4,512
Original maturities greater than one year			
2025	\$ 7,544	\$ 14,377	\$ 21,921
2026	24,738	13,231	37,969
2027	20,716	13,334	34,050
2028	13,844	14,875	28,719
2029	16,318	9,841	26,159
Thereafter	98,886	36,603	135,489
Total greater than one year	\$ 182,046	\$ 102,261	\$ 284,307
Total	\$ 182,046	\$ 106,773	\$ 288,819

1. Original maturity in the table is generally based on contractual final maturity. For borrowings with put options, maturity represents the earliest put date.

Borrowings of \$289 billion at December 31, 2024 increased when compared with \$264 billion at December 31, 2023, primarily due to issuances net of maturities and redemptions.

We believe that accessing debt investors through multiple distribution channels helps provide consistent access to the unsecured markets. In addition, the issuance of borrowings with original maturities greater than one year allows us to reduce reliance on short-term credit-sensitive instruments. Borrowings with original maturities greater than one year are generally managed to achieve staggered maturities, thereby mitigating refinancing risk, and to maximize investor diversification through sales to global institutional and retail clients across regions, currencies and product types.

The availability and cost of financing to us can vary depending on market conditions, the volume of certain trading and lending activities, our credit ratings and the overall availability of credit. We also engage in, and may continue to engage in, repurchases of our borrowings as part of our market-making activities.

For further information on Borrowings, see Note 13 to the financial statements.

Credit Ratings

We rely on external sources to finance a significant portion of our daily operations. Our credit ratings are one of the factors in the cost and availability of financing and can have an impact on certain trading revenues, particularly in those businesses where longer-term counterparty performance is a key consideration, such as certain OTC derivative transactions. When determining credit ratings, rating agencies consider both company-specific and industry-wide factors. See also “Risk Factors—Liquidity Risk.”

Parent Company and U.S. Bank Subsidiaries Issuer Ratings at February 14, 2025

	Parent Company		
	Short-Term Debt	Long-Term Debt	Rating Outlook
DBRS, Inc.	R-1 (middle)	A (high)	Positive
Fitch Ratings, Inc.	F1	A+	Stable
Moody’s Investors Service, Inc.	P-1	A1	Stable
Rating and Investment Information, Inc.	a-1	A+	Stable
S&P Global Ratings	A-2	A-	Stable
	MSBNA		
	Short-Term Debt	Long-Term Debt	Rating Outlook
Fitch Ratings, Inc.	F1+	AA-	Stable
Moody’s Investors Service, Inc.	P-1	Aa3	Stable
S&P Global Ratings	A-1	A+	Stable
	MSPBNA		
	Short-Term Debt	Long-Term Debt	Rating Outlook
Moody’s Investors Service, Inc.	P-1	Aa3	Stable
S&P Global Ratings	A-1	A+	Stable

Incremental Collateral or Terminating Payments

In connection with certain OTC derivatives and certain other agreements where we are a liquidity provider to certain financing vehicles associated with the Institutional Securities

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business segment, we may be required to provide additional collateral, immediately settle any outstanding liability balances with certain counterparties or pledge additional collateral to certain clearing organizations in the event of a future credit rating downgrade irrespective of whether we are in a net asset or net liability position. See Note 6 to the financial statements for additional information on OTC derivatives that contain such contingent features.

While certain aspects of a credit rating downgrade are quantifiable pursuant to contractual provisions, the impact it would have on our business and results of operations in future periods is inherently uncertain and would depend on a number of interrelated factors, including, among other things, the magnitude of the downgrade, the rating relative to peers, the rating assigned by the relevant agency before the downgrade, individual client behavior and future mitigating actions we might take. The liquidity impact of additional collateral requirements is included in our Liquidity Stress Tests.

Capital Management

We view capital as an important source of financial strength and actively manage our consolidated capital position based upon, among other things, business opportunities, risks, capital availability and rates of return together with internal capital policies, regulatory requirements, such as the SCB, and rating agency guidelines. In the future, we may expand or contract our capital base to address the changing needs of our businesses.

Common Stock Repurchases

<i>in millions, except for per share data</i>	2024	2023	2022
Number of shares	33	62	113
Average price per share	\$ 99.16	\$ 85.35	\$ 87.25
Total	\$ 3,250	\$ 5,300	\$ 9,865

For additional information on our common stock repurchases, see “Liquidity and Capital Resources—Regulatory Requirements—Capital Plans, Stress Tests and the Stress Capital Buffer” herein and Note 17 to the financial statements.

For a description of our capital plan, see “Liquidity and Capital Resources—Regulatory Requirements—Capital Plans, Stress Tests and the Stress Capital Buffer” herein.

Common Stock Dividend Announcement

Announcement date	January 16, 2025
Amount per share	\$0.925
Date paid	February 14, 2025
Shareholders of record as of	January 31, 2025

For additional information on our common stock dividends, see “Liquidity and Capital Resources—Regulatory Requirements—Capital Plans, Stress Tests and the Stress Capital Buffer” herein.

For additional information on our common stock and information on our preferred stock, see Note 17 to the financial statements.

Off-Balance Sheet Arrangements

We enter into various off-balance sheet arrangements, including through unconsolidated SPEs and lending-related financial instruments (e.g., guarantees and commitments), primarily in connection with the Institutional Securities and Investment Management business segments.

We utilize SPEs primarily in connection with securitization activities. For information on our securitization activities, see Note 15 to the financial statements.

For information on our commitments, obligations under certain guarantee arrangements and indemnities, see Note 14 to the financial statements. For a further discussion of our lending commitments, see “Quantitative and Qualitative Disclosures about Risk—Credit Risk—Loans and Lending Commitments” herein.

Regulatory Requirements

Regulatory Capital Framework

We are an FHC under the BHC Act and are subject to the regulation and oversight of the Federal Reserve. The Federal Reserve establishes capital requirements for us, including “well-capitalized” standards, and evaluates our compliance with such capital requirements. The OCC establishes similar capital requirements and standards for our U.S. Bank Subsidiaries. The regulatory capital requirements are largely based on the Basel III capital standards established by the Basel Committee and also implement certain provisions of the Dodd-Frank Act. For us to remain an FHC, we must remain well-capitalized in accordance with standards established by the Federal Reserve, and our U.S. Bank Subsidiaries must remain well-capitalized in accordance with standards established by the OCC. In addition, many of our regulated subsidiaries are subject to regulatory capital requirements, including regulated subsidiaries registered as swap dealers with the CFTC or conditionally registered as security-based swap dealers with the SEC or registered as broker-dealers or futures commission merchants. For additional information on regulatory capital requirements for our U.S. Bank Subsidiaries, as well as our subsidiaries that are swap entities, see Note 16 to the financial statements.

Regulatory Capital Requirements

We are required to maintain minimum risk-based and leverage-based capital and TLAC ratios. For additional information on TLAC, see “Total Loss-Absorbing Capacity, Long-Term Debt and Clean Holding Company Requirements” herein.

Risk-Based Regulatory Capital. Risk-based capital ratio requirements apply to Common Equity Tier 1 (“CET1”)

Management’s Discussion and Analysis

capital, Tier 1 capital and Total capital (which includes Tier 2 capital), each as a percentage of RWA, and consist of regulatory minimum required ratios plus our capital buffer requirement. Capital requirements require certain adjustments to, and deductions from, capital for purposes of determining these ratios.

Capital Buffer Requirements

	At December 31, 2024	At December 31, 2023	At December 31, 2024 and December 31, 2023
	Standardized	Standardized	Advanced
Capital buffers			
Capital conservation buffer	—	—	2.5%
SCB ¹	6.0%	5.4%	N/A
G-SIB capital surcharge ²	3.0%	3.0%	3.0%
CCyB ³	0%	0%	0%
Capital buffer requirement	9.0%	8.4%	5.5%

- For additional information on the SCB, see “Capital Plans, Stress Tests and the Stress Capital Buffer” herein.
- For a further discussion of the G-SIB capital surcharge, see “G-SIB Capital Surcharge” herein.
- The CCyB can be set up to 2.5% but is currently set by the Federal Reserve at zero.

The capital buffer requirement represents the amount of CET1 capital we must maintain above the minimum risk-based capital requirements in order to avoid restrictions on our ability to make capital distributions, including the payment of dividends and the repurchase of stock, and to pay discretionary bonuses to executive officers. Our capital buffer requirement computed under the standardized approaches for calculating credit risk and market RWAs (“Standardized Approach”) is equal to the sum of our SCB, G-SIB capital surcharge and CCyB, and our capital buffer requirement computed under the applicable advanced approaches for calculating credit risk, market risk and operational risk RWAs (“Advanced Approach”) is equal to our 2.5% capital conservation buffer, G-SIB capital surcharge and CCyB.

Risk-Based Regulatory Capital Ratio Requirements

Regulatory Minimum	At December 31, 2024	At December 31, 2023	At December 31, 2024 and December 31, 2023
	Standardized	Standardized	Advanced
Required ratios¹			
CET1 capital ratio	4.5%	13.5%	12.9%
Tier 1 capital ratio	6.0%	15.0%	14.4%
Total capital ratio	8.0%	17.0%	16.4%
			13.5%

- Required ratios represent the regulatory minimum plus the capital buffer requirement.

Risk-Weighted Assets. RWA reflects both our on- and off-balance sheet risk, as well as capital charges attributable to the risk of loss arising from the following:

- Credit risk: The failure of a borrower, counterparty or issuer to meet its financial obligations to us;
- Market risk: Adverse changes in the level of one or more market prices, rates, spreads, indices, volatilities,

correlations or other market factors, such as market liquidity; and

- Operational risk: Inadequate or failed processes or systems, from human factors or from external events (e.g., fraud, theft, legal and compliance risks, cyber attacks or damage to physical assets).

Our risk-based capital ratios are computed under each of (i) the Standardized Approach and (ii) the Advanced Approach. The credit risk RWA calculations between the two approaches differ in that the Standardized Approach requires calculation of RWA using prescribed risk weights and exposure methodologies, whereas the Advanced Approach utilizes models to calculate exposure amounts and risk weights. At December 31, 2024 and December 31, 2023, the differences between the actual and required ratios were lower under the Standardized Approach.

Leverage-Based Regulatory Capital. Leverage-based capital requirements include a minimum Tier 1 leverage ratio of 4%, a minimum SLR of 3% and an enhanced SLR capital buffer of at least 2%.

CECL Deferral. Beginning on January 1, 2020, we elected to defer the effect of the adoption of CECL on our risk-based and leverage-based capital amounts and ratios, as well as our RWA, adjusted average assets and supplementary leverage exposure calculations, over a five-year transition period. The deferral impacts began to phase in at 25% per year from January 1, 2022 and were phased-in at 75% from January 1, 2024. The deferral impacts were fully phased-in from January 1, 2025.

Regulatory Capital Ratios

Risk-based capital

	Standardized		Advanced	
	At December 31, 2024	At December 31, 2023	At December 31, 2024	At December 31, 2023
<i>\$ in millions</i>				
Risk-based capital				
CET1 capital	\$ 75,095	\$ 69,448	\$ 75,095	\$ 69,448
Tier 1 capital	84,790	78,183	84,790	78,183
Total capital	95,567	88,874	94,846	88,190
Total RWA	471,834	456,053	477,331	448,154
Risk-based capital ratios				
CET1 capital	15.9%	15.2%	15.7%	15.5%
Tier 1 capital	18.0%	17.1%	17.8%	17.4%
Total capital	20.3%	19.5%	19.9%	19.7%
Required ratios¹				
CET1 capital	13.5%	12.9%	10.0%	10.0%
Tier 1 capital	15.0%	14.4%	11.5%	11.5%
Total capital	17.0%	16.4%	13.5%	13.5%

1. Required ratios are inclusive of any buffers applicable as of the date presented.

Leveraged-based capital

	At December 31, 2024	At December 31, 2023
<i>\$ in millions</i>		
Leveraged-based capital		
Adjusted average assets ¹	\$ 1,223,779	\$ 1,159,626
Supplementary leverage exposure ²	1,517,687	1,429,552
Leveraged-based capital ratios		
Tier 1 leverage	6.9%	6.7%
SLR	5.6%	5.5%
Required ratios³		
Tier 1 leverage	4.0%	4.0%
SLR	5.0%	5.0%

- Adjusted average assets represents the denominator of the Tier 1 leverage ratio and is composed of the average daily balance of consolidated on-balance sheet assets for the quarters ending on the respective balance sheet dates, reduced by disallowed goodwill, intangible assets, investments in covered funds, defined benefit pension plan assets, after-tax gain on sale from assets sold into securitizations, investments in our own capital instruments, certain deferred tax assets and other capital deductions.
- Supplementary leverage exposure is the sum of Adjusted average assets used in the Tier 1 leverage ratio and other adjustments, primarily: (i) for derivatives, potential future exposure and the effective notional principal amount of sold credit protection offset by qualifying purchased credit protection; (ii) the counterparty credit risk for repo-style transactions; and (iii) the credit equivalent amount for off-balance sheet exposures.
- Required ratios are inclusive of any buffers applicable as of the date presented.

Regulatory Capital

	At December 31, 2024	At December 31, 2023	Change
<i>\$ in millions</i>			
CET1 capital			
Common shareholders' equity	\$ 94,761	\$ 90,288	\$ 4,473
Regulatory adjustments and deductions:			
Net goodwill	(16,354)	(16,394)	40
Net intangible assets	(5,003)	(5,509)	506
Impact of CECL transition	62	124	(61)
Other adjustments and deductions ¹	1,629	939	690
Total CET1 capital	\$ 75,095	\$ 69,448	\$ 5,647
Additional Tier 1 capital			
Preferred stock	\$ 9,750	\$ 8,750	\$ 1,000
Noncontrolling interests	807	758	49
Additional Tier 1 capital	\$ 10,557	\$ 9,508	\$ 1,049
Deduction for investments in covered funds	(862)	(773)	(89)
Total Tier 1 capital	\$ 84,790	\$ 78,183	\$ 6,607
Standardized Tier 2 capital			
Subordinated debt	\$ 8,851	\$ 8,760	\$ 91
Eligible ACL	2,065	2,051	14
Other adjustments and deductions	(139)	(120)	(19)
Total Standardized Tier 2 capital	\$ 10,777	\$ 10,691	\$ 86
Total Standardized capital			
	\$ 95,567	\$ 88,874	\$ 6,693
Advanced Tier 2 capital			
Subordinated debt	\$ 8,851	\$ 8,760	\$ 91
Eligible credit reserves	1,344	1,367	(23)
Other adjustments and deductions	(139)	(120)	(19)
Total Advanced Tier 2 capital	\$ 10,056	\$ 10,007	\$ 49
Total Advanced capital	\$ 94,846	\$ 88,190	\$ 6,656

- Other adjustments and deductions used in the calculation of CET1 capital primarily includes net after-tax DVA, the credit spread premium over risk-free rate for derivative liabilities, defined benefit pension plan assets, after-tax gain on sale from assets sold into securitizations, investments in our own capital instruments and certain deferred tax assets.

Management’s Discussion and Analysis

RWA Rollforward

<i>\$ in millions</i>	Standardized	Advanced
Credit risk RWA		
Balance at December 31, 2023	\$ 407,731	\$ 297,858
Change related to the following items:		
Derivatives	(8,690)	3,106
Securities financing transactions	9,699	1,871
Investment securities	(133)	(2,515)
Commitments, guarantees and loans	7,956	15,523
Equity investments	(50)	(279)
Other credit risk	1,469	865
Total change in credit risk RWA	\$ 10,251	\$ 18,571
Balance at December 31, 2024	\$ 417,982	\$ 316,429
Market risk RWA		
Balance at December 31, 2023	\$ 48,322	\$ 48,201
Change related to the following items:		
Regulatory VaR	124	124
Regulatory stressed VaR	643	643
Incremental risk charge	1,577	1,577
Comprehensive risk measure	(98)	493
Specific risk	3,284	3,284
Total change in market risk RWA	\$ 5,530	\$ 6,121
Balance at December 31, 2024	\$ 53,852	\$ 54,322
Operational risk RWA		
Balance at December 31, 2023	N/A	\$ 102,095
Change in operational risk RWA	N/A	4,485
Balance at December 31, 2024	N/A	\$ 106,580
Total RWA	\$ 471,834	\$ 477,331

Regulatory VaR—VaR for regulatory capital requirements

In 2024, Credit risk RWA increased under both the Standardized and Advanced Approaches. Under the Standardized Approach, the increase was primarily due to higher Securities financing transactions, growth in Corporate lending, as well as an increase in Other credit risk driven by securitizations. These increases were partially offset by decreased exposure in derivatives. Under the Advanced Approach, the increase was primarily due to growth in Corporate lending, increase in Derivatives driven by counterparty credit risk, and higher Securities financing transactions. These increases were partially offset by decreased exposure in investment securities.

Market risk RWA increased in 2024 under both the Standardized and Advanced Approaches, primarily driven by higher charges on Specific risk and Incremental risk due to increased exposures.

The increase in Operational risk RWA in 2024 is related to legal expenses and execution losses.

G-SIB Capital Surcharge

We and other U.S. G-SIBs are subject to an additional risk-based capital surcharge, the G-SIB capital surcharge, which must be satisfied using CET1 capital and which functions as an extension of the capital conservation buffer. The surcharge is calculated based on the G-SIB’s size, interconnectedness, cross-jurisdictional activity, and complexity and

substitutability (“Method 1”) or use of short-term wholesale funding (“Method 2”), whichever is higher.

Total Loss-Absorbing Capacity, Long-Term Debt and Clean Holding Company Requirements

The Federal Reserve has established external TLAC, long-term debt (“LTD”) and clean holding company requirements for top-tier BHCs of U.S. G-SIBs (“covered BHCs”), including the Parent Company. These requirements are designed to ensure that covered BHCs will have enough loss-absorbing resources at the point of failure to be recapitalized through the conversion of eligible LTD to equity or otherwise by imposing losses on eligible LTD or other forms of TLAC where an SPOE resolution strategy is used (see “Business—Supervision and Regulation—Financial Holding Company—Resolution and Recovery Planning” and “Risk Factors—Legal, Regulatory and Compliance Risk”).

These TLAC and eligible LTD requirements include various restrictions, such as requiring eligible LTD to: be issued by the covered BHC; be unsecured; have a maturity of one year or more from the date of issuance; and not contain certain embedded features, such as a principal or redemption amount subject to reduction based on the performance of an asset, entity or index, or a similar feature. In addition, the requirements provide permanent grandfathering for debt instruments issued prior to December 31, 2016 that would be eligible LTD but for having impermissible acceleration clauses or being governed by foreign law.

A covered BHC is also required to maintain minimum external TLAC equal to the greater of (i) 18% of total RWA or (ii) 7.5% of its total leverage exposure (the denominator of its SLR). Covered BHCs must also meet a minimum external LTD requirement equal to the greater of (i) total RWA multiplied by the sum of 6% plus the higher of the Method 1 or Method 2 G-SIB capital surcharge applicable to the Parent Company or (ii) 4.5% of its total leverage exposure.

TLAC buffer requirements are imposed on top of both the risk-based and leverage exposure-based external TLAC minimum requirements. The risk-based TLAC buffer is equal to the sum of 2.5%, our Method 1 G-SIB surcharge and the CCyB, if any, as a percentage of total RWA. The leverage exposure-based TLAC buffer is equal to 2% of our total leverage exposure. Failure to maintain the buffers would result in restrictions on our ability to make capital distributions, including the payment of dividends and the repurchase of stock, and to pay discretionary bonuses to executive officers.

Management’s Discussion and Analysis

Required and Actual TLAC and Eligible LTD Ratios

\$ in millions	Regulatory Minimum	Required Ratio	Actual Amount/Ratio	
			At December 31, 2024	At December 31, 2023
External TLAC ²			\$ 266,146	\$ 250,914
External TLAC as a % of RWA	18.0%	21.5%	55.8%	55.0%
External TLAC as a % of leverage exposure	7.5%	9.5%	17.5%	17.6%
Eligible LTD ³			\$ 169,690	\$ 162,547
Eligible LTD as a % of RWA	9.0%	9.0%	35.5%	35.6%
Eligible LTD as a % of leverage exposure	4.5%	4.5%	11.2%	11.4%

1. Required ratios are inclusive of applicable buffers.
2. External TLAC consists of CET1 capital and Additional Tier 1 capital (each excluding any noncontrolling minority interests), as well as eligible LTD.
3. Consists of TLAC-eligible LTD reduced by 50% for amounts of unpaid principal due to be paid in more than one year but less than two years from each respective balance sheet date.

Furthermore, under the clean holding company requirements, a covered BHC is prohibited from incurring any external debt with an original maturity of less than one year or certain other liabilities, regardless of whether the liabilities are fully secured or otherwise senior to eligible LTD, or entering into certain other prohibited transactions. Certain other external liabilities, including those with certain embedded features noted above, are subject to a cap equal to 5% of the covered BHC’s outstanding external TLAC amount. Additionally, as of April 1, 2021, we and our U.S. Bank Subsidiaries are required to make certain deductions from regulatory capital for investments in certain unsecured debt instruments (including eligible LTD in the TLAC framework) issued by the Parent Company or other G-SIBs.

We are in compliance with all TLAC requirements as of December 31, 2024 and December 31, 2023.

Capital Plans, Stress Tests and the Stress Capital Buffer

The Federal Reserve has capital planning and stress test requirements for large BHCs, which form part of the Federal Reserve’s annual CCAR framework.

We must submit, on at least an annual basis, a capital plan to the Federal Reserve, taking into account the results of separate annual stress tests designed by us and the Federal Reserve, so that the Federal Reserve may assess our systems and processes that incorporate forward-looking projections of revenues and losses to monitor and maintain our internal capital adequacy. As banks with less than \$250 billion of total assets, our U.S. Bank Subsidiaries are not subject to company-run stress test regulatory requirements.

The capital plan must include a description of all planned capital actions over a nine-quarter planning horizon, including any issuance or redemption of a debt or equity capital instrument, any capital distribution (i.e., payments of dividends or stock repurchases) and any similar action that the Federal Reserve determines could impact our consolidated capital. The capital plan must include a discussion of how we

will maintain capital above the minimum regulatory capital ratios and how we will serve as a source of strength to our U.S. Bank Subsidiaries under supervisory stress scenarios. In addition, the Federal Reserve has issued guidance setting out its heightened expectations for capital planning practices at certain large financial institutions, including us.

As part of its annual capital supervisory stress testing process, the Federal Reserve determines an SCB for each large BHC, including us. The SCB applies only with respect to Standardized Approach risk-based capital requirements and replaced the CET1 capital conservation buffer of 2.5%. The SCB is the greater of (i) the maximum decline in our Common Equity Tier 1 capital ratio under the severely adverse scenario over the supervisory stress test measurement period plus the sum of the four quarters of planned common stock dividends divided by the projected RWAs from the quarter in which the Firm’s projected Common Equity Tier 1 capital ratio reaches its minimum in the supervisory stress test and (ii) 2.5%.

The supervisory stress test assumes that BHCs generally maintain a constant level of assets and RWAs throughout the projection period.

A firm’s SCB is subject to revision each year, taking effect from October 1 to reflect the results of the Federal Reserve’s annual supervisory stress test. The Federal Reserve has discretion to recalculate a firm’s SCB outside of the October 1 annual cycle and to require approval for certain actions, in some circumstances. The Federal Reserve also has the authority to impose restrictions on capital actions as a supervisory matter.

For the 2024 capital planning and stress test cycle, we submitted our capital plan and company-run stress test results to the Federal Reserve on April 5, 2024. On June 26, 2024, the Federal Reserve published summary results of its supervisory stress tests of each large BHC, in which the projected decline in our CET1 ratio in the severely adverse scenario increased from the prior annual supervisory stress test by 50 basis points, from 4.1% to 4.6%. Following the publication of the supervisory stress test results, we announced that our SCB will be 6.0% from October 1, 2024 through September 30, 2025. In addition to the projected decline in our Common Equity Tier 1 ratio in the severely adverse scenario, our SCB reflects the increase in our common stock dividend in the dividend add-on. Together with other features of the regulatory capital framework, this SCB results in an aggregate Standardized Approach Common Equity Tier 1 ratio of 13.5%. Generally, our SCB is determined annually based on the results of the supervisory stress test.

We also disclosed a summary of the results of our company-run stress tests on our Investor Relations website and increased our quarterly common stock dividend to \$0.925 per share from \$0.85, beginning with the common stock dividend announced on July 16, 2024.

Management’s Discussion and Analysis

Attribution of Average Common Equity According to the Required Capital Framework

Our required capital (“Required Capital”) estimation is based on the Required Capital framework, an internal capital adequacy measure. Common equity attribution to the business segments is based on capital usage calculated under the Required Capital framework, as well as each business segment’s relative contribution to our total Required Capital.

The Required Capital framework is a risk-based and leverage-based capital measure, which is compared with our regulatory capital to ensure that we maintain an amount of going concern capital after absorbing potential losses from stress events, where applicable, at a point in time. The amount of capital allocated to the business segments is generally set at the beginning of each year and remains fixed throughout the year until the next annual reset unless a significant business change occurs (e.g., acquisition or disposition). We define the difference between our total average common equity and the sum of the average common equity amounts allocated to our business segments as Parent Company common equity. We generally hold Parent Company common equity for prospective regulatory requirements, organic growth, potential future acquisitions and other capital needs.

Average Common Equity Attribution under the Required Capital Framework¹

<i>\$ in billions</i>	2024	2023	2022
Institutional Securities	\$ 45.0	\$ 45.6	\$ 48.8
Wealth Management	29.1	28.8	31.0
Investment Management	10.8	10.4	10.6
Parent	6.8	6.0	3.5
Total	\$ 91.7	\$ 90.8	\$ 93.9

1. The attribution of average common equity to the business segments is a non-GAAP financial measure. See “Selected Non-GAAP Financial Information” herein.

We continue to evaluate our Required Capital framework with respect to the impact of evolving regulatory requirements, as appropriate.

Resolution and Recovery Planning

We are required to submit once every two years to the Federal Reserve and the FDIC (“Agencies”) a resolution plan that describes our strategy for a rapid and orderly resolution under the U.S. Bankruptcy Code in the event of our material financial distress or failure. We submitted our 2023 full resolution plan on June 30, 2023. In June 2024, we received joint feedback on our 2023 resolution plan from the Agencies, with no shortcomings or deficiencies identified. Our next resolution plan submission will be a targeted resolution plan in July 2025. For more information about resolution planning requirements, see “Business—Supervision and Regulation—Financial Holding Company—Resolution and Recovery Planning.”

As described in our most recent resolution plan, our preferred resolution strategy is an SPOE strategy. In line with our

SPOE strategy, the Parent Company has transferred, and has agreed to transfer on an ongoing basis, certain assets to its wholly owned, direct subsidiary Morgan Stanley Holdings LLC (the “Funding IHC”). In addition, the Parent Company has entered into an amended and restated support agreement with its material entities (including the Funding IHC) and certain other subsidiaries. In the event of a resolution scenario, the Parent Company would be obligated to contribute all of its contributable assets to our supported entities and/or the Funding IHC. The Funding IHC would be obligated to provide capital and liquidity, as applicable, to our supported entities. The combined implication of the SPOE resolution strategy and the requirement to maintain certain levels of TLAC is that losses in resolution would be imposed on the holders of eligible LTD and other forms of eligible TLAC issued by the Parent Company before any losses are imposed on creditors of our supported entities and without requiring taxpayer or government financial support.

The obligations of the Parent Company and the Funding IHC under the amended and restated support agreement are in most cases secured on a senior basis by the assets of the Parent Company (other than shares in subsidiaries of the Parent Company and certain other assets) and the assets of the Funding IHC. As a result, claims of our supported entities, including the Funding IHC, with respect to the secured assets, are effectively senior to unsecured obligations of the Parent Company.

For more information about resolution and recovery planning requirements and our activities in these areas, including the implications of such activities in a resolution scenario, see “Business—Supervision and Regulation—Financial Holding Company—Resolution and Recovery Planning” and “Risk Factors—Legal, Regulatory and Compliance Risk.”

Regulatory Developments and Other Matters

Basel III Endgame and G-SIB Surcharge Proposals

On July 27, 2023, U.S. banking agencies proposed revisions to risk-based capital and related standards applicable to us and our U.S. Bank Subsidiaries (“Basel III Endgame Proposal”). We continue to monitor developments related to this rulemaking as well as the proposed revisions to the G-SIB capital surcharge framework.

Quantitative and Qualitative Disclosures about Risk

Risk Management

Overview

Risk is an inherent part of our businesses and activities. We believe effective risk management is vital to the success of our business activities. Accordingly, we have an Enterprise Risk Management (“ERM”) framework to integrate the diverse roles of risk management into a holistic enterprise structure and to facilitate the incorporation of risk assessment into decision-making processes across the Firm.

We have policies and procedures in place to identify, measure, monitor, escalate, mitigate and control the principal risks involved in the activities of the Institutional Securities, Wealth Management and Investment Management business segments, significant operating subsidiaries, as well as at the Parent Company level. The principal risks involved in our business activities are both financial and non-financial and include market (including non-trading interest rate risk), credit, liquidity, model, operational (including cybersecurity), compliance (including conduct), financial crimes, strategic and reputational risks. Strategic risk is integrated into our business planning, embedded in the evaluation of all principal risks and overseen by the Board.

The cornerstone of our risk management philosophy is the pursuit of risk-adjusted returns through prudent risk taking that protects our capital base and franchise. This philosophy is implemented through the ERM framework. Five key principles underlie this philosophy: integrity, comprehensiveness, independence, accountability and transparency. To help ensure the efficacy of risk management, which is an essential component of our reputation, senior

management requires thorough and frequent reporting and the appropriate escalation of risk matters. The fast-paced, complex and constantly evolving nature of global financial markets requires us to maintain a risk management culture that is incisive, knowledgeable about specialized products and markets, and subject to ongoing review and enhancement.

Our risk appetite defines the aggregate level and types of risk that the Firm is willing to accept to achieve its business objectives, taking into account the interests of clients and fiduciary duties to shareholders, as well as capital and other regulatory requirements. This risk appetite is embedded in our risk culture and linked to our short-term and long-term strategic, capital and financial plans, as well as compensation programs. This risk appetite and the related Board-level risk limits and risk tolerance statements are reviewed and approved by the Risk Committee of the Board (“BRC”) and the Board on at least an annual basis.

Risk Governance Structure

Risk management at the Firm requires independent Firm-level oversight, accountability of our business segments and effective communication of risk matters across the Firm, to senior management and ultimately to the Board. Our risk governance structure is set forth in the following chart and also includes risk managers, committees and groups within and across business segments and operating legal entities. The ERM framework, composed of independent but complementary entities, facilitates efficient and comprehensive supervision of our risk exposures and processes.



RRP—Resolution and Recovery Planning

- Committees include the Capital Commitment Committee, Equity Underwriting Committee, Global Large Loan Committee, Leveraged Finance Underwriting Committee and Municipal Capital Commitment Committee.
- Committees include the Investment Management Risk Committee, Securities Risk Committee and Wealth Management Risk Committee.

Morgan Stanley Board of Directors

The Board has oversight of the ERM framework and is responsible for helping to ensure that our risks are managed in a sound manner. The Board has authorized the committees within the ERM framework to help facilitate our risk oversight responsibilities. As set forth in the Board's Corporate Governance Policies, the Board also oversees, and receives reports on, our financial performance, strategy and business plans, as well as our practices and procedures relating to reputational and franchise risk, and culture, values and conduct.

Risk Committee of the Board

The BRC assists the Board in its oversight of the ERM framework; oversees significant financial risk exposures of the Firm, including market, credit, model and liquidity risk, against established risk measurement methodologies and the steps management has taken to monitor and control such exposures; oversees our risk appetite statement, including risk tolerance levels and limits; reviews capital, liquidity and funding strategy and planning and related guidelines and policies; reviews the contingency funding plan and capital planning process; oversees our significant risk governance, risk management and risk assessment guidelines and policies; oversees the performance of the Chief Risk Officer; reviews reports from our Strategic Transactions Committee, CCAR Committee and RRP Committee; reviews significant new product risk, emerging risks, regulatory matters and climate risk; and reviews reports from the Chief Audit Officer regarding the results of reviews and assessments of the risk management, liquidity and capital functions. The BRC reports to the Board on a regular basis and coordinates with the Board and other Board committees with respect to oversight of risk management and risk assessment guidelines.

Audit Committee of the Board

The Audit Committee of the Board ("BAC") oversees the integrity of our financial statements, compliance with legal and regulatory requirements, and system of internal controls; oversees risk management and risk assessment guidelines in coordination with the Board and other Board committees; reviews the major legal, compliance and financial crime risk exposures of the Firm and the steps management has taken to monitor and control such exposures; appoints, compensates, retains, oversees, evaluates and, when appropriate, replaces the independent auditor; oversees the qualifications, performance and independence of our independent auditor and pre-approves audit and permitted non-audit services; oversees the performance of our Chief Audit Officer; and, after review, recommends to the Board the acceptance and inclusion of the annual audited financial statements in the Firm's annual report on Form 10-K. The BAC reports to the Board on a regular basis.

Operations and Technology Committee of the Board

The Operations and Technology Committee of the Board ("BOTC") oversees our operations and technology strategy and significant investments in support of such strategy; oversees operational risk, including information technology, information security, fraud, third-party oversight, business disruption and resilience and cybersecurity risks and the steps management has taken to monitor and control such exposures. The BOTC reviews and approves significant operations and technology policies. The BOTC also reviews risk management and risk assessment guidelines in coordination with the Board and other Board committees, and policies regarding operational risk. The BOTC reports to the Board on a regular basis.

Firm Risk Committee

The Board has also authorized the Firm Risk Committee ("FRC"), a management committee appointed and co-chaired by the Chief Executive Officer and Chief Risk Officer, which includes the most senior officers of the Firm from the business, independent risk functions and control groups, to help oversee the ERM framework. The FRC's responsibilities include: oversight of our risk management principles, procedures, limits and tolerances; the monitoring of capital levels and material market, credit, model, operational, liquidity, legal, compliance, reputational and other risks, as appropriate; and the steps management has taken to monitor and manage such risks. The FRC also establishes and communicates risk appetite, including aggregate Firm limits and tolerances, as appropriate. The Governance Process Review Subcommittee of the FRC oversees governance and process issues on behalf of the FRC. The FRC reports to the Board, the BAC, the BOTC and the BRC through the Chief Risk Officer, Chief Financial Officer, Chief Legal Officer and Head of Non-Financial Risk.

Functional Risk and Control Committees

Functional risk and control committees and other committees within the ERM framework facilitate efficient and comprehensive supervision of our risk exposures and processes.

Each business segment has a risk committee that is responsible for helping to ensure that the business segment, as applicable, adheres to established limits for market, credit, operational and other risks; implements risk measurement, monitoring, and management policies, procedures, controls and systems that are consistent with the risk framework established by the FRC; and reviews, on a periodic basis, our aggregate risk exposures, risk exception experience, and the efficacy of our risk identification, measurement, monitoring and management policies and procedures, and related controls.

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Chief Risk Officer

The Chief Risk Officer, who is independent of business units, reports to the BRC and the Chief Executive Officer. The Chief Risk Officer oversees compliance with our financial risk limits; approves exceptions to our financial risk limits; independently reviews material market, credit, model and liquidity risks; and reviews results of risk management processes with the Board, the BRC, the BOTC and the BAC, as appropriate. The Chief Risk Officer oversees the ERM framework, which includes non-financial risk, and coordinates with the the Chief Financial Officer and the Chief Executive Officer regarding capital and liquidity management and works with the Compensation, Management Development and Succession Committee of the Board (“CMDS Committee”) to help ensure that the structure and design of incentive compensation arrangements do not encourage unnecessary and excessive risk taking.

Head of Non-Financial Risk

The Head of Non-Financial Risk, who is independent of business units, reports to the Chief Legal Officer and Chief Administrative Officer. The Head of Non-Financial Risk oversees the compliance, financial crimes and operational risk management functions; independently reviews non-financial risks, including compliance (including conduct), financial crimes, and operational (including cybersecurity) risks, as well as material regulatory risks; and reviews results of risk management processes with the Board, the BAC, the BOTC, the BRC, and the CMDS Committee, as appropriate. The Head of Non-Financial Risk also reports to the Chief Risk Officer as part of his oversight of the ERM Framework.

Independent Risk Management Functions

The Financial Risk Management functions (Market Risk, Credit Risk, Model Risk and Liquidity Risk Management Departments) and Non-Financial Risk Management functions (Compliance, Global Financial Crimes, and Operational Risk Departments) are independent of our business units and report to the Chief Risk Officer and Head of Non-Financial Risk, respectively. These functions assist senior management and the FRC in monitoring and controlling our risk through a number of control processes. Each function maintains its own risk governance structure with specified individuals and committees responsible for aspects of managing risk. Further discussion about the responsibilities of the risk management functions may be found under “Market Risk,” “Credit Risk,” “Operational Risk,” “Model Risk,” “Liquidity Risk,” and “Legal, Regulatory and Compliance Risk” herein.

Support and Control Functions

Our support and control groups include, but are not limited to, Legal, the Finance Division, the Technology Division (“Technology”), the Operations Division (“Operations”), the Human Capital Management, and Firm Strategy and Execution. Our support and control functions coordinate with

the business segment control groups to review the risk monitoring and risk management policies and procedures relating to, among other things, controls over financial reporting and disclosure; each business segment’s market, credit and operational risk profile; liquidity risks; model risks; sales practices; reputational, legal enforceability, compliance and regulatory risks; and technological risks. Participation by the senior officers of the Firm and business segment control groups helps ensure that risk policies and procedures, exceptions to risk limits, new products and business ventures, and transactions with risk elements undergo thorough review.

Internal Audit Department

The Internal Audit Department (“IAD”) independently identifies and assesses risks facing the Firm and provides independent, objective and timely assurance to stakeholders about the effectiveness of risk management, governance and controls over key risks within the Firm’s businesses and functions. Every activity (including outsourced activities) and every entity of the Firm (including subsidiaries, affiliates and branches) is subject to IAD coverage. IAD develops and executes a comprehensive risk-based assurance plan to fulfill its role and purpose, which includes assessing compliance with policies, procedures and laws and regulations. IAD may also conduct other activities, such as retrospective reviews, pre-implementation reviews and investigations as requested by the BAC, senior management or the Firm’s regulators.

IAD executes its activities in accordance with the mandatory elements of The Institute of Internal Auditors’ International Professional Practices Framework as well as the Firm’s Code of Ethics and Business Conduct, regulatory requirements, and IAD’s policies, procedures, standards and guidance. The Chief Audit Officer, who reports directly to the Chair of the BAC and administratively to the Firm’s Chief Executive Officer (“CEO”), communicates the results of IAD activities to the BAC on a quarterly basis and periodically to the BRC and BOTC.

Culture, Values and Conduct of Employees

Employees of the Firm are accountable for conducting themselves in accordance with our core values: *Put Clients First, Do the Right Thing, Lead with Exceptional Ideas, Commit to Diversity and Inclusion, and Give Back*. We are committed to reinforcing and confirming adherence to our core values through our governance framework, tone from the top, management oversight, risk management and controls, and three lines of defense structure (risk owners within the business, our independent risk management functions, including the Financial Risk Management and Non-Financial Risk Management functions, and IAD).

The Board is responsible for overseeing the Firm’s practices and procedures relating to culture, values and conduct, as set forth in the Board’s Corporate Governance Policies. Senior management committees oversee the Firmwide culture, values and conduct program and report regularly to the Board. A

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fundamental building block of these programs is the Firm's Code of Conduct, which establishes standards for employee conduct that further reinforce the Firm's commitment to integrity and ethical conduct. Every new hire and every employee annually is required to certify to their understanding of and adherence to the Code of Conduct. The Firm's Global Conduct Risk Management Policy also sets out a consistent global framework for managing conduct risk (i.e., the risk arising from misconduct by employees or contingent workers) and conduct risk incidents at the Firm.

The employee annual performance review process includes evaluation of employee conduct related to risk management practices and the Firm's expectations. We also have several mutually reinforcing processes to identify employee conduct that may have an impact on employment status, current-year compensation and/or prior-year compensation. For example, the Global Incentive Compensation Discretion Policy sets forth standards for managers when making annual compensation decisions and specifically provides that managers must consider whether their employees effectively managed and/or supervised risk control practices during the performance year. Control function management meets to discuss employees whose conduct is not in line with our expectations. These results are incorporated into identified employees' performance reviews and compensation and promotion decisions.

The Firm's clawback and cancellation provisions apply to deferred incentive compensation and cover a broad scope of employee conduct, including any act or omission (including with respect to direct supervisory responsibilities) that constitutes a breach of obligation to the Firm or causes a restatement of the Firm's financial results, constitutes a violation of the Firm's global risk management principles, policies and standards, or causes a loss of revenue associated with a position on which the employee was paid and the employee operated outside of risk management policies.

Risk Limits Framework

Risk limits and quantitative metrics provide the basis for monitoring risk-taking activity and avoiding outsized risk taking. Our risk-taking capacity is sized through the Firm's capital planning process where losses are estimated under the Firm's BHC Severely Adverse stress testing scenario. We also maintain a comprehensive suite of risk limits and quantitative metrics to support and implement our risk-appetite statement. Our risk limits support linkages between the overall risk appetite, which is reviewed by the Board, and more granular risk-taking decisions and activities.

Risk limits, once established, are reviewed and updated on an annual basis, with more frequent updates as necessary. Board-level risk limits address the most important Firmwide aggregations of risk. Additional risk limits approved by the FRC address more specific types of risk and are bound by the higher-level Board risk limits.

Risk Management Process

In subsequent sections, we discuss our risk management policies and procedures for our primary risks involved in the activities of our Institutional Securities, Wealth Management and Investment Management business segments. These sections and the estimated amounts of our risk exposure generated by our statistical analyses are forward-looking statements. However, the analyses used to assess such risks are not predictions of future events, and actual results may vary significantly from such analyses due to events in the markets in which we operate and certain other factors described in the following paragraphs.

Market Risk

Market risk refers to the risk that a change in the level of one or more market prices, rates, spreads, indices, volatilities, correlations or other market factors, such as market liquidity, will result in losses for a position or portfolio. Generally, we incur market risk as a result of trading, investing and client facilitation activities, principally within the Institutional Securities business segment where the substantial majority of our VaR for market risk exposures is generated. In addition, we incur non-trading market risk, principally within the Wealth Management and Investment Management business segments. The Wealth Management business segment primarily incurs non-trading market risk (including interest rate risk) from lending and deposit-taking activities. The Investment Management business segment primarily incurs non-trading market risk from capital investments in its funds.

Market risk also includes non-trading interest rate risk. Non-trading interest rate risk in the banking book (amounts classified for regulatory capital purposes under the banking book regime) refers to the exposure that a change in interest rates will result in prospective earnings and fair value changes for assets and liabilities in the banking book.

Sound market risk management is an integral part of our culture. The various business units and trading desks are responsible for ensuring that market risk exposures are well-managed and prudent. The Firm's control functions help ensure that these risks are measured and closely monitored and are made transparent to senior management. The Market Risk Department is responsible for ensuring the transparency of material market risks, monitoring compliance with established limits and escalating risk concentrations to appropriate senior management.

To execute these responsibilities, the Market Risk Department monitors our risk against limits on aggregate risk exposures, performs a variety of risk analyses, routinely reports risk summaries, and maintains our VaR and scenario analysis systems. Market risk is also monitored through various measures: by use of statistics (including VaR and related analytical measures), by measures of position size and sensitivity, and through routine stress testing, which measures the impact on the value of existing portfolios of specified

changes in market factors and scenarios designed by the Market Risk Department in collaboration with the business units. The material risks identified by these processes are summarized in reports produced by the Market Risk Department that are circulated to and discussed with senior management, the FRC, the BRC and the Board.

Trading Risks

Primary Market Risk Exposures and Market Risk Management

We have exposures to a wide range of risks related to interest rates and credit spreads, equity prices, foreign exchange rates and commodity prices as well as the associated implied volatilities, correlations and spreads of the global markets in which we conduct our trading activities.

We are exposed to interest rate and credit spread risk as a result of our market-making activities and other trading in interest rate-sensitive financial instruments (i.e., risk arising from changes in the level or implied volatility of interest rates, the timing of mortgage prepayments, the shape of the yield curve and/or credit spreads). The activities from which those exposures arise and the markets in which we are active include, but are not limited to: derivatives, corporate and government debt across both developed and emerging markets and asset-backed debt, including mortgage-related securities.

We are exposed to equity price, correlation and implied volatility risk as a result of making markets in equity securities and derivatives and maintaining other positions, including positions in non-public entities. Positions in non-public entities may include, but are not limited to, exposures to private equity, venture capital, private partnerships, real estate funds and other funds. Such positions are less liquid, have longer investment horizons and are more difficult to hedge than listed equities.

We are exposed to foreign exchange rate, correlation and implied volatility risk as a result of making markets in foreign currencies and foreign currency derivatives, from maintaining foreign exchange positions and from holding non-U.S. dollar-denominated financial instruments.

We are exposed to commodity price and implied volatility risk as a result of market-making activities in commodity products related primarily to electricity, natural gas, oil and precious metals. Commodity exposures are subject to periods of high price volatility as a result of changes in supply and demand. These changes can be caused by weather conditions, physical production and transportation, or geopolitical and other events that affect the available supply and level of demand for these commodities.

We manage our trading positions by employing a variety of risk-mitigation strategies. These strategies include diversification of risk exposures and hedging. Hedging activities consist of the purchase or sale of positions in related

securities and financial instruments, including a variety of derivative products (e.g., futures, forwards, swaps and options). Hedging activities may not always provide effective mitigation against trading losses due to differences in the terms, specific characteristics or other basis risks that may exist between the hedge instrument and the risk exposure that is being hedged.

We manage the market risk associated with our trading activities on a Firmwide basis, on a worldwide trading division level and on an individual product basis. We manage and monitor our market risk exposures in such a way as to maintain a portfolio that we believe is well diversified in the aggregate with respect to market risk factors and that reflects our aggregate risk tolerance as established by our senior management.

Aggregate market risk limits have been approved for the Firm across all divisions worldwide. Additional market risk limits are assigned to trading desks and, as appropriate, products and regions. Trading division risk managers, desk risk managers, traders and the Market Risk Department monitor market risk measures against limits in accordance with policies set by our senior management.

Value-at-Risk

The statistical technique known as VaR is one of the tools we use to measure, monitor and review the market risk exposures of our trading portfolios. The Market Risk Department calculates and distributes daily VaR-based risk measures to various levels of management.

We estimate VaR using a model based on a one-year equal-weighted historical simulation for general market risk factors and name-specific risk in corporate equities and related derivatives, and Monte Carlo simulation for name-specific risk in bonds, loans and related derivatives. The model constructs a distribution of hypothetical daily changes in the value of trading portfolios based on historical observation of daily changes in key market indices or other market risk factors, and information on the sensitivity of the portfolio values to these market risk factor changes.

VaR for risk management purposes ("Management VaR") is computed at a 95% level of confidence over a one-day time horizon, which is a useful indicator of possible trading losses resulting from adverse daily market moves. The 95%/one-day VaR corresponds to the unrealized loss in portfolio value that, based on historically observed market risk factor movements, would have been exceeded with a frequency of 5%, or five times in every 100 trading days, if the portfolio were held constant for one day.

Our VaR model generally takes into account linear and non-linear exposures to equity and commodity price risk, interest rate risk, credit spread risk and foreign exchange rates. The model also takes into account linear exposures to implied volatility risks for all asset classes and non-linear exposures to implied volatility risks for equity, commodity and foreign

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exchange referenced products. The VaR model also captures certain implied correlation risks associated with portfolio credit derivatives, as well as certain basis risks (e.g., corporate debt and related credit derivatives).

We use VaR as one of a range of risk management tools. Among their benefits, VaR models permit estimation of a portfolio’s aggregate market risk exposure, incorporating a range of varied market risks and portfolio assets. One key element of the VaR model is that it reflects risk reduction due to portfolio diversification or hedging activities. However, VaR has various limitations, which include, but are not limited to: use of historical changes in market risk factors, which may not be accurate predictors of future market conditions and may not fully incorporate the risk of extreme market events that are outsized relative to observed historical market behavior or reflect the historical distribution of results beyond the 95% confidence interval; and reporting of losses in a single day, which does not reflect the risk of positions that cannot be liquidated or hedged in one day. A small proportion of market risk generated by trading positions is not included in VaR.

The modeling of the risk characteristics of some positions relies on approximations that, under certain circumstances, could produce significantly different results from those produced using more precise measures. VaR is most appropriate as a risk measure for trading positions in liquid financial markets and will understate the risk associated with severe events, such as periods of extreme illiquidity. We are aware of these and other limitations and, therefore, use VaR as only one component in our risk management oversight process. This process also incorporates stress testing and scenario analyses and extensive risk monitoring, analysis and control at the trading desk, division and Firm levels.

We update our VaR model in response to changes in the composition of trading portfolios and to improvements in modeling techniques and systems capabilities. We are committed to continuous review and enhancement of VaR methodologies and assumptions in order to capture evolving risks associated with changes in market structure and dynamics. As part of our regular process improvements, additional systematic and name-specific risk factors may be added to improve the VaR model’s ability to more accurately estimate risks to specific asset classes or industry sectors.

Since the reported VaR statistics are estimates based on historical data, VaR should not be viewed as predictive of our future revenues or financial performance or of our ability to monitor and manage risk. There can be no assurance that our actual losses on a particular day will not exceed the VaR amounts indicated in the following tables or that such losses will not occur more than five times in 100 trading days for a 95%/one-day VaR. VaR does not predict the magnitude of losses that, should they occur, may be significantly greater than the VaR amount.

VaR statistics are not readily comparable across firms because of differences in the firms’ portfolios, modeling assumptions and methodologies. These differences can result in materially different VaR estimates across firms for similar portfolios. The impact of such differences varies depending on the factor history assumptions, the frequency with which the factor history is updated and the confidence level. As a result, VaR statistics are more useful when interpreted as indicators of trends in a firm’s risk profile rather than as an absolute measure of risk to be compared across firms.

Our regulators have approved the same VaR model we use for risk management purposes for use in regulatory calculations.

The portfolio of positions used for Management VaR differs from that used for Regulatory VaR. Management VaR contains certain positions that are excluded from Regulatory VaR.

95%/One-Day Management VaR

\$ in millions	2024			
	Period End	Average	High ¹	Low ¹
Interest rate and credit spread	\$ 23	\$ 31	\$ 52	\$ 19
Equity price	21	23	39	17
Foreign exchange rate	10	10	15	6
Commodity price	18	15	23	10
Less: Diversification benefit ²	(37)	(37)	N/A	N/A
Primary Risk Categories	\$ 35	\$ 42	\$ 59	\$ 32
Credit Portfolio	20	24	26	20
Less: Diversification benefit ²	(16)	(17)	N/A	N/A
Total Management VaR	\$ 39	\$ 49	\$ 66	\$ 39

\$ in millions	2023			
	Period End	Average	High ¹	Low ¹
Interest rate and credit spread	\$ 29	\$ 34	\$ 43	\$ 27
Equity price	19	24	38	15
Foreign exchange rate	6	9	18	5
Commodity price	11	17	35	10
Less: Diversification benefit ²	(27)	(40)	N/A	N/A
Primary Risk Categories	\$ 38	\$ 44	\$ 60	\$ 33
Credit Portfolio	25	21	25	18
Less: Diversification benefit ²	(22)	(15)	N/A	N/A
Total Management VaR	\$ 41	\$ 50	\$ 72	\$ 41

1. The high and low VaR values for the Total Management VaR and each of the component VaRs might have occurred on different days during the quarter, and, therefore, the diversification benefit is not an applicable measure.
2. Diversification benefit equals the difference between the total VaR and the sum of the component VaRs. This benefit arises because the simulated one-day losses for each of the components occur on different days. Similar diversification benefits are also taken into account within each component.

Average Total Management VaR and average Management VaR for the Primary Risk Categories decreased from 2023, primarily driven by lower market volatility.

Distribution of VaR Statistics and Net Revenues

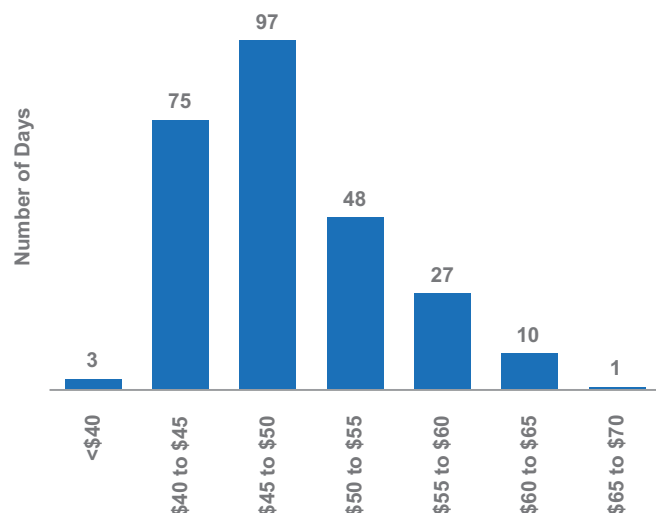
We evaluate the reasonableness of our VaR model by comparing the potential declines in portfolio values generated by the model with corresponding actual trading results for the Firm, as well as individual business units. For days where losses exceed the VaR statistic, we examine the drivers of

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trading losses to evaluate the VaR model's accuracy. There were 11 trading loss days in 2024, none of which exceeded 95% Total Management VaR, compared to 16 trading loss days in 2023, one of which exceeded 95% Total Management VaR.

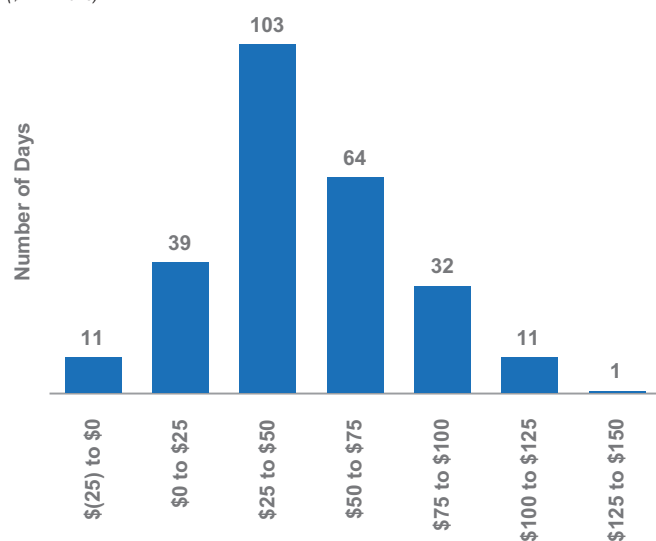
Daily 95%/One-Day Total Management VaR for 2024

(\$ in millions)



Daily Net Trading Revenues for 2024

(\$ in millions)



Daily net trading revenues include profits and losses from Interest rate and credit spread, Equity price, Foreign exchange rate, Commodity price, and Credit Portfolio positions and intraday trading activities for our trading businesses. Certain items such as fees, commissions, net interest income and counterparty default risk are excluded from daily net trading revenues and the VaR model. Revenues required for Regulatory VaR backtesting further exclude intraday trading.

Non-Trading Risks

We believe that sensitivity analysis is an appropriate representation of our non-trading risks. The following

sensitivity analyses cover substantially all of the non-trading market risk in our portfolio.

Credit Spread Risk Sensitivity¹

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Derivatives	\$ 6	\$ 6
Borrowings carried at fair value	49	48

1. Amounts represent the potential gain for each 1 bps widening of our credit spread.

The Wealth Management business segment reflects a substantial portion of our non-trading interest rate risk. Net interest income in the Wealth Management business segment primarily consists of interest income earned on non-trading assets held, including loans and investment securities, as well as margin and other lending on non-bank entities and interest expense incurred on non-trading liabilities, primarily deposits.

Wealth Management Net Interest Income Sensitivity Analysis¹

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Basis point change		
+200	\$ 699	\$ 1,127
+100	350	585
-100	(371)	(609)
-200	(803)	(1,255)

1. The prior period has been revised to conform to the current period presentation.

The previous table presents an analysis of selected instantaneous upward and downward parallel interest rate shocks (subject to a floor of zero percent in the downward scenario) on net interest income over the next 12 months for our Wealth Management business segment. These shocks are applied to our 12-month forecast for our Wealth Management business segment, which incorporates market expectations of interest rates and our forecasted balance sheet and business activity. The forecast includes modeled prepayment behavior, reinvestment of net cash flows from maturing assets and liabilities, and deposit pricing sensitivity to interest rates. These key assumptions are updated periodically based on historical data and future expectations.

We do not manage to any single rate scenario but rather manage net interest income in our Wealth Management business segment across a range of possible outcomes, including non-parallel rate change scenarios. The sensitivity analysis assumes that we take no action in response to these scenarios, assumes there are no changes in other macroeconomic variables normally correlated with changes in interest rates and includes subjective assumptions regarding customer and market re-pricing behavior and other factors.

Our Wealth Management business segment balance sheet is asset sensitive, given assets reprice faster than liabilities, resulting in higher net interest income in higher interest rate scenarios and lower net interest income in lower interest rate scenarios. The level of interest rates may impact the amount of deposits held at the Firm, given competition for deposits

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from other institutions and alternative cash-equivalent products available to depositors. Further, the level of interest rates could also impact client demand for loans. Net interest income sensitivity to interest rates at December 31, 2024 decreased from December 31, 2023, primarily driven by the effects of changes in the mix of our assets and liabilities and changes in market rates.

Investments Sensitivity, Including Related Carried Interest

<i>\$ in millions</i>	Loss from 10% Decline	
	At December 31, 2024	At December 31, 2023
Investments related to Investment Management activities	\$ 571	\$ 481
Other investments:		
MUMSS	122	134
Other Firm investments	463	399

We have exposure to public and private companies through direct investments, as well as through funds that invest in these assets. These investments are predominantly equity positions with long investment horizons, a portion of which is for business facilitation purposes. The market risk related to these investments is measured by estimating the potential reduction in net revenues associated with a reasonably possible 10% decline in investment values and related impact on performance-based income, as applicable. Investment sensitivity changed between December 31, 2024 and December 31, 2023 primarily due to new investments in the Community Reinvestment Act affordable housing and new private credit funds in Investment Management.

Asset Management Revenue Sensitivity

Certain asset management revenues in the Wealth Management and Investment Management business segments are derived from management fees, which are based on fee-based client assets in Wealth Management or AUM in Investment Management (together, “client holdings”). The assets underlying client holdings are primarily composed of equity, fixed income and alternative investments and are sensitive to changes in related markets. These revenues depend on multiple factors including, but not limited to, the level and duration of a market increase or decline, price volatility, the geographic and industry mix of client assets, and client behavior such as the rate and magnitude of client investments and redemptions. Therefore, overall revenues may not correlate completely with changes in the related markets.

Credit Risk

Credit risk refers to the risk of loss arising when a borrower, counterparty or issuer does not meet its financial obligations to us. We are primarily exposed to credit risk from institutions and individuals through our Institutional Securities and Wealth Management business segments.

We incur credit risk in our Institutional Securities business segment through a variety of activities, including, but not limited to, the following:

- extending credit to clients through loans and lending commitments;
- entering into swap or other derivative contracts under which counterparties may have obligations to make payments to us;
- acting as clearing broker for listed and over-the-counter derivatives whereby we guarantee client performance to clearinghouses;
- providing short- or long-term funding that is secured by physical or financial collateral, including, but not limited to, real estate and marketable securities, whose value may at times be insufficient to fully cover the repayment amount;
- posting margin and/or collateral to clearinghouses, clearing agencies, exchanges, banks, securities firms and other financial counterparties;
- placing funds on deposit at other financial institutions to support our clearing and settlement obligations; and
- investing or trading in securities and loan pools, whereby the value of these assets may fluctuate based on realized or expected defaults on the underlying obligations or loans.

We incur credit risk in our Wealth Management business segment, primarily through lending to individuals and entities, including, but not limited to, the following:

- margin loans collateralized by securities;
- securities-based lending and other forms of secured loans, including tailored lending to ultra-high net worth clients, that are in most cases secured by various types of collateral, including marketable securities, private investments, commercial real estate and other financial assets;
- single-family residential mortgage loans in conforming, non-conforming or HELOC form, primarily to existing Wealth Management clients; and
- employee loans granted primarily to recruit certain Wealth Management representatives.

Monitoring and Control

The Credit Risk Management Department (“CRM”) establishes Firmwide practices to evaluate, monitor and control credit risk at the transaction, obligor and portfolio levels. The CRM approves extensions of credit, evaluates the creditworthiness of the counterparties and borrowers on a regular basis, and helps ensure that credit exposure is actively monitored and managed. The evaluation of counterparties and borrowers includes an assessment of the probability that an obligor will default on its financial obligations and any losses that may occur when an obligor defaults. In addition, credit risk exposure is actively managed by credit professionals and committees within the CRM and through various risk committees, whose membership includes individuals from the CRM. A comprehensive and global Credit Limits Framework is utilized to manage credit risk levels across the Firm. The Credit Limits Framework is calibrated within our risk

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tolerance and includes single-name limits and portfolio concentration limits by country, industry and product type.

The CRM helps ensure timely and transparent communication of material credit risks, compliance with established limits and escalation of risk concentrations to appropriate senior management. The CRM also works closely with the Market Risk Department and applicable business units to monitor risk exposures and to perform stress tests to identify, analyze and control credit risk concentrations arising from lending and trading activities. The stress tests shock market factors (e.g., interest rates, commodity prices, credit spreads), risk parameters (e.g., probability of default and loss given default), recovery rates and expected losses in order to assess the impact of stresses on exposures, profit and loss, and our capital position. Stress tests are conducted in accordance with our established policies and procedures.

Credit Evaluation

The evaluation of corporate and institutional counterparties and borrowers includes assigning credit ratings, which reflect an assessment of an obligor's probability of default and loss given default. Credit evaluations typically involve the assessment of financial statements; leverage; liquidity; capital strength; asset composition and quality; market capitalization; access to capital markets; adequacy of collateral, if applicable; and, in the case of certain loans, cash flow projections and debt service requirements. The CRM also evaluates strategy, market position, industry dynamics, exposure to changes in international trade policies and supply chain constraints, management and other factors such as country risks and legal and contingent risks that could affect the obligor's risk profile. Additionally, the CRM evaluates the relative position of our exposure in the borrower's capital structure and relative recovery prospects, as well as other structural elements of the particular transaction. The underwriting of commercial real estate loans includes, but is not limited to, review of the property type, LTV ratio, occupancy levels, debt service ratio, prevailing capitalization rates and market dynamics.

The evaluation of consumer borrowers is tailored to the specific type of lending. Securities-based loans are evaluated based on factors that include, but are not limited to, the amount of the loan and the amount, quality, diversification, price volatility and liquidity of the collateral. The underwriting of residential real estate loans includes, but is not limited to, review of the obligor's debt-to-income ratio, net worth, liquidity, collateral, LTV ratio and industry standard credit-scoring models (e.g., FICO scores). Subsequent credit monitoring for individual loans is performed at the portfolio level, and collateral values are monitored on an ongoing basis.

Credit risk metrics assigned to our borrowers during the evaluation process are incorporated into the CRM maintenance of the allowance for credit losses. Such allowance serves as a reserve for expected inherent losses, as well as expected losses related to loans identified as impaired.

For more information on the allowance for credit losses, see Notes 2 and 9 to the financial statements.

Risk Mitigation

We may seek to mitigate credit risk from our lending and trading activities in multiple ways, including collateral provisions, guarantees and hedges. At the transaction level, we seek to mitigate risk through management of key risk elements such as size, tenor, financial covenants, seniority and collateral. We actively hedge our lending and derivatives exposures. Hedging activities consist of the purchase, sale or transfer of positions in related securities and financial instruments, including a variety of derivative products (e.g., futures, forwards, swaps and options). Additionally, we may sell, assign or syndicate loans and lending commitments to other financial institutions in the primary and secondary loan markets.

In connection with our derivatives trading activities, we generally enter into master netting agreements and collateral arrangements with counterparties. These agreements provide us with the ability to demand collateral, as well as to liquidate collateral and offset receivables and payables covered under the same master agreement in the event of a counterparty default. A collateral management group monitors collateral levels against requirements and oversees the administration of the collateral function. See Note 8 to the financial statements for additional information about our collateralized transactions.

Loans and Lending Commitments

	At December 31, 2024			
<i>\$ in millions</i>	HFI	HFS	FVO ¹	Total
Institutional Securities:				
Corporate	\$ 6,889	\$ 9,183	\$ —	\$ 16,072
Secured lending facilities	48,842	2,507	—	51,349
Commercial and Residential real estate	8,412	628	2,420	11,460
Securities-based lending and Other	2,876	—	6,041	8,917
Total Institutional Securities	67,019	12,318	8,461	87,798
Wealth Management:				
Residential real estate	66,738	—	—	66,738
Securities-based lending and Other	93,139	1	—	93,140
Total Wealth Management	159,877	1	—	159,878
Total Investment Management²	4	—	200	204
Total loans	226,900	12,319	8,661	247,880
ACL	(1,066)			(1,066)
Total loans, net of ACL	\$225,834	\$ 12,319	\$ 8,661	\$246,814
Lending commitments³	\$148,818	\$ 26,955	\$ 758	\$176,531
Total exposure	\$374,652	\$ 39,274	\$ 9,419	\$423,345

\$ in millions	At December 31, 2023			
	HFI	HFS	FVO ¹	Total
Institutional Securities:				
Corporate	\$ 6,758	\$ 11,862	\$ —	\$ 18,620
Secured lending facilities	39,498	3,161	—	42,659
Commercial and Residential real estate	8,678	209	3,331	12,218
Securities-based lending and Other	2,818	—	4,402	7,220
Total Institutional Securities	57,752	15,232	7,733	80,717
Wealth Management:				
Residential real estate	60,375	22	—	60,397
Securities-based lending and Other	86,423	1	—	86,424
Total Wealth Management	146,798	23	—	146,821
Total Investment Management²	4	—	455	459
Total loans	204,554	15,255	8,188	227,997
ACL	(1,169)			(1,169)
Total loans, net of ACL	\$203,385	\$ 15,255	\$ 8,188	\$226,828
Lending commitments³	\$128,134	\$ 21,329	\$ 510	\$149,973
Total exposure	\$331,519	\$ 36,584	\$ 8,698	\$376,801

Total exposure—consists of Total loans, net of ACL, and Lending commitments

1. FVO includes the fair value of certain unfunded lending commitments.
2. Investment Management business segment loans are related to certain of our activities as an investment adviser and manager. Loans held at fair value are the result of the consolidation of investment vehicles (including CLOs) managed by Investment Management, composed primarily of senior secured loans to corporations.
3. Lending commitments represent the notional amount of legally binding obligations to provide funding to clients for lending transactions. Since commitments associated with these business activities may expire unused or may not be utilized to full capacity, they do not necessarily reflect the actual future cash funding requirements.

We provide loans and lending commitments to a variety of customers, including large corporate and institutional clients, as well as high to ultra-high net worth individuals. In addition, we purchase loans in the secondary market. Loans and lending commitments are either held for investment, held for sale or carried at fair value. For more information on these loan classifications, see Note 2 to the financial statements.

In 2024, total loans and lending commitments increased by approximately \$47 billion, primarily due to an increase in Corporate lending commitments and Secured lending facilities within the Institutional Securities business segment, and growth across portfolios within the Wealth Management business segment.

See Notes 4, 5, 9 and 14 to the financial statements for further information.

Allowance for Credit Losses—Loans and Lending Commitments

\$ in millions	2024	
ACL—Loans		
Beginning balance	\$	1,169
Gross charge-offs		(242)
Recoveries		7
Net (charge-offs)/recoveries		(235)
Provision for credit losses		146
Other		(14)
Ending balance	\$	1,066
ACL—Lending commitments		
Beginning balance	\$	551
Provision for credit losses		118
Other		(13)
Ending balance	\$	656
Total ending balance	\$	1,722

Provision for Credit Losses by Business Segment

\$ in millions	Year Ended December 31, 2024		
	IS	WM	Total
Loans	\$ 81	\$ 65	\$ 146
Lending commitments	121	(3)	118
Total	\$ 202	\$ 62	\$ 264

Credit exposure arising from our loans and lending commitments is measured in accordance with our internal risk management standards. Risk factors considered in determining the allowance for credit losses for loans and lending commitments include the borrower's financial strength, industry, facility structure, LTV ratio, debt service ratio, collateral and covenants. Qualitative and environmental factors such as economic and business conditions, nature and volume of the portfolio and lending terms, and volume and severity of past due loans may also be considered.

The allowance for credit losses for loans and lending commitments was relatively unchanged since December 31, 2023, reflecting provisions for certain specific commercial real estate loans and growth in the corporate loan portfolio, offset by charge-offs related to commercial real estate lending, mainly in the office sector, and improvements in the macroeconomic outlook.

The base scenario used in our ACL models as of December 31, 2024 was generated using a combination of consensus economic forecasts, forward rates, and internally developed and validated models. This scenario assumes continued economic growth as well as lower interest rates relative to the prior year forecast. The ACL calculation incorporates key macroeconomic variables, including U.S. real GDP growth rate. The significance of key macroeconomic variables on the ACL calculation varies depending on portfolio composition and economic conditions.

Forecasted U.S. Real GDP Growth Rates in Base Scenario

	4Q 2025	4Q 2026
Year-over-year growth rate	1.9 %	2.1 %

Risk Disclosures

Other key macroeconomic variables used in the ACL calculation include corporate credit spreads, interest rates and commercial real estate indices. See Note 2 to the financial statements for a discussion of the Firm's ACL methodology under CECL.

Status of Loans Held for Investment

	At December 31, 2024		At December 31, 2023	
	IS	WM	IS	WM
Accrual	99.2 %	99.7 %	98.9 %	99.8 %
Nonaccrual ¹	0.8 %	0.3 %	1.1 %	0.2 %

1. Nonaccrual loans are loans where principal or interest is not expected when contractually due or are past due 90 days or more.

Net Charge-off Ratios for Loans Held for Investment

\$ in millions	Corporate	Secured Lending Facilities		CRE	Residential Real Estate		SBL and Other		Total
		Facilities	Facilities		Estate	Estate	Other	Other	
2024									
Net charge-off ratio ¹	0.57 %	0.03 %	1.87 %	— %	0.03 %	0.11 %			
Average loans	\$ 6,895	\$43,158	\$8,620	\$ 63,204	\$91,221	\$213,098			
2023									
Net charge-off ratio ¹	0.47 %	— %	1.50 %	— %	— %	0.08 %			
Average loans	\$ 7,062	\$37,702	\$8,590	\$ 57,177	\$91,126	\$201,657			
2022									
Net charge-off ratio ¹	(0.09)%	0.01 %	0.09 %	— %	0.02 %	0.01 %			
Average loans	\$ 6,544	\$33,172	\$8,234	\$ 49,937	\$93,427	\$191,314			

CRE—Commercial real estate

SBL—Securities-based lending

1. Net charge-off ratio represents gross charge-offs net of recoveries divided by total average loans held for investment before ACL.

Institutional Securities Loans and Lending Commitments¹

\$ in millions	At December 31, 2024					Total
	Contractual Years to Maturity					
	< 1	1-5	5-15	>15		
Loans						
AA	\$ 3	\$ 575	\$ 187	\$ —	\$ 765	
A	894	588	164	—	1,646	
BBB	5,165	13,185	91	124	18,565	
BB	11,235	24,467	2,592	358	38,652	
Other NIG	8,520	12,776	1,673	145	23,114	
Unrated ²	227	1,176	420	2,503	4,326	
Total loans, net of ACL	26,044	52,767	5,127	3,130	87,068	
Lending commitments						
AAA	—	75	—	—	75	
AA	2,560	4,285	88	—	6,933	
A	8,226	21,372	1,091	—	30,689	
BBB	10,135	54,752	1,507	146	66,540	
BB	3,174	23,239	3,062	941	30,416	
Other NIG	1,074	17,436	3,956	2	22,468	
Unrated ²	14	93	33	—	140	
Total lending commitments	25,183	121,252	9,737	1,089	157,261	
Total exposure	\$ 51,227	\$174,019	\$ 14,864	\$ 4,219	\$244,329	

\$ in millions	At December 31, 2023				
	Contractual Years to Maturity				
	< 1	1-5	5-15	>15	Total
Loans					
AA	\$ 3	\$ 11	\$ 216	\$ —	\$ 230
A	1,054	950	182	—	2,186
BBB	7,117	10,076	346	—	17,539
BB	11,723	16,367	1,775	277	30,142
Other NIG	9,586	12,961	2,924	156	25,627
Unrated ²	111	1,036	62	2,910	4,119
Total loans, net of ACL	29,594	41,401	5,505	3,343	79,843
Lending commitments					
AAA	—	50	—	—	50
AA	2,610	3,064	154	—	5,828
A	7,704	21,256	593	—	29,553
BBB	9,161	46,304	106	—	55,571
BB	4,069	16,431	1,594	414	22,508
Other NIG	1,916	13,842	1,077	3	16,838
Unrated ²	6	7	—	—	13
Total lending commitments	25,466	100,954	3,524	417	130,361
Total exposure	\$ 55,060	\$142,355	\$ 9,029	\$ 3,760	\$210,204

NIG—Non-investment grade

1. Counterparty credit ratings are internally determined by the CRM.

2. Unrated loans and lending commitments are primarily trading positions that are measured at fair value and risk-managed as a component of market risk. For a further discussion of our market risk, see "Quantitative and Qualitative Disclosures about Risk—Market Risk" herein.

Institutional Securities Loans and Lending Commitments by Industry

\$ in millions	At	At
	December 31, 2024	December 31, 2023
Financials	\$ 68,512	\$ 57,804
Real estate	40,041	35,342
Communications services	20,425	15,301
Industrials	20,024	18,056
Information technology	15,666	12,430
Healthcare	15,455	14,274
Consumer discretionary	14,699	12,190
Consumer staples	12,098	9,305
Utilities	11,755	11,522
Energy	9,036	9,156
Materials	7,378	6,503
Insurance	6,812	6,486
Other	2,428	1,835
Total exposure	\$ 244,329	\$ 210,204

Institutional Securities Lending Activities

The Institutional Securities business segment lending activities include Corporate, Secured lending facilities, Commercial and Residential real estate, and Securities-based lending and Other. As of December 31, 2024 and December 31, 2023, over 90% of our total lending exposure, which consists of loans and lending commitments, was investment grade and/or secured by collateral.

Corporate comprises relationship and event-driven loans and lending commitments supporting general and event-driven financing needs for our institutional clients, which typically consist of revolving lines of credit, term loans and bridge loans; may have varying terms; may be senior or

Risk Disclosures

subordinated; may be secured or unsecured; are generally contingent upon representations, warranties and contractual conditions applicable to the borrower; and may be syndicated, traded or hedged. Relationship loans and lending commitments are extended to select institutional clients, primarily for general corporate purposes and generally with the intent to hold for the foreseeable future. Event-driven loans and lending commitments are extended in connection with specific client transactions and are explained in further detail in “Institutional Securities Event-Driven Loans and Lending Commitments” herein.

Secured lending facilities include loans provided to clients, which are collateralized by various assets, including residential and commercial real estate mortgage loans, investor commitments for capital calls, corporate loans and other assets. These facilities generally provide for overcollateralization. Credit risk with respect to these loans and lending commitments arises from the failure of a borrower to perform according to the terms of the loan agreement and/or a decline in the underlying collateral value. The Firm monitors collateral levels against the requirements of lending agreements. See Note 15 to the financial statements for information about our securitization activities.

Commercial real estate loans are primarily senior, secured by underlying real estate and are typically in term loan form. In addition, as part of certain of its trading and securitization activities, Institutional Securities may also hold residential real estate loans.

Securities-based lending and Other includes financing extended to sales and trading customers and corporate loans purchased in the secondary market.

Institutional Securities Event-Driven Loans and Lending Commitments

\$ in millions	At December 31, 2024			
	Contractual Years to Maturity			Total
	<1	1-5	5-15	
Loans, net of ACL	\$ 2,253	\$ 2,839	\$ 733	\$ 5,825
Lending commitments	5,153	2,152	2,918	10,223
Total exposure	\$ 7,406	\$ 4,991	\$ 3,651	\$ 16,048

\$ in millions	At December 31, 2023			
	Contractual Years to Maturity			Total
	<1	1-5	5-15	
Loans, net of ACL	\$ 1,974	\$ 2,564	\$ 2,580	\$ 7,118
Lending commitments	3,564	685	549	4,798
Total exposure	\$ 5,538	\$ 3,249	\$ 3,129	\$ 11,916

Event-driven loans and lending commitments are associated with certain underwritings and/or syndications to finance a specific transaction, such as merger, acquisition, recapitalization or project finance activities. Balances may fluctuate as such lending is related to transactions that vary in timing and size from period to period.

Institutional Securities Loans and Lending Commitments Held for Investment

\$ in millions	At December 31, 2024		
	Loans	Lending Commitments	Total
Corporate	\$ 6,889	\$ 105,824	\$ 112,713
Secured lending facilities	48,842	20,971	69,813
Commercial real estate	8,412	1,249	9,661
Securities-based lending and Other	2,876	1,504	4,380
Total, before ACL	\$ 67,019	\$ 129,548	\$ 196,567
ACL	\$ (730)	\$ (640)	\$ (1,370)

\$ in millions	At December 31, 2023		
	Loans	Lending Commitments	Total
Corporate	\$ 6,758	\$ 91,752	\$ 98,510
Secured lending facilities	39,498	15,589	55,087
Commercial real estate	8,678	266	8,944
Securities-based lending and Other	2,818	915	3,733
Total, before ACL	\$ 57,752	\$ 108,522	\$ 166,274
ACL	\$ (874)	\$ (533)	\$ (1,407)

Institutional Securities Commercial Real Estate Loans and Lending Commitments

By Region

\$ in millions	At December 31, 2024			At December 31, 2023		
	Loans ¹	LC ¹	Total	Loans ¹	LC ¹	Total
Americas	\$ 5,066	\$ 820	\$ 5,886	\$ 5,410	\$ 289	\$ 5,699
EMEA	3,806	522	4,328	3,127	56	3,183
Asia	467	13	480	485	—	485
Total	\$ 9,339	\$ 1,355	\$ 10,694	\$ 9,022	\$ 345	\$ 9,367

By Property Type

\$ in millions	At December 31, 2024			At December 31, 2023		
	Loans ¹	LC ¹	Total	Loans ¹	LC ¹	Total
Office	\$ 2,846	\$ 109	\$ 2,955	\$ 3,310	\$ 186	\$ 3,496
Industrial	2,610	125	2,735	2,435	5	2,440
Multifamily	2,042	80	2,122	1,715	74	1,789
Retail	1,105	971	2,076	842	7	849
Hotel	736	70	806	718	73	791
Other	—	—	—	2	—	2
Total	\$ 9,339	\$ 1,355	\$ 10,694	\$ 9,022	\$ 345	\$ 9,367

LC—Lending Commitments

1. Amounts include HFI, HFS and FVO loans and lending commitments. HFI loans are presented net of ACL.

The current economic environment and changes in business and consumer behavior have adversely impacted commercial real estate borrowers due to pressure from higher interest rates, tenant lease renewals, and elevated refinancing risks for loans with near-term maturities, among other issues. While we continue to actively monitor all our loan portfolios, the commercial real estate sector remains under heightened focus given the sector’s sensitivity to economic and secular factors, credit conditions, and difficulties specific to certain property types, most notably office.

As of December 31, 2024 and December 31, 2023, our lending against commercial real estate (“CRE”) properties within the Institutional Securities business segment totaled \$10.7 billion and \$9.4 billion, respectively. This represents

Risk Disclosures

4.4% and 4.5%, respectively, of total exposure reflected in the Institutional Securities Loans and Lending Commitments table above. Those CRE loans are originated for experienced sponsors and are generally secured by specific institutional CRE properties. In many cases, loans are subsequently syndicated or securitized on a full or partial basis, reducing our ongoing exposure.

In addition to the amounts included in the table above, we provide certain secured lending facilities which are typically collateralized by pooled CRE mortgage loans and are included in Secured lending facilities in the Institutional Securities Loans and Lending Commitments Held for Investment table above. These secured lending facilities benefit from structural protections including cross-collateralization and diversification across property types.

Institutional Securities Allowance for Credit Losses—Loans and Lending Commitments

\$ in millions	Year Ended December 31, 2024				
	Corporate	Secured Lending Facilities	CRE	SBL and Other	Total
ACL—Loans					
Beginning balance	\$ 241	\$ 153	\$ 463	\$ 17	\$ 874
Gross charge-offs	(39)	(11)	(165)	—	(215)
Recoveries	—	—	4	1	5
Net (charge-offs)/ recoveries	(39)	(11)	(161)	1	(210)
Provision (release)	2	1	77	1	81
Other	(4)	(3)	(6)	(2)	(15)
Ending balance	\$ 200	\$ 140	\$ 373	\$ 17	\$ 730
ACL—Lending commitments					
Beginning balance	\$ 431	\$ 70	\$ 26	\$ 6	\$ 533
Provision (release)	86	19	16	—	121
Other	(10)	(1)	(2)	(1)	(14)
Ending balance	\$ 507	\$ 88	\$ 40	\$ 5	\$ 640
Total ending balance	\$ 707	\$ 228	\$ 413	\$ 22	\$ 1,370

Institutional Securities HFI Loans—Ratios of Allowance for Credit Losses to Balance before Allowance

	At December 31, 2024	At December 31, 2023
Corporate	2.9%	3.6%
Secured lending facilities	0.3%	0.4%
Commercial real estate	4.4%	5.3%
Securities-based lending and Other	0.6%	0.6%
Total Institutional Securities loans	1.1%	1.5%

Wealth Management Loans and Lending Commitments

\$ in millions	At December 31, 2024				
	Contractual Years to Maturity				Total
	<1	1-5	5-15	>15	
Securities-based lending and Other	\$ 82,788	\$ 8,944	\$ 1,024	\$ 145	\$ 92,901
Residential real estate	1	111	1,106	65,423	66,641
Total loans, net of ACL	\$ 82,789	\$ 9,055	\$ 2,130	\$ 65,568	\$ 159,542
Lending commitments	16,318	2,523	43	386	19,270
Total exposure	\$ 99,107	\$ 11,578	\$ 2,173	\$ 65,954	\$ 178,812

\$ in millions	At December 31, 2023				Total
	Contractual Years to Maturity				
	<1	1-5	5-15	>15	
Securities-based lending and Other	\$ 76,923	\$ 7,679	\$ 1,494	\$ 133	\$ 86,229
Residential real estate	1	91	1,255	58,950	60,297
Total loans, net of ACL	\$ 76,924	\$ 7,770	\$ 2,749	\$ 59,083	\$ 146,526
Lending commitments	16,312	2,937	19	344	19,612
Total exposure	\$ 93,236	\$ 10,707	\$ 2,768	\$ 59,427	\$ 166,138

The principal Wealth Management business segment lending activities include Securities-based lending and Residential real estate loans.

Securities-based lending allows clients to borrow money against the value of qualifying securities, generally for any purpose other than purchasing, trading or carrying securities or refinancing margin debt. We establish approved credit lines against qualifying securities and monitor limits daily and, pursuant to such guidelines, require customers to deposit additional collateral, or reduce debt positions, when necessary. These credit lines are primarily uncommitted loan facilities, as we reserve the right not to make any advances or may terminate these credit lines at any time. Factors considered in the review of these loans include, but are not limited to, the loan amount, the client's credit profile, the degree of leverage, collateral diversification, price volatility and liquidity of the collateral. Other loans primarily include tailored lending, which typically consist of bespoke lending arrangements provided to ultra-high net worth clients. Securities-based lending and Other loans are generally secured by various types of eligible collateral, including marketable securities, private investments, commercial real estate and other financial assets.

Residential real estate loans consist of first- and second-lien mortgages, including HELOCs. Our underwriting policy is designed to ensure that all borrowers pass an assessment of capacity and willingness to pay, which includes an analysis utilizing industry standard credit scoring models (e.g., FICO scores), debt-to-income ratios and assets of the borrower. Mortgage borrowers are required to maintain adequate insurance in accordance with loan terms. LTV ratios are determined based on independent third-party property appraisals and valuations, and security lien positions are established through title and ownership reports. The vast majority of mortgage loans, including HELOCs, are held for investment in the Wealth Management business segment's loan portfolio.

Risk Disclosures

Wealth Management Commercial Real Estate Loans and Lending Commitments by Property Type

\$ in millions	At December 31, 2024			At December 31, 2023		
	Loans ¹	LC ¹	Total	Loans ¹	LC ¹	Total
Retail	\$ 2,293	\$ —	\$ 2,293	\$ 2,180	\$ 3	\$ 2,183
Multifamily	1,928	261	2,189	1,891	159	2,050
Office	1,951	11	1,962	1,736	16	1,752
Industrial	456	—	456	454	—	454
Hotel	442	—	442	400	—	400
Other	309	—	309	253	—	253
Total	\$ 7,379	\$ 272	\$ 7,651	\$ 6,914	\$ 178	\$ 7,092

LC—Lending Commitments

1. Amounts include HFI loans and lending commitments. HFI loans are presented net of ACL.

As of December 31, 2024 and December 31, 2023, our direct lending against CRE properties totaled \$7.7 billion and \$7.1 billion, respectively, within the Wealth Management business segment. This represents 4.3% and 4.3%, respectively, of total exposure reflected in the Wealth Management Loans and Lending Commitments table above, primarily included within Securities-based lending and Other loans. Such loans are originated through our private banking platform, are both secured and generally benefiting from full or partial guarantees from high or ultra-high net worth clients, which partially reduce associated credit risk. At both December 31, 2024 and December 31, 2023, greater than 95% of the CRE loans balance in the Wealth Management business segment received guarantees. During 2024, there were charge-offs of Wealth Management commercial real estate loans of \$25 million, mainly in the office sector. All of our lending against CRE properties within Wealth Management are in the Americas region.

Wealth Management Allowance for Credit Losses—Loans and Lending Commitments

\$ in millions	Year Ended December 31, 2024		
	Residential Real Estate	SBL and Other	Total
ACL—Loans			
Beginning balance	\$ 100	\$ 195	\$ 295
Gross charge-offs	—	(27)	(27)
Recoveries	—	2	2
Net (charge-offs)/recoveries	—	(25)	(25)
Provision (release)	(3)	68	65
Other	—	1	1
Ending balance	\$ 97	\$ 239	\$ 336
ACL—Lending commitments			
Beginning balance	\$ 4	\$ 14	\$ 18
Provision (release)	—	(3)	(3)
Other	—	1	1
Ending balance	\$ 4	\$ 12	\$ 16
Total ending balance	\$ 101	\$ 251	\$ 352

As of December 31, 2024 and December 31, 2023, more than 75% of Wealth Management residential real estate loans were to borrowers with “Exceptional” or “Very Good” FICO scores (i.e., exceeding 740). Additionally, Wealth Management’s securities-based lending portfolio remains well-collateralized and subject to daily client margining,

which includes requiring customers to deposit additional collateral or reduce debt positions, when necessary.

Customer and Other Receivables

Margin and Other Lending

\$ in millions	At December 31, 2024	At December 31, 2023
Institutional Securities	\$ 27,612	\$ 24,208
Wealth Management	28,270	21,436
Total	\$ 55,882	\$ 45,644

The Institutional Securities and Wealth Management business segments provide margin lending arrangements that allow customers to borrow against the value of qualifying securities, primarily for the purpose of purchasing additional securities, as well as to collateralize short positions. Institutional Securities primarily includes margin loans in the Equity Financing business. Wealth Management includes margin loans as well as non-purpose securities-based lending on non-bank entities. Amounts may fluctuate from period to period as overall client balances change as a result of market levels, client positioning and leverage.

Credit exposures arising from margin lending activities are generally mitigated by their short-term nature, the value of collateral held and our right to call for additional margin when collateral values decline. However, we could incur losses in the event that the customer fails to meet margin calls and collateral values decline below the loan amount. This risk is elevated in loans backed by collateral pools with significant concentrations in individual issuers or securities with similar risk characteristics. For a further discussion, see “Risk Factors—Credit Risk” herein.

Employee Loans

For information on employee loans and related ACL, see Note 9 to the financial statements.

Derivatives

Fair Value of OTC Derivative Assets

\$ in millions	At December 31, 2024					
	Counterparty Credit Rating ¹					Total
	AAA	AA	A	BBB	NIG	
Less than 1 year	\$1,711	\$17,625	\$50,643	\$22,643	\$ 9,793	\$102,415
1-3 years	541	6,249	19,068	10,248	6,095	42,201
3-5 years	973	7,308	9,821	5,631	3,750	27,483
Over 5 years	3,330	25,406	49,469	28,206	6,398	112,809
Total, gross	\$6,555	\$56,588	\$129,001	\$66,728	\$26,036	\$284,908
Counterparty netting	(3,320)	(44,604)	(98,598)	(47,132)	(14,691)	(208,345)
Cash and securities collateral	(2,559)	(10,632)	(25,568)	(13,729)	(5,558)	(58,046)
Total, net	\$ 676	\$ 1,352	\$ 4,835	\$ 5,867	\$ 5,787	\$ 18,517

\$ in millions	At December 31, 2023					
	Counterparty Credit Rating ¹					Total
	AAA	AA	A	BBB	NIG	
Less than 1 year	\$2,013	\$16,885	\$37,517	\$25,529	\$10,084	\$ 92,028
1-3 years	1,013	7,274	18,451	12,757	7,360	46,855
3-5 years	504	8,897	8,814	5,989	3,825	28,029
Over 5 years	3,955	29,511	50,512	28,003	6,597	118,578
Total, gross	\$7,485	\$62,567	\$115,294	\$72,278	\$27,866	\$285,490
Counterparty netting	(3,691)	(48,821)	(86,826)	(53,178)	(15,888)	(208,404)
Cash and securities collateral	(2,709)	(10,704)	(25,921)	(13,025)	(5,554)	(57,913)
Total, net	\$1,085	\$ 3,042	\$ 2,547	\$ 6,075	\$ 6,424	\$ 19,173

\$ in millions	At December 31, 2024	At December 31, 2023
Industry		
Financials	\$ 5,678	\$ 7,215
Utilities	3,733	4,267
Industrials	1,315	937
Consumer discretionary	1,046	684
Energy	987	533
Communications services	914	841
Regional governments	799	1,319
Consumer staples	734	515
Sovereign governments	683	262
Information technology	634	677
Materials	409	383
Healthcare	353	468
Insurance	207	156
Not-for-profit organizations	94	166
Real estate	91	167
Other	840	583
Total	\$ 18,517	\$ 19,173

1. Counterparty credit ratings are determined internally by the CRM.

We are exposed to credit risk as a dealer in OTC derivatives. Credit risk with respect to derivative instruments arises from the possibility that a counterparty may fail to perform according to the terms of the contract. For a description of our risk mitigation strategies, see “Credit Risk—Risk Mitigation” herein.

Credit Derivatives

A credit derivative is a contract between a seller and buyer of protection against the risk of a credit event occurring on one

or more debt obligations issued by a specified reference entity. The buyer typically pays a periodic premium over the life of the contract and is protected for the period. If a credit event occurs, the seller is required to make payment to the beneficiary based on the terms of the credit derivative contract. Credit events, as defined in the contract, may be one or more of the following defined events: bankruptcy, dissolution or insolvency of the referenced entity, failure to pay, obligation acceleration, repudiation, payment moratorium and restructuring.

We trade in a variety of credit derivatives and may either purchase or write protection on a single name or portfolio of referenced entities. In transactions referencing a portfolio of entities or securities, protection may be limited to a tranche of exposure or a single name within the portfolio. We are an active market maker in the credit derivatives markets. As a market maker, we work to earn a bid-offer spread on client flow business and manage any residual credit or correlation risk on a portfolio basis. Further, we use credit derivatives to manage our exposure to residential and commercial mortgage loans and corporate lending exposures. The effectiveness of our CDS protection as a hedge of our exposures may vary depending upon a number of factors, including the contractual terms of the CDS.

We actively monitor our counterparty credit risk related to credit derivatives. A majority of our counterparties are composed of banks, broker-dealers, insurance and other financial institutions. Contracts with these counterparties may include provisions related to counterparty rating downgrades, which may result in the counterparty posting additional collateral to us. As with all derivative contracts, we consider counterparty credit risk in the valuation of our positions and recognize CVAs as appropriate within Trading revenues in the income statement.

For additional credit exposure information on our credit derivative portfolio, see Note 6 to the financial statements.

Country Risk

Country risk exposure is the risk that events in, or that affect, a foreign country (any country other than the U.S.) might adversely affect us. We actively manage country risk exposure through a comprehensive risk management framework that combines credit and other market fundamentals and allows us to effectively identify, monitor and limit country risk.

Our obligor credit evaluation process defines country of risk as the country that has the largest economic impact on the obligor and may be different from the obligor's country of jurisdiction. Examples where this applies may include corporations that are incorporated in one country but that derive the bulk of their revenue from another and mutual funds incorporated in one jurisdiction but with a concentration of investments in a different country.

In addition to the direct country risk reflected in the “Top 10 Non-U.S. Country Exposures” table below, we also have indirect country exposure, for example, from collateral received in secured financing transactions or from providing client clearing services. These indirect exposures are managed through the credit and market risk frameworks.

We conduct periodic stress testing that seeks to measure the impact on our credit and market exposures of shocks stemming from negative economic or political scenarios including changes to global trade policies and the implementation of tariffs. When deemed appropriate by our risk managers, the stress test scenarios include possible contagion effects and second order risks. This analysis, and results of the stress tests, may result in the amendment of limits or exposure mitigation.

Our sovereign exposures consist of financial contracts and obligations entered into with sovereign and local governments. Our non-sovereign exposures consist of financial contracts and obligations entered into primarily with corporations and financial institutions.

Index credit derivatives are included in the following “Top 10 Non-U.S. Country Exposures” table. Each reference entity within an index is allocated to that reference entity’s country of risk. Index exposures are allocated to the underlying reference entities in proportion to the notional weighting of each reference entity in the index, adjusted for any fair value receivable or payable for that reference entity. Where credit risk crosses multiple jurisdictions, for example, a CDS purchased from an issuer in a specific country that references bonds issued by an entity in a different country, the fair value of the CDS is reflected in the Net counterparty exposure row based on the country of the CDS issuer. Further, the notional amount of the CDS adjusted for the fair value of the receivable or payable is reflected in the Net inventory row based on the country of the underlying reference entity.

Top 10 Non-U.S. Country Exposures

	At December 31, 2024				
<i>\$ in millions</i>	United Kingdom	France	Japan	Brazil	Germany
Sovereign					
Net inventory ¹	\$ 934	\$ 1,530	\$ 2,048	\$ 4,845	\$ (4,924)
Net counterparty exposure ²	3	—	30	—	92
Exposure before hedges	937	1,530	2,078	4,845	(4,832)
Hedges ³	(55)	(147)	(165)	(141)	(242)
Net exposure	\$ 882	\$ 1,383	\$ 1,913	\$ 4,704	\$ (5,074)
Non-sovereign					
Net inventory ¹	\$ 1,523	\$ 868	\$ 589	\$ 83	\$ 1,011
Net counterparty exposure ²	7,788	3,396	3,551	575	3,368
Loans	7,875	449	160	139	1,702
Lending commitments	9,334	3,024	199	426	6,087
Exposure before hedges	26,520	7,737	4,499	1,223	12,168
Hedges ³	(1,691)	(1,534)	(214)	(35)	(1,746)
Net exposure	\$ 24,829	\$ 6,203	\$ 4,285	\$ 1,188	\$ 10,422
Total net exposure	\$ 25,711	\$ 7,586	\$ 6,198	\$ 5,892	\$ 5,348
<i>\$ in millions</i>	Korea	Spain	Australia	Canada	Italy
Sovereign					
Net inventory ¹	\$ 3,149	\$ 194	\$ (419)	\$ (58)	\$ 1,703
Net counterparty exposure ²	250	—	86	22	23
Exposure before hedges	3,399	194	(333)	(36)	1,726
Hedges ³	(35)	(8)	—	—	(29)
Net exposure	\$ 3,364	\$ 186	\$ (333)	\$ (36)	\$ 1,697
Non-sovereign					
Net inventory ¹	\$ 118	\$ 551	\$ 365	\$ 607	\$ 281
Net counterparty exposure ²	842	479	701	1,106	753
Loans	—	1,855	1,958	461	39
Lending commitments	—	1,167	1,472	1,717	1,062
Exposure before hedges	960	4,052	4,496	3,891	2,135
Hedges ³	(35)	(272)	(448)	(154)	(348)
Net exposure	\$ 925	\$ 3,780	\$ 4,048	\$ 3,737	\$ 1,787
Total net exposure	\$ 4,289	\$ 3,966	\$ 3,715	\$ 3,701	\$ 3,484

1. Net inventory represents exposure to both long and short single-name and index positions (i.e., bonds and equities at fair value and CDS based on a notional amount assuming zero recovery adjusted for the fair value of any receivable or payable).
2. Net counterparty exposure (e.g., repurchase transactions, securities lending and OTC derivatives) is net of the benefit of collateral received and also is net by counterparty when legally enforceable master netting agreements are in place. For more information, see “Additional Information—Top 10 Non-U.S. Country Exposures” herein.
3. Amounts represent net CDS hedges (purchased and sold) on net counterparty exposure and lending executed by trading desks responsible for hedging counterparty and lending credit risk exposures. Amounts are based on the CDS notional amount assuming zero recovery adjusted for the fair value of any receivable or payable. For further description of the contractual terms for purchased credit protection and whether they may limit the effectiveness of our hedges, see “Quantitative and Qualitative Disclosures about Risk—Credit Risk—Derivatives” herein.

Additional Information—Top 10 Non-U.S. Country Exposures

Collateral Held Against Net Counterparty Exposure¹

<i>\$ in millions</i>		At December 31, 2024
Country of Risk	Collateral²	
United Kingdom	U.K., U.S., and France	\$ 8,618
Japan	Japan and U.S.	5,637
Other	Italy, U.S., and Korea	18,366

1. The benefit of collateral received is reflected in the Top 10 Non-U.S. Country Exposures at December 31, 2024.
2. Primarily consists of cash and government obligations of the countries listed.

Operational Risk

Operational risk refers to the risk of loss, or of damage to our reputation, resulting from inadequate or failed processes or systems, human factors (e.g., inappropriate or unlawful conduct) or external events (e.g., cyberattacks or third-party vulnerabilities) that may manifest as, for example, loss of information, business disruption, theft and fraud, legal and compliance risks, or damage to physical assets. We may incur operational risk across the full scope of our business activities, including revenue-generating activities and support and control groups (e.g., IT and trade processing).

We have established an operational risk framework to identify, measure, monitor and control risk across the Firm. Effective operational risk management is essential to reducing the impact of operational risk incidents and mitigating legal, regulatory and reputational risks. The framework is continually evolving to account for changes in the Firm and to respond to the changing regulatory and business environment.

We have implemented operational risk data and assessment systems to monitor and analyze internal and external operational risk events, to assess business environment and internal control factors, and to perform scenario analysis. The collected data elements are incorporated in the operational risk capital model. The model encompasses both quantitative and qualitative elements. Internal loss data and scenario analysis results are direct inputs to the capital model, while external operational incidents, business environment and internal control factors are evaluated as part of the scenario analysis process.

In addition, we employ a variety of risk processes and mitigants to manage our operational risk exposures. These include a governance framework, a comprehensive risk management program and insurance. Operational risks and associated risk exposures are assessed relative to the risk appetite reviewed and confirmed by the Board and are prioritized accordingly.

The breadth and range of operational risk are such that the types of mitigating activities are wide-ranging. Examples of activities include: continuous enhancement of defenses against cyberattacks, use of legal agreements and contracts to

transfer and/or limit operational risk exposures, due diligence, implementation of enhanced policies and procedures, technology change management controls, exception management processing controls, and segregation of duties.

Primary responsibility for the management of operational risk is with the business segments, the control groups and the business managers therein. The business managers maintain processes and controls designed to identify, assess, manage, mitigate and report operational risk. Each of the business segments has a designated operational risk coordinator. The operational risk coordinator regularly reviews operational risk issues and reports to our senior management within each business. Each control group also has a designated operational risk coordinator and a forum for discussing operational risk matters with our senior management. Oversight of operational risk is provided by the Non-Financial Risk Committee, legal entity risk committees, regional risk committees and senior management. In the event of a merger, joint venture, divestiture, reorganization, or creation of a new legal entity, a new product, or a business activity, operational risks are considered, and any necessary changes in processes or controls are implemented.

The Operational Risk Department and Non-Financial Risk Cyber, Technology, and Information Security Department (“NFR CTIS”) provide independent oversight of operational risk and assess, measure and monitor operational risk against appetite. The Operational Risk Department and NFR CTIS work with the divisions and control groups to embed a transparent, consistent and comprehensive framework for managing operational risk within each area and across the Firm.

The NFR CTIS scope includes oversight of technology risk, cybersecurity risk, information security risk and compliance. The Operational Risk Department scope includes oversight of the fraud risk management and prevention program, and third-party risk management (supplier and affiliate risk oversight and assessment), among others.

Cybersecurity

Risk management and strategy

We, our businesses, and the broader financial services industry face an increasingly complex and evolving threat environment. We have made and continue to make substantial investments in cybersecurity and fraud prevention technology, and employ experienced talent to lead our Cybersecurity and Information Security organizations and program under the oversight of the Board and the BOTC. See “Risk Factors—Operational Risk” for information on risks to the Firm from cybersecurity threats.

As part of the ERM framework, we have implemented and maintain a program to assess, identify and manage risks arising from the cybersecurity threats confronting the Firm (“Cybersecurity Program”). Our Cybersecurity Program helps

Risk Disclosures

protect our clients, customers, employees, property, products, services and reputation by seeking to preserve the confidentiality, integrity and availability of information, enable the secure delivery of financial services, and protect the business and the safe operation of our technology systems. We continually adjust our Cybersecurity Program to address the evolving cybersecurity threat landscape and comply with extensive legal and regulatory expectations.

Processes for assessing, identifying and managing material risks from cybersecurity threats

Our Cybersecurity Program takes into account industry best practices and addresses risks from cybersecurity threats to our network, infrastructure, computing environment and the third parties that we rely on. We periodically assess the design of our cybersecurity controls against the Cyber Risk Institute Cyber Profile, which is based on the National Institute of Standards and Technology (“NIST”) Cybersecurity Framework for Improving Critical Infrastructure Cybersecurity, as well as global cybersecurity regulations, and develop improvements to those controls in response to that assessment. Our Cybersecurity Program also includes cybersecurity and information security policies, procedures and technologies that are designed to address regulatory requirements and protect our clients’, employees’ and own data against unauthorized disclosure, modification and misuse. These policies, procedures and technologies cover a broad range of areas, including: identification of internal and external threats, access control, data security, protective controls, detection of malicious or unauthorized activity, incident response and recovery planning. See also “Firm Resilience” herein for a discussion of our resilience program that is designed to mitigate the impacts of cybersecurity events and other risks.

Our threat intelligence function within the Cybersecurity Program actively engages in private and public information-sharing communities and leverages both commercial and proprietary products to collect a wide variety of industry and governmental information regarding the latest cybersecurity threats, which informs our cybersecurity risk assessments and strategy. This information is also provided to an internal cyber threat detection team, which develops and implements strategies designed to defend against these cybersecurity threats across our environment. Our vulnerability management team, as well as NFR, also reviews external cybersecurity incidents that may be relevant to the Firm to further inform the design of our Cybersecurity Program. To assess the efficacy of our controls and defenses designed to mitigate cybersecurity risk, we utilize internal and external testing, including penetration testing and red team engagements. The results of these assessments are used to strengthen the Cybersecurity Program. Additionally, we maintain a global training program covering cybersecurity risks and requirements, including heightened security training to specialized employees, and conduct regular phishing email simulations for our employees and consultants as preventative measures.

When a threat is identified in our environment, our incident response team follows an incident response plan to evaluate the impact to the Firm and coordinate appropriate remediation. If warranted, the cybersecurity incident will be reported to applicable regulators, authorities, impacted clients or counterparties, as appropriate. The Firm’s cybersecurity incident response and remediation processes, including assessing materiality and reporting requirements, are reviewed through tabletop exercises.

Our processes are designed to help oversee, identify and mitigate cybersecurity risks associated with our use of third-party vendors. We maintain a third-party risk management program that evaluates and responds to cybersecurity risks at our third-party vendors. Prior to engaging third-party vendors to provide services to the Firm, we assess the third-party vendors’ cybersecurity programs to identify cybersecurity risks arising from the use of those vendors’ services. Once onboarded, third-party vendors’ cybersecurity programs are subject to risk-based oversight, which may include security questionnaires, submission of independent security audit reports or a Firm audit of the third-party vendor’s security program, and, with limited exceptions, third-party vendors are required to meet our minimum cybersecurity standards. Where a third-party vendor cannot meet those standards, its services, and the residual risk to the Firm, are subject to review, challenge and escalation through our risk management processes and ERM committees, which may ultimately result in requesting increased security measures or ceasing engagement with such third-party vendor.

Our Cybersecurity Program is regularly assessed by IAD through various assurance activities, with the results reported to the BAC and the BOTC. Annually, key elements of the Cybersecurity Program are subject to review by an independent third party, the results of which, including opportunities identified for improvement and related remediation plans, are reviewed with the BOTC. Our Cybersecurity Program is also examined regularly by the Firm’s prudential and conduct regulators within the scope of their jurisdiction.

Governance

Management’s role in assessing and managing material risks from cybersecurity threats

Our Cybersecurity Program is operated and maintained by management, including the Chief Information Officer of Cyber, Data, Risk and Resilience (“CIO”) and the Chief Information Security Officer (“CISO”). These senior officers are responsible for assessing and managing the Firm’s cybersecurity risks. Our Cybersecurity Program strategy, which is set by the CISO and overseen by the Head of Cyber, Technology, and Information Security Non-Financial Risk (“Head of NFR CTIS”), is informed by various risk and control assessments, control testing, external assessments, threat intelligence, and public and private information sharing. Our Cybersecurity Program also includes processes

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for escalating and considering the materiality of incidents that impact the Firm, including escalation to senior management and the Board.

The members of management that lead our Cybersecurity Program and strategy have extensive experience in technology, cybersecurity and information security. The CIO has over 30 years of experience in various engineering, IT, operations and information security roles. The CISO has over 25 years of experience leading cybersecurity teams at financial institutions, including in the areas of IT strategy, risk management and information security. The Head of NFR CTIS has over 20 years of experience in technology, security and compliance roles, including experience in government security agencies.

Risk levels and mitigating measures are presented to and monitored by dedicated management-level cybersecurity risk committees. These committees include representatives from Firm management as well as business and control stakeholders who review, challenge and, where appropriate, consider exceptions to our policies and procedures. Significant cybersecurity risks are escalated from these committees to our Non-Financial Risk Committee. The CIO and the Head of NFR CTIS report on the status of our Cybersecurity Program, including significant cybersecurity risks; review metrics related to the program; and discuss the status of regulatory and remedial actions and incidents to the FRC, the BOTC and the Board, as appropriate. For more information regarding the Firm's ERM framework, see "Quantitative and Qualitative Disclosures about Risk—Risk Management."

Board of Directors' oversight of risks from cybersecurity threats

As discussed above, material cybersecurity risks are addressed by management-level ERM committees with escalation to the BOTC and Board, as appropriate. The BOTC has primary responsibility for assisting the Board in its oversight of significant operational risk exposures of the Firm and its business units, including IT, information security, fraud, third-party oversight, business disruption and resilience, and cybersecurity risks (including review of cybersecurity risks against established risk management methodologies) and the steps management has taken to monitor and control such exposures.

In accordance with its charter, the BOTC receives quarterly reports from (i) Technology, including the CIO or the CISO; (ii) Operations; and (iii) NFR. Such reporting includes updates on our Cybersecurity Program, risks from cybersecurity threats, our programs to address and mitigate the risks associated with the evolving cybersecurity threat environment, and NFR's assessment of cybersecurity risks. Senior officers in Technology and NFR also provide an annual report to the BOTC on the status of our broader information security program in compliance with the Gramm-Leach-Bliley Act, which includes a discussion of risks arising

from cybersecurity threats. At least annually, senior management representatives in Technology and NFR discuss the status of the Cybersecurity Program and key cybersecurity risks with the Board and, in accordance with the Board's Corporate Governance Policies, all Board members are invited to attend BOTC meetings and have access to meeting materials. The BOTC, which meets at least quarterly, also reviews and approves significant policies related to cybersecurity, receives an annual independent assessment of key aspects of our Cybersecurity Program from an independent third party and holds joint meetings with the BAC and BRC, as necessary and appropriate. The chair of the BOTC regularly discusses cybersecurity developments with senior management, including the senior officers mentioned above, and reports to the Board on cybersecurity risks and threats and other related matters.

Firm Resilience

The Firm's critical processes and businesses could be disrupted by events including cyberattacks, failure or loss of access to technology and/or associated data, military conflicts, acts of terror, natural disasters, severe weather events and infectious disease. The Firm maintains a Firmwide resilience program that is designed to provide for operational resilience and enable it to respond to and recover critical processes and supporting assets in the event of a disruption impacting our people, technology, facilities and third parties. The key elements of the Firm's resilience program include business continuity management, technology disaster recovery, third party resilience and key business service resilience. Resilience testing is performed both internally and with critical third parties to validate recovery capability in accordance with business requirements.

Third-Party Risk Management

In connection with our ongoing operations, we utilize the products and/or services of third parties, which we anticipate will continue and may increase in the future. These products and/or services include, for example, outsourced processing and support functions and other professional services. Our risk-based approach to managing exposure to our third parties includes the performance of due diligence, implementation of service-level and other contractual agreements, consideration of operational risks and ongoing monitoring of the performance of our third parties. We maintain and continue to enhance our third-party risk management program, which is designed to align with our risk tolerance and meet regulatory requirements. The program includes appropriate governance, policies, procedures and enabling technology. The third-party risk management program includes the adoption of appropriate risk management controls and practices throughout the third-party management life cycle to manage risk of service failure, risk of data loss and reputational risk, among others.

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Model Risk

Model risk is the potential for adverse consequences from decisions based on incorrect or misused model outputs. Model risk can lead to financial loss, poor business and strategic decision-making, noncompliance with applicable laws and/or regulations or damage to the Firm's reputation. The risk inherent in a model is a function of the materiality, complexity and uncertainty around inputs and assumptions.

Model risk is generated from the use of models impacting financial statements, regulatory filings, capital adequacy assessments and the formulation of strategy.

Sound model risk management is an integral part of our Risk Management Framework. The Model Risk Management Department (“MRM”) is a distinct department in Risk Management responsible for the oversight of model risk.

The MRM establishes a model risk tolerance in line with our risk appetite. The tolerance is based on an assessment of the materiality of the risk of financial loss or reputational damage due to errors in design, implementation and/or inappropriate use of models. The tolerance is monitored through model-specific and aggregate business-level assessments, which are based upon qualitative and quantitative factors.

The effective challenge of models consists of critical analysis by objective, informed parties who can identify model limitations and assumptions and drive appropriate changes. The MRM provides effective challenge of models, independently validates and approves models for use, annually recertifies models, periodically revalidates, identifies and tracks remediation plans for model limitations and reports on model risk metrics. The department also oversees the development of controls to support a complete and accurate Firmwide model inventory.

Liquidity Risk

Liquidity risk refers to the risk that we will be unable to finance our operations due to a loss of access to the capital markets or difficulty in liquidating our assets. Liquidity risk also encompasses our ability (or perceived ability) to meet our financial obligations without experiencing significant business disruption or reputational damage that may threaten our viability as a going concern. Liquidity risk also encompasses the associated funding risks triggered by the market or idiosyncratic stress events that may negatively affect our liquidity and may impact our ability to raise new funding or the cost of new funding. Generally, we incur liquidity and funding risk as a result of our trading, lending, investing and client facilitation activities.

Our Liquidity Risk Management Framework is critical to helping ensure that we maintain sufficient liquidity reserves and durable funding sources to meet our daily obligations and to withstand unanticipated stress events. The Liquidity Risk

Department is a distinct area in Risk Management responsible for the oversight and monitoring of liquidity risk. The Liquidity Risk Department ensures transparency of material liquidity and funding risks, compliance with established risk limits and escalation of risk concentrations to appropriate senior management.

To execute these responsibilities, the Liquidity Risk Department establishes limits in line with our risk appetite, identifies and analyzes emerging liquidity and funding risks to ensure such risks are appropriately mitigated, monitors and reports risk exposures against metrics and limits, and reviews the methodologies and assumptions underpinning our Liquidity Stress Tests to ensure sufficient liquidity and funding under a range of adverse scenarios.

The Treasury Department and applicable business units have primary responsibility for evaluating, monitoring and controlling the liquidity and funding risks arising from our business activities and for maintaining processes and controls to manage the key risks inherent in their respective areas. The Liquidity Risk Department coordinates with the Treasury Department and these business units to help ensure a consistent and comprehensive framework for managing liquidity and funding risk across the Firm. See also “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources” herein.

Legal, Regulatory and Compliance Risk

Legal, regulatory and compliance risk includes the risk of legal or regulatory sanctions, material financial loss, including fines, penalties, judgments, damages and/or settlements, limitations on our business, or loss to reputation that we may suffer as a result of failure to comply with laws, regulations, rules, related self-regulatory organization standards and codes of conduct applicable to our business activities. This risk also includes contractual and commercial risk, such as the risk that a counterparty’s performance obligations will be unenforceable. It also includes compliance with AML, terrorist financing, and anti-corruption rules and regulations. We are generally subject to extensive regulation in the different jurisdictions in which we conduct our business (see also “Business—Supervision and Regulation” and “Risk Factors”).

We have established procedures based on legal and regulatory requirements on a worldwide basis that are designed to facilitate compliance with applicable statutory and regulatory requirements and to require that our policies relating to business conduct, ethics and practices are followed globally. In addition, we have established procedures to mitigate the risk that a counterparty’s performance obligations will be unenforceable, including consideration of counterparty legal authority and capacity, adequacy of legal documentation, the permissibility of a transaction under applicable law and whether applicable bankruptcy or insolvency laws limit or alter contractual remedies. The heightened legal and

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regulatory focus on the financial services and banking industries globally presents a continuing business challenge for us.

Climate Risk

Climate change manifests as physical and transition risks. The physical risks of climate change include harm to people and property arising from acute climate-related events, such as floods, hurricanes, heatwaves, droughts and wildfires, and chronic, longer-term shifts in climate patterns, such as higher global average temperatures, rising sea levels and long-term droughts. The transition risk of climate change include policy, legal, technology and market changes. Examples of these transition risks include changes in consumer and business sentiment, related technologies, shareholder preferences and any additional regulatory and legislative requirements, including increased disclosure or regulation of carbon emissions.

Climate risk, which is not expected to have a significant effect on our consolidated results of operations or financial condition in the near term, is an overarching risk that can impact other categories of risk. Physical risk may lead to increased credit risk by diminishing borrowers' repayment capacity or impacting the value of collateral. In addition, physical risk could pose increased operational risk to our facilities and people. The impacts of transition risk may lead to and amplify credit or liquidity risk by reducing our customers' operating income or the value of their assets as well as exposing us to reputational, compliance and/or litigation risk due to increased legal and regulatory scrutiny or negative public sentiment.

As climate risk is interconnected with other risk types, we have developed and continue to enhance processes to embed climate risk considerations into our risk management practices and governance structures. The BRC oversees Firmwide risks, which include climate risk, and, as part of its oversight, receives updates on our risk management approach to climate risk, including our approaches toward scenario analysis and integration of climate risk into our existing risk management processes. Our climate risk management efforts are overseen by the Climate Risk Committee, which is co-chaired by our Chief Risk Officer and Chief Sustainability Officer and shapes our approach to managing climate-related risks in line with our overall risk framework.

Financial Statements and Supplementary Data

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Morgan Stanley:

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Morgan Stanley and subsidiaries (the “Firm”) as of December 31, 2024 and 2023, the related consolidated income statements, comprehensive income statements, cash flow statements and statements of changes in total equity for each of the three years in the period ended December 31, 2024, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Firm as of December 31, 2024 and 2023, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2024, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Firm’s internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 21, 2025, expressed an unqualified opinion on the Firm’s internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Firm’s management. Our responsibility is to express an opinion on the Firm’s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Firm in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Valuation of Level 3 Financial Assets and Liabilities Carried at Fair Value on a Recurring Basis and Level 3 Loans Held for Sale — Refer to Note 4 to the financial statements

Critical Audit Matter Description

The Firm’s trading and financing activities result in the Firm carrying material financial instruments having limited price transparency. These financial instruments can span a broad array of product types and generally include derivatives, securities, loans, and borrowings. As described in Note 4, these Level 3 financial assets and liabilities carried at fair value on a recurring basis approximate \$6.8 billion and \$4.1 billion, respectively, and the Level 3 loans held for sale approximate \$6.1 billion at December 31, 2024. Unlike financial instruments whose inputs are readily observable and, therefore, more easily independently corroborated, the valuation of these financial instruments is inherently subjective and often involves the use of unobservable inputs and proprietary valuation models whose underlying algorithms and valuation methodologies are complex.

We identified the valuation of Level 3 financial assets and liabilities carried at fair value on a recurring basis and Level 3 loans held for sale as a critical audit matter given the Firm uses complex valuation models and/or valuation inputs that are not observable in the marketplace to determine the respective carrying values. Performing our audit procedures to evaluate the appropriateness of these models and inputs involved a high degree of auditor judgment, professionals with specialized skills and knowledge, and an increased extent of testing.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the valuation of Level 3 financial assets and liabilities carried at fair value on a recurring basis and Level 3 loans held for sale included the following, among others:

- We tested the design and operating effectiveness of the Firm’s model review and price verification controls. The Firm maintains these internal controls to assess the appropriateness

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of its valuation methodologies and the relevant inputs and assumptions.

- We independently evaluated the appropriateness of management's valuation methodologies, for selected financial instruments, including the input assumptions, considering the expected assumptions of other market participants and external data when available.
- We developed independent estimates for selected financial instruments, using externally sourced inputs and independent valuation models, and used such estimates to further evaluate management's estimates. For certain of our selected financial instruments, this included a comparison to the Firm's estimates for similar transactions and an evaluation of the Firm's assumptions inclusive of the inputs, as applicable.
- We tested the revenues arising from the trade date fair value estimates for selected structured transactions for which we developed independent fair value estimates to test the valuation inputs and assumptions used by the Firm and evaluated whether these methods were consistent with the Firm's relevant valuation policies.
- We assessed the consistency by which management has applied significant and unobservable valuation assumptions used in developing the Firm's estimates.
- We performed a retrospective assessment of management's fair value estimates for certain of our selected financial instruments, for which there were events or transactions occurring after the valuation date. We did so by comparing management's estimates to the relevant evidence provided by such events or transactions, as applicable.

/s/ Deloitte & Touche LLP

New York, New York

February 21, 2025

We have served as the Firm's auditor since 1997.

Consolidated Income Statement

Morgan Stanley

<i>in millions, except per share data</i>	2024	2023	2022
Revenues			
Investment banking	\$ 6,705	\$ 4,948	\$ 5,599
Trading	16,763	15,263	13,928
Investments	824	573	15
Commissions and fees	5,094	4,537	4,938
Asset management	22,499	19,617	19,578
Other	1,265	975	283
Total non-interest revenues	53,150	45,913	44,341
Interest income ¹	54,135	45,849	21,595
Interest expense ¹	45,524	37,619	12,268
Net interest	8,611	8,230	9,327
Net revenues	61,761	54,143	53,668
Provision for credit losses	264	532	280
Non-interest expenses			
Compensation and benefits	26,178	24,558	23,053
Brokerage, clearing and exchange fees	4,140	3,476	3,458
Information processing and communications	4,088	3,775	3,493
Professional services	2,901	3,058	3,070
Occupancy and equipment	1,905	1,895	1,729
Marketing and business development	965	898	905
Other	3,724	4,138	3,591
Total non-interest expenses	43,901	41,798	39,299
Income before provision for income taxes	17,596	11,813	14,089
Provision for income taxes	4,067	2,583	2,910
Net income	\$ 13,529	\$ 9,230	\$ 11,179
Net income applicable to noncontrolling interests	139	143	150
Net income applicable to Morgan Stanley	\$ 13,390	\$ 9,087	\$ 11,029
Preferred stock dividends	590	557	489
Earnings applicable to Morgan Stanley common shareholders	\$ 12,800	\$ 8,530	\$ 10,540
Earnings per common share			
Basic	\$ 8.04	\$ 5.24	\$ 6.23
Diluted	7.95	5.18	6.15
Average common shares outstanding			
Basic	1,591	1,628	1,691
Diluted	1,611	1,646	1,713

1. 2023 amounts have been adjusted to conform with the current period presentation. See Note 2 for additional information.

Consolidated Comprehensive Income Statement

<i>\$ in millions</i>	2024	2023	2022
Net income	\$ 13,529	\$ 9,230	\$ 11,179
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	(422)	(20)	(337)
Change in net unrealized gains (losses) on available-for-sale securities	521	1,098	(4,437)
Pension and other	12	(87)	43
Change in net debt valuation adjustment	(534)	(1,290)	1,502
Net change in cash flow hedges	(51)	20	(4)
Total other comprehensive income (loss)	\$ (474)	\$ (279)	\$ (3,233)
Comprehensive income	\$ 13,055	\$ 8,951	\$ 7,946
Net income applicable to noncontrolling interests	139	143	150
Other comprehensive income (loss) applicable to noncontrolling interests	(81)	(111)	(82)
Comprehensive income applicable to Morgan Stanley	\$ 12,997	\$ 8,919	\$ 7,878

Consolidated Balance Sheet

Morgan Stanley

	At December 31, 2024	At December 31, 2023
<i>\$ in millions, except share data</i>		
Assets		
Cash and cash equivalents	\$ 105,386	\$ 89,232
Trading assets at fair value (\$148,945 and \$162,698 were pledged to various parties)	331,884	367,074
Investment securities:		
Available-for-sale at fair value (amortized cost of \$101,960 and \$92,149)	98,608	88,113
Held-to-maturity (fair value of \$51,203 and \$57,453)	61,071	66,694
Securities purchased under agreements to resell (includes \$— and \$7 at fair value)	118,565	110,740
Securities borrowed	123,859	121,091
Customer and other receivables	86,158	80,105
Loans:		
Held for investment (net of allowance for credit losses of \$1,066 and \$1,169)	225,834	203,385
Held for sale	12,319	15,255
Goodwill	16,706	16,707
Intangible assets (net of accumulated amortization of \$5,445 and \$4,847)	6,453	7,055
Other assets	28,228	28,242
Total assets	\$ 1,215,071	\$ 1,193,693
Liabilities		
Deposits (includes \$6,499 and \$6,472 at fair value)	\$ 376,007	\$ 351,804
Trading liabilities at fair value	153,764	151,513
Securities sold under agreements to repurchase (includes \$956 and \$1,020 at fair value)	50,067	62,651
Securities loaned	15,226	15,057
Other secured financings (includes \$14,088 and \$9,899 at fair value)	21,602	12,655
Customer and other payables	175,938	208,148
Other liabilities and accrued expenses	28,220	28,151
Borrowings (includes \$103,332 and \$93,900 at fair value)	288,819	263,732
Total liabilities	1,109,643	1,093,711
Commitments and contingent liabilities (see Note 14)		
Equity		
Morgan Stanley shareholders' equity:		
Preferred stock	9,750	8,750
Common stock, \$0.01 par value:		
Shares authorized: 3,500,000,000; Shares issued: 2,038,893,979; Shares outstanding: 1,606,653,706 and 1,626,828,437	20	20
Additional paid-in capital	30,179	29,832
Retained earnings	104,989	97,996
Employee stock trusts	5,103	5,314
Accumulated other comprehensive income (loss)	(6,814)	(6,421)
Common stock held in treasury at cost, \$0.01 par value (432,240,273 and 412,065,542 shares)	(33,613)	(31,139)
Common stock issued to employee stock trusts	(5,103)	(5,314)
Total Morgan Stanley shareholders' equity	104,511	99,038
Noncontrolling interests	917	944
Total equity	105,428	99,982
Total liabilities and equity	\$ 1,215,071	\$ 1,193,693

Consolidated Statement of Changes in Total Equity

Morgan Stanley

<i>\$ in millions</i>	2024	2023	2022
Preferred stock			
Beginning balance	\$ 8,750	\$ 8,750	\$ 7,750
Issuance of preferred stock	1,000	—	1,000
Ending balance	9,750	8,750	8,750
Common stock			
Beginning and ending balance	20	20	20
Additional paid-in capital			
Beginning balance	29,832	29,339	28,841
Share-based award activity	352	493	503
Issuance of preferred stock	(5)	—	(6)
Other net increases (decreases)	—	—	1
Ending balance	30,179	29,832	29,339
Retained earnings			
Beginning balance	97,996	94,862	89,432
Cumulative adjustment related to the adoption of accounting standard update ¹	(60)	—	—
Net income applicable to Morgan Stanley	13,390	9,087	11,029
Preferred stock dividends ²	(590)	(557)	(489)
Common stock dividends ²	(5,745)	(5,393)	(5,108)
Other net increases (decreases)	(2)	(3)	(2)
Ending balance	104,989	97,996	94,862
Employee stock trusts			
Beginning balance	5,314	4,881	3,955
Share-based award activity	(211)	433	926
Ending balance	5,103	5,314	4,881
Accumulated other comprehensive income (loss)			
Beginning balance	(6,421)	(6,253)	(3,102)
Net change in Accumulated other comprehensive income (loss)	(393)	(168)	(3,151)
Ending balance	(6,814)	(6,421)	(6,253)
Common stock held in treasury at cost			
Beginning balance	(31,139)	(26,577)	(17,500)
Share-based award activity	1,704	1,654	1,794
Repurchases of common stock and employee tax withholdings	(4,178)	(6,216)	(10,871)
Ending balance	(33,613)	(31,139)	(26,577)
Common stock issued to employee stock trusts			
Beginning balance	(5,314)	(4,881)	(3,955)
Share-based award activity	211	(433)	(926)
Ending balance	(5,103)	(5,314)	(4,881)
Noncontrolling interests			
Beginning balance	944	1,090	1,157
Net income applicable to noncontrolling interests	139	143	150
Net change in Accumulated other comprehensive income (loss) applicable to noncontrolling interests	(81)	(111)	(82)
Other net increases (decreases)	(85)	(178)	(135)
Ending balance	917	944	1,090
Total equity	\$ 105,428	\$ 99,982	\$ 101,231

1. The Firm adopted the *Investments - Tax Credit Structures* accounting standard update on January 1, 2024. Refer to Note 2 for further information.

2. See Note 17 for information regarding dividends per share for each class of stock.

Consolidated Cash Flow Statement

Morgan Stanley

<i>\$ in millions</i>	2024	2023	2022
Cash flows from operating activities			
Net income	\$ 13,529	\$ 9,230	\$ 11,179
Adjustments to reconcile net income to net cash provided by (used for) operating activities:			
Deferred income taxes	152	(463)	(849)
Stock-based compensation expense	1,622	1,709	1,875
Depreciation and amortization	5,161	4,256	3,998
Provision for credit losses	264	532	280
Other operating adjustments	4	308	618
Changes in assets and liabilities:			
Trading assets, net of Trading liabilities	34,496	(61,026)	(39,422)
Securities borrowed	(2,768)	12,283	(3,661)
Securities loaned	169	(622)	3,380
Customer and other receivables and other assets	(5,308)	602	14,664
Customer and other payables and other liabilities	(25,550)	(3,629)	(4,897)
Securities purchased under agreements to resell	(7,825)	3,167	6,092
Securities sold under agreements to repurchase	(12,584)	117	346
Net cash provided by (used for) operating activities	1,362	(33,536)	(6,397)
Cash flows from investing activities			
Proceeds from (payments for):			
Other assets—Premises, equipment and software	(3,462)	(3,412)	(3,078)
Changes in loans, net	(22,618)	(4,059)	(23,652)
AFS securities:			
Purchases	(35,327)	(23,078)	(24,602)
Proceeds from sales	5,728	5,929	22,014
Proceeds from paydowns and maturities	21,089	14,316	13,435
HTM securities:			
Purchases	(3,860)	—	(5,231)
Proceeds from paydowns and maturities	10,475	8,143	9,829
Other investing activities	(1,485)	(923)	(347)
Net cash provided by (used for) investing activities	(29,460)	(3,084)	(11,632)
Cash flows from financing activities			
Net proceeds from (payments for):			
Other secured financings	4,358	796	(884)
Deposits	23,955	(5,075)	1,659
Issuance of preferred stock, net of issuance costs	995	—	994
Proceeds from issuance of Borrowings	108,365	78,424	72,460
Payments for:			
Borrowings	(80,230)	(64,805)	(34,898)
Repurchases of common stock and employee tax withholdings	(4,199)	(6,178)	(10,871)
Cash dividends	(6,138)	(5,763)	(5,401)
Other financing activities	(350)	(125)	(345)
Net cash provided by (used for) financing activities	46,756	(2,726)	22,714
Effect of exchange rate changes on cash and cash equivalents	(2,504)	451	(4,283)
Net increase (decrease) in cash and cash equivalents	16,154	(38,895)	402
Cash and cash equivalents, at beginning of period	89,232	128,127	127,725
Cash and cash equivalents, at end of period	\$ 105,386	\$ 89,232	\$ 128,127
Supplemental Disclosure of Cash Flow Information			
Cash payments for:			
Interest	\$ 46,359	\$ 41,940	\$ 9,819
Income taxes, net of refunds	1,885	2,035	4,147

1. Introduction and Basis of Presentation

The Firm

Morgan Stanley is a global financial services firm that maintains significant market positions in each of its business segments—Institutional Securities, Wealth Management and Investment Management. Morgan Stanley, through its subsidiaries and affiliates, provides a wide variety of products and services to a large and diversified group of clients and customers, including corporations, governments, financial institutions and individuals. Unless the context otherwise requires, the terms “Morgan Stanley” or the “Firm” mean Morgan Stanley (the “Parent Company”) together with its consolidated subsidiaries. See the “Glossary of Common Terms and Acronyms” for the definition of certain terms and acronyms used throughout this Form 10-K.

A description of the clients and principal products and services of each of the Firm’s business segments is as follows:

Institutional Securities provides a variety of products and services to corporations, governments, financial institutions and ultra-high net worth clients. Investment Banking services consist of capital raising and financial advisory services, including the underwriting of debt, equity securities and other products, as well as advice on mergers and acquisitions, restructurings and project finance. Our Equity and Fixed Income businesses include sales, financing, prime brokerage, market-making, Asia wealth management services and certain business-related investments. Lending activities include originating corporate loans and commercial real estate loans, providing secured lending facilities, and extending securities-based and other financing to clients. Other activities include research.

Wealth Management provides a comprehensive array of financial services and solutions to individual investors and small to medium-sized businesses and institutions. Wealth Management covers: financial advisor-led brokerage, custody, administrative and investment advisory services; self-directed brokerage services; financial and wealth planning services; workplace services, including stock plan administration; securities-based lending, residential and commercial real estate loans and other lending products; banking; and retirement plan services.

Investment Management provides a broad range of investment strategies and products that span geographies, asset classes, and public and private markets to a diverse group of clients across institutional and intermediary channels. Strategies and products, which are offered through a variety of investment vehicles, include equity, fixed income, alternatives and solutions, and liquidity and overlay services. Institutional clients include defined benefit/defined contribution plans, foundations, endowments, government entities, sovereign wealth funds,

insurance companies, third-party fund sponsors and corporations. Individual clients are generally served through intermediaries, including affiliated and non-affiliated distributors.

Basis of Financial Information

The financial statements are prepared in accordance with U.S. GAAP, which requires the Firm to make estimates and assumptions regarding the valuations of certain financial instruments, the valuations of goodwill and intangible assets, the outcome of legal and tax matters, deferred tax assets, ACL, and other matters that affect its financial statements and related disclosures. The Firm believes that the estimates utilized in the preparation of its financial statements are prudent and reasonable. Actual results could differ materially from these estimates.

The Notes are an integral part of the Firm’s financial statements. The Firm has evaluated subsequent events for adjustment to or disclosure in these financial statements through the date of this report and has not identified any recordable or disclosable events not otherwise reported in these financial statements or the notes thereto.

Consolidation

The financial statements include the accounts of the Firm, its wholly owned subsidiaries and other entities in which the Firm has a controlling financial interest, including certain VIEs (see Note 15). Intercompany balances and transactions have been eliminated. For consolidated subsidiaries that are not wholly owned, the third-party holdings of equity interests are referred to as Noncontrolling interests. The net income attributable to Noncontrolling interests for such subsidiaries is presented as Net income applicable to noncontrolling interests in the income statement. The portion of shareholders’ equity that is attributable to Noncontrolling interests for such subsidiaries is presented as Noncontrolling interests, a component of Total equity, in the balance sheet.

For entities where the total equity investment at risk is sufficient to enable the entity to finance its activities without additional subordinated financial support and the equity holders bear the residual economic risks and returns of the entity and have the power to direct the activities of the entity that most significantly affect its economic performance, the Firm consolidates those entities it controls either through a majority voting interest or otherwise. For VIEs (i.e., entities that do not meet the aforementioned criteria), the Firm consolidates those entities where it has the power to make the decisions that most significantly affect the economic performance of the VIE and has the obligation to absorb losses or the right to receive benefits that could potentially be significant to the VIE.

For investments in entities in which the Firm does not have a controlling financial interest but has significant influence over operating and financial decisions, it applies the equity method

Notes to Consolidated Financial Statements

of accounting with net gains and losses recorded within Other revenues (see Note 11) unless the Firm has elected to measure the investment at fair value, in which case net gains and losses are recorded within Investments revenues (see Note 5).

Equity and partnership interests held by entities qualifying for accounting purposes as investment companies are carried at fair value.

The Firm's significant regulated U.S. and international subsidiaries include:

- Morgan Stanley & Co. LLC ("MS&Co."),
- Morgan Stanley Smith Barney LLC ("MSSB"),
- Morgan Stanley Europe SE ("MSESE"),
- Morgan Stanley & Co. International plc ("MSIP"),
- Morgan Stanley Capital Services LLC ("MSCS"),
- Morgan Stanley Capital Group Inc. ("MSCG"),
- Morgan Stanley MUFG Securities Co., Ltd. ("MSMS"),
- Morgan Stanley Bank, N.A. ("MSBNA") and
- Morgan Stanley Private Bank, National Association ("MSPBNA").

For further information on the Firm's significant regulated U.S. and international subsidiaries, see Note 16.

2. Significant Accounting Policies

Presentation Changes in 2024

In the first quarter of 2024, the Firm implemented certain presentation changes which resulted in a decrease to both interest income and interest expense of \$4,432 million for the year ended December 31, 2023, and no effect on net interest income, with the entire impact to the Firm recorded within the Institutional Securities segment. These changes further aligned the accounting treatment between the balance sheet and the related interest income or expense, primarily by offsetting interest income and expense for certain prime brokerage-related customer receivables and payables that are currently accounted for as a single unit of account on the balance sheet. The current and previous presentation of these interest income and interest expense amounts are acceptable and the change does not represent a change in accounting principle. These changes were applied retrospectively to the consolidated income statement for 2023 and accordingly, 2023 amounts were adjusted to conform with the current presentation.

Revenue Recognition

Revenues are recognized when the promised goods or services are delivered to our customers in an amount that is based on the consideration the Firm expects to receive in exchange for those goods or services when such amounts are not probable of significant reversal.

Investment Banking

Revenues from investment banking activities consist of revenues earned from underwriting, primarily equity and fixed income securities and loan syndications, and advisory fees, primarily for mergers, acquisitions and restructurings.

Underwriting revenues are generally recognized on trade date if there is no uncertainty or contingency related to the amount to be paid. Underwriting costs are deferred and recognized in the relevant non-interest expenses line items when the related underwriting revenues are recorded.

Advisory fees are recognized as advice is provided to the client, based on the estimated progress of work and when revenues are not probable of a significant reversal. Advisory costs are recognized as incurred in the relevant non-interest expenses line items, including those reimbursed.

Commissions and Fees

Commission and fee revenues generally result from transaction-based arrangements in which the client is charged a fee for the execution of transactions. Such revenues primarily arise from transactions in equity securities; services related to sales and trading activities; and sales of mutual funds, alternative funds, futures, insurance products and options, as well as revenues from order flow payments for directing customer orders to broker-dealers, exchanges and market centers for execution. Commission and fee revenues are recognized on trade date when the performance obligation is satisfied.

Asset Management Revenues

Asset management, distribution and administration fees are generally based on related asset levels, such as the AUM of a customer's account or the net asset value of a fund. These fees are generally recognized when services are performed and the value of the assets is known. Management fees are reduced by estimated fee waivers and expense caps, if any, provided to the customer.

Performance-based fees not in the form of carried interest are recorded when the annual performance target is met and the revenues are not probable of a significant reversal.

Sales commissions paid by the Firm in connection with the sale of certain classes of shares of its open-end mutual fund products are accounted for as deferred commission assets and amortized to Other expenses over the expected life of the contract. The Firm periodically tests deferred commission assets for recoverability based on cash flows expected to be received in future periods. Other asset management and distribution costs are recognized as incurred in the relevant non-interest expenses line items.

Notes to Consolidated Financial Statements

Investments Revenues—Carried Interest

The Firm is entitled to receive performance-based fees in the form of carried interest when the return in certain funds exceeds specified performance targets. When the Firm earns carried interest from funds as specified performance thresholds are met, that carried interest and any related general or limited partner interest are accounted for under the equity method of accounting and measured based on the Firm's claim on the NAV of the fund at the reporting date, taking into account the distribution terms applicable to the interest held. Such items are reflected within Investments revenues.

See Note 22 for information regarding the net cumulative unrealized amount of performance-based fee revenues at risk of reversal. See Note 14 for information regarding general partner guarantees, which include potential obligations to return performance fee distributions previously received.

Other Items

Revenues from certain commodities-related contracts are recognized in Trading revenues when the Firm has transferred control over the promised goods or services to the customer.

Receivables from contracts with customers are recognized in Customer and other receivables in the balance sheet when the underlying performance obligations have been satisfied and the Firm has the right per the contract to bill the customer. Contract assets are recognized in Other assets when the Firm has satisfied its performance obligations but customer payment is conditional on something other than the passage of time. Contract liabilities are recognized in Other liabilities and accrued expenses when the Firm has collected payment from a customer based on the terms of the contract but the underlying performance obligations are not yet satisfied.

For contracts with a term of less than one year, incremental costs to obtain the contract are expensed as incurred. Revenues are not discounted when payment is expected within one year.

The Firm generally presents, net within revenues, taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction and collected by the Firm from a customer.

Cash and Cash Equivalents

Cash and cash equivalents consist of Cash and due from banks and interest-bearing deposits with banks. Cash equivalents are highly liquid investments with remaining maturities of three months or less from the acquisition date that are readily convertible to cash and are not held for trading purposes.

Cash and cash equivalents also include Restricted cash, such as cash segregated in compliance with federal or other regulations, including minimum reserve requirements set by the Federal Reserve Bank and other central banks, and the Firm's initial margin deposited with clearing organizations.

Fair Value of Financial Instruments

Instruments within Trading assets and Trading liabilities are measured at fair value, either as required or allowed by accounting guidance. These financial instruments primarily represent the Firm's trading and investment positions and include both cash and derivative products. In addition, securities classified as Available-for-Sale ("AFS") are measured at fair value.

Gains and losses on instruments carried at fair value are reflected in Trading revenues, Investments revenues or Investment banking revenues in the income statement, except for gains and losses related to AFS securities (see "AFS Investment Securities" section herein and Note 7) and derivatives accounted for as hedges, as well as economic derivative hedges associated with certain held-for-sale and held-for-investment corporate loans and lending commitments (see "Hedge Accounting" and "Other Hedges" herein and Note 6).

Interest income and interest expense are recorded within the income statement depending on the nature of the instrument and related market conventions. When interest is included as a component of the instruments' fair value, interest is recorded within Trading revenues or Investments revenues. Otherwise, it is recorded within Interest income or Interest expense. Dividend income is recorded in Trading revenues or Investments revenues depending on the business activity.

The fair value of OTC financial instruments, including derivative contracts related to financial instruments and commodities, is presented in the accompanying balance sheet on a net-by-counterparty basis, when appropriate. Additionally, the Firm nets the fair value of cash collateral paid or received against the fair value amounts recognized for net derivative positions executed with the same counterparty under the same master netting agreement.

Fair Value Option

The Firm has elected to measure certain eligible instruments at fair value, including Securities purchased under agreements to resell, Loans and lending commitments, equity method investments and certain other assets, Deposits, Securities sold under agreements to repurchase, Other secured financings and Borrowings.

Fair Value Measurement—Definition and Hierarchy

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (i.e., the "exit price") in

Notes to Consolidated Financial Statements

an orderly transaction between market participants at the measurement date.

Fair value is a market-based measure considered from the perspective of a market participant rather than an entity-specific measure. Therefore, even when market assumptions are not readily available, assumptions are set to reflect those that the Firm believes market participants would use in pricing the asset or liability at the measurement date. Where the Firm manages a group of financial assets, financial liabilities, and nonfinancial items accounted for as derivatives on the basis of its net exposure to either market risks or credit risk, the Firm measures the fair value of that group of financial instruments consistently with how market participants would price the net risk exposure at the measurement date.

In determining fair value, the Firm uses various valuation approaches and establishes a hierarchy for inputs used in measuring fair value that requires the most observable inputs be used when available.

Observable inputs are inputs that market participants would use in pricing the asset or liability that were developed based on market data obtained from sources independent of the Firm. Unobservable inputs are inputs that reflect assumptions the Firm believes other market participants would use in pricing the asset or liability that are developed based on the best information available in the circumstances. The fair value hierarchy is broken down into three levels based on the observability of inputs as follows, with Level 1 being the highest and Level 3 being the lowest level:

Level 1. Valuations based on quoted prices in active markets that the Firm has the ability to access for identical assets or liabilities. Valuation adjustments, block discounts and discounts for entity-specific and contractual restrictions that would not transfer to market participants are not applied to Level 1 instruments. Since valuations are based on quoted prices that are readily and regularly available in an active market, valuation of these products does not entail a significant degree of judgment.

Level 2. Valuations based on quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in inactive markets, significant market inputs other than quoted prices that are observable for the asset or liability, or market-corroborated inputs.

Level 3. Valuations based on inputs that are unobservable and significant to the overall fair value measurement.

The availability of observable inputs can vary from product to product and is affected by a wide variety of factors, including the type of product, whether the product is new and not yet established in the marketplace, the liquidity of markets and other characteristics particular to the product. To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination

of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Firm in determining fair value is greatest for instruments categorized in Level 3 of the fair value hierarchy.

The Firm considers prices and inputs that are current as of the measurement date, including during periods of market dislocation. In periods of market dislocation, the observability of prices and inputs may be reduced for many instruments. This condition could cause an instrument to be reclassified from Level 1 to Level 2 or from Level 2 to Level 3 of the fair value hierarchy.

In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, the total fair value amount is disclosed in the level appropriate for the lowest level input that is significant to the total fair value of the asset or liability.

Valuation Techniques

Many cash instruments and OTC derivative contracts have bid and ask prices that can be observed in the marketplace. Bid prices reflect the highest price that a party is willing to pay for an asset. Ask prices represent the lowest price that a party is willing to accept for an asset. The Firm carries positions at the point within the bid-ask range that meets its best estimate of fair value. For offsetting positions in the same financial instrument, the same price within the bid-ask spread is used to measure both the long and short positions.

Fair value for many cash instruments and OTC derivative contracts is derived using pricing models. Pricing models take into account the contract terms, as well as multiple inputs, including, where applicable, commodity prices, equity prices, interest rate yield curves, credit curves, correlation, creditworthiness of the counterparty, creditworthiness of the Firm, option volatility and currency rates.

Where appropriate, valuation adjustments are made to account for various factors such as liquidity risk (bid-ask adjustments), credit quality, model uncertainty, and concentration risk and funding in order to arrive at fair value. Adjustments for liquidity risk adjust model-derived mid-market amounts of Level 2 and Level 3 financial instruments for the bid-mid or mid-ask spread required to properly reflect the exit price of a risk position. Bid-mid and mid-ask spreads are marked to levels observed in trade activity, broker quotes or other external third-party data. Where these spreads are unobservable for the particular position in question, spreads are derived from observable levels of similar positions.

The Firm applies credit-related valuation adjustments to its Borrowings for which the fair value option was elected and to OTC derivatives. The Firm considers the impact of changes in its own credit spreads based upon observations of the secondary bond market spreads when measuring the fair value for Borrowings.

Notes to Consolidated Financial Statements

For OTC derivatives, which are recognized in Trading assets at fair value in the balance sheet, the impact of changes in both the Firm's and the counterparty's credit rating is considered when measuring fair value. In determining the expected exposure, the Firm simulates the distribution of the future exposure to a counterparty, then applies market-based default probabilities to the future exposure, leveraging external third-party CDS spread data. Where CDS spread data are unavailable for a specific counterparty, bond market spreads, CDS spread data based on the counterparty's credit rating or CDS spread data that reference a comparable counterparty may be utilized. The Firm also considers collateral held and legally enforceable master netting agreements that mitigate its exposure to each counterparty.

Adjustments for model uncertainty are taken for positions whose underlying models are reliant on significant inputs that are neither directly nor indirectly observable, hence requiring reliance on established theoretical concepts in their derivation. These adjustments are derived by making assessments of the possible degree of variability using statistical approaches and market-based information where possible.

The Firm may apply concentration adjustments to certain of its OTC derivative portfolios to reflect the additional cost of closing out a particularly large risk exposure. Where possible, these adjustments are based on observable market information, but in many instances, significant judgment is required to estimate the costs of closing out concentrated risk exposures due to the lack of liquidity in the marketplace.

The Firm applies an FVA in the fair value measurements of OTC uncollateralized or partially collateralized derivatives and in collateralized derivatives where the terms of the agreement do not permit the reuse of the collateral received. In general, FVA reflects a market funding risk premium inherent in the noted derivative instruments. The methodology for measuring FVA leverages the Firm's existing credit-related valuation adjustment calculation methodologies, which apply to both assets and liabilities.

See Note 4 for a description of valuation techniques applied to the major categories of financial instruments measured at fair value.

Assets and Liabilities Measured at Fair Value on a Non-recurring Basis

Certain of the Firm's assets and liabilities are measured at fair value on a non-recurring basis. The Firm incurs losses or gains for any adjustments of these assets or liabilities to fair value.

For assets and liabilities measured at fair value on a non-recurring basis, fair value is determined by using various valuation approaches. The same hierarchy for inputs as described above, which requires that observable inputs be

used when available, is used in measuring fair value for these items.

For further information on financial assets and liabilities that are measured at fair value on a recurring and non-recurring basis, see Note 4.

Offsetting of Derivative Instruments

In connection with its derivative activities, the Firm generally enters into master netting agreements and collateral agreements with its counterparties. These agreements provide the Firm with the right, in the event of a default by the counterparty, to net a counterparty's rights and obligations under the agreement and to liquidate and set off cash collateral against any net amount owed by the counterparty. Derivatives with enforceable master netting agreements are reported net of cash collateral received and posted.

However, in certain circumstances, the Firm may not have such an agreement in place; the relevant insolvency regime may not support the enforceability of the master netting agreement or collateral agreement; or the Firm may not have sought legal advice to support the enforceability of the agreement. In cases where the Firm has not determined an agreement to be enforceable, the related amounts are not offset (see Note 6).

The Firm's policy is generally to receive cash and/or securities posted as collateral (with rights of rehypothecation) in connection with derivative transactions, irrespective of the enforceability determination regarding the master netting and collateral agreement. In certain cases, the Firm may agree for such collateral to be posted by the counterparty to a third-party custodian under a control agreement that enables it to take control of such collateral in the event of a counterparty default. The enforceability of the master netting agreement is taken into account in the Firm's risk management practices and application of counterparty credit limits.

For information related to offsetting of derivatives, see Note 6.

Hedge Accounting

The Firm applies hedge accounting using various derivative financial instruments for the following types of hedges: hedges of changes in the fair value of assets and liabilities due to the risk being hedged (fair value hedges); hedges of variability in forecasted cash flows from floating-rate assets due to contractually specified interest rates (cash flow hedges) and hedges of net investments in foreign operations whose functional currency is different from the reporting currency of the Parent Company (net investment hedges). These financial instruments are included within Trading assets—Derivative and other contracts or Trading liabilities—Derivative and other contracts in the balance sheet. For hedges where hedge accounting is being applied, the Firm performs effectiveness testing and other procedures. The change in the fair value of the designated portion of the hedging instrument should be

Notes to Consolidated Financial Statements

highly correlated, between 80 and 125 percent of the change in the fair value, cash flows, or carrying value (due to translation gains or losses) of the hedged item attributable to the risk being hedged. The Firm considers the impact of valuation adjustments related to counterparty credit spreads and its own credit spreads to determine whether they would cause the hedging relationship to be ineffective.

Fair Value Hedges—Interest Rate Risk

The Firm's designated fair value hedges consist of interest rate swaps designated as hedges of changes in the benchmark interest rate of certain fixed-rate AFS securities and senior borrowings. The Firm also designates interest rate swaps as fair value hedges of changes in the benchmark interest rate of certain fixed rate deposits. The Firm is permitted to hedge the full, or part of the contractual term of the hedged instrument. The Firm uses regression analysis to perform an ongoing prospective and retrospective assessment of the effectiveness of these hedging relationships. For qualifying fair value hedges of benchmark interest rates, the change in the fair value of the derivative, offset by the change in the fair value attributable to the change in the benchmark interest rate risk of the hedged asset (liability), is recognized in earnings each period as a component of Interest income (expense). For AFS securities, the change in fair value of the hedged item due to changes other than the risk being hedged will continue to be reported in OCI. When a derivative is de-designated as a hedge, any basis adjustment remaining on the hedged asset (liability) is amortized to Interest income (expense) over the remaining life of the asset (liability) using the effective interest method. For certain AFS securities, the Firm also applies the portfolio layer method of hedge accounting, which permits prepayable and non-prepayable assets to be included in the portfolio and allows more of the portfolio to be hedged. Further, the portfolio layer method of accounting requires that basis adjustments are maintained at the portfolio level and not allocated to individual items until certain de-designation events occur. The amount designated as hedged is the sum of the notional amounts of all outstanding layers in each portfolio. Refer to Note 6 and Note 7 to the financial statements for additional information on portfolio layer method hedging.

Net Investment Hedges

The Firm uses forward foreign exchange contracts to manage a portion of the currency exposure relating to its net investments in foreign operations. To the extent that the notional amounts of the hedging instruments equal the portion of the investments being hedged and the underlying exchange rate of the derivative hedging instrument is the same as the exchange rate between the functional currency of the investee and the intermediate parent entity's functional currency, it is considered to be perfectly effective. The gain or loss from revaluing qualifying hedges of net investments in foreign operations at the spot rate is reported within AOCI. The forward points on the hedging instruments are excluded from hedge effectiveness testing and changes in the fair value of

this excluded component are recorded currently in Interest income.

Cash Flow Hedges—Interest Rate Risk

The Firm's designated cash flow hedges consist of interest rate derivatives designated as hedges of variability in forecasted cash flows from floating-rate assets due to changes in the contractually specified interest rates. The Firm uses regression analysis to perform an ongoing prospective and retrospective assessment of the effectiveness of these hedging relationships.

The objective of this strategy is to hedge the risk of changes in the hedged item's cash flows attributable to changes in the contractually specified interest rate. For qualifying cash flow hedges of contractually specified interest rates, changes in the fair value of the derivative are recorded in OCI and subsequently reclassified to earnings in the same periods when the hedged item affects earnings. If cash flow hedge accounting is discontinued, AOCI is released into earnings immediately if the cash flow of the hedged item is probable of not occurring. Otherwise the amount in AOCI is released into earnings as the forecasted transaction affects earnings.

Other Hedges

In addition to hedges that are designated and qualify for hedge accounting, the Firm uses derivatives to economically hedge credit risk associated with certain held-for-sale and held-for-investment corporate loans and lending commitments, and the related gains and losses are reported within Other revenues in the income statement.

For further information on derivative instruments and hedging activities, see Note 6.

AFS Investment Securities

AFS securities are reported at fair value in the balance sheet. Interest income, including amortization of premiums and accretion of discounts, is included in Interest income in the income statement. Unrealized gains are recorded in OCI, and unrealized losses are recorded either in OCI or in Other revenues as described below.

AFS securities in an unrealized loss position are first evaluated to determine whether there is an intent to sell or it is more likely than not the Firm will be required to sell before recovery of the amortized cost basis. If so, the amortized cost basis is written down to the fair value of the security such that the entire unrealized loss is recognized in Other revenues, and any previously established ACL is written off.

For all other AFS securities in an unrealized loss position, any portion of unrealized losses representing a credit loss is recognized in Other revenues and as an increase to the ACL for AFS securities, with the remainder of unrealized losses recognized in OCI. A credit loss exists if the Firm does not expect to recover the amortized cost basis of the security.

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When considering whether a credit loss exists, the Firm considers relevant information, including:

- guarantees (implicit or explicit) by the U.S. government;
- the extent to which the fair value has been less than the amortized cost basis;
- adverse conditions specifically related to the security, its industry or geographic area;
- changes in the financial condition of the issuer of the security or, in the case of an asset-backed debt security, changes in the financial condition of the underlying loan obligors;
- the payment structure of the debt security and the likelihood of the issuer being able to make payments that increase in the future;
- failure of the issuer of the security to make scheduled interest or principal payments;
- the current rating and any changes to the rating of the security by a rating agency.

If a credit loss exists, the Firm measures the credit loss as the difference between the present value of cash flows expected to be collected (discounted at the implicit interest rate at acquisition of the security or discounted at the effective yield for securities that incorporate changes in prepayment assumptions) and the amortized cost basis of the security. Changes in prepayment assumptions alone are not considered to result in a credit loss. When estimating the present value of expected cash flows, information utilized includes the remaining payment terms of the security, prepayment speeds, financial condition of the issuer, expected defaults and the value of any underlying collateral.

Presentation of ACL and Provision for Credit Losses

	ACL	Provision for Credit Losses
AFS securities	Contra investment securities	Other revenue

Nonaccrual & ACL Charge-offs on AFS Securities

AFS securities follow the same nonaccrual and charge-off guidance as discussed in “Allowance for Credit Losses” herein.

HTM Securities

HTM securities are reported at amortized cost, net of any ACL, in the balance sheet. Refer to “Allowance for Credit Losses” herein for guidance on the ACL determination. Interest income, including amortization of premiums and accretion of discounts on HTM securities, is included in Interest income in the income statement.

Loans

The Firm accounts for loans based on the following categories: loans held for investment; loans held for sale; and loans at fair value.

Nonaccrual and ACL Charge-offs on Loans

All loan categories described below follow the same nonaccrual guidance and loans held for investment follow the charge-off guidance as discussed in “Allowance for Credit Losses” herein.

Loans Held for Investment

Loans held for investment are reported at amortized cost, which consists of the outstanding principle balance adjusted for any charge-offs, the allowance for credit losses, any unamortized deferred fees or costs for originated loans, and any unamortized premiums or discounts for purchased loans.

Interest Income. Interest income on performing loans held for investment is accrued and recognized as interest income at the contractual rate of interest. Purchase price discounts or premiums, as well as net deferred loan fees or costs, are amortized into interest income over the life of the loan to produce a level rate of return.

Lending Commitments. The Firm records the liability and related expense for the credit exposure related to commitments to fund loans. The liability is recorded in Other liabilities and accrued expenses in the balance sheet and the expense is recorded in the Provision for credit losses in the income statement. For more information regarding loan commitments, standby letters of credit and financial guarantees, see Note 14.

For more information regarding allowance for credit losses, refer to “Allowance for Credit Losses” herein.

Loans Held for Sale

Loans held for sale are measured at the lower of amortized cost or fair value, with valuation changes recorded in Other revenues. The Firm determines the valuation allowance on an individual loan basis, except for residential mortgage loans for which the valuation allowance is determined at the loan product level. Any decreases in fair value below the initial carrying amount and any recoveries in fair value up to the initial carrying amount are recorded in Other revenues. Increases in fair value above initial carrying value are not recognized.

Interest Income. Interest income on loans held for sale is accrued and recognized based on the contractual rate of interest. Loan origination fees or costs and purchase price discounts or premiums are deferred as an adjustment to the loan’s cost basis until the related loan is sold and, as such, are included in the periodic determination of the lower of cost or fair value adjustments and the gain or loss recognized at the time of sale.

Lending Commitments. Commitments to fund mortgage loans held for sale are derivatives and are reported in Trading assets or Trading liabilities in the balance sheet and in Trading revenues in the income statement.

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For commitments to fund non-mortgage loans, the Firm records the liability and related expense for the fair value exposure below cost of such commitments in Other liabilities and accrued expenses in the balance sheet with an offset to Other revenues in the income statement.

Because loans and lending commitments held for sale are recognized at the lower of cost or fair value, the allowance for credit losses and charge-off policies do not apply to these loans.

Loans at Fair Value

Loans for which the fair value option is elected are carried at fair value and included in Trading assets in the balance sheet, with changes in fair value recognized in earnings. For further information on loans carried at fair value and classified as Trading assets, see Note 4.

Lending Commitments. The Firm records the liability and related expense for the fair value exposure related to commitments to fund loans that will be measured at fair value. The liability is recorded in Trading liabilities in the balance sheet, and the expense is recorded in Trading revenues in the income statement.

Because such loans and lending commitments are reported at fair value, the allowance for credit losses and charge-off policies do not apply to these loans.

For further information on loans, see Note 9. For more information regarding loan commitments, standby letters of credit and financial guarantees, see Note 14.

Allowance for Credit Losses

The ACL for financial instruments measured at amortized cost and certain off-balance sheet exposures (e.g., HFI loans and lending commitments, HTM securities, customer and other receivables and certain guarantees) represents an estimate of expected credit losses over the entire life of the financial instrument.

Factors considered by management when determining the ACL include payment status, fair value of collateral and expected payments of principal and interest, as well as internal or external information relating to past events, current conditions, and reasonable and supportable forecasts. The Firm uses three forecasts that include assumptions about certain macroeconomic variables, including, but not limited to, U.S. gross domestic product (“GDP”), equity market indices and unemployment rates, as well as commercial real estate and home price indices. At the conclusion of the Firm’s reasonable and supportable forecast period of 13 quarters, there is a gradual reversion back to historical averages.

The ACL is measured on a collective basis when similar risk characteristics exist for multiple instruments, considering all available information relevant to assessing the collectability of cash flows. Generally, the Firm applies a probability of

default/loss given default model for instruments that are collectively assessed, under which the ACL is calculated as the product of probability of default, loss given default and exposure at default. These parameters are forecast for each collective group of assets using a scenario-based statistical model.

If the instrument does not share similar risk characteristics with other instruments, including when it is probable that the Firm will be unable to collect the full payment of principal and interest on the instrument when due, the ACL is measured on an individual basis. The Firm generally applies a discounted cash flow method for instruments that are individually assessed.

The Firm may also elect to use an approach that considers the fair value of the collateral when measuring the ACL if the loan is collateral dependent (i.e., repayment of the loan is expected to be provided substantially by the sale or operation of the underlying collateral and the borrower is experiencing financial difficulty).

Additionally, the Firm can elect to use an approach to measure the ACL that considers the fair value of collateral where the borrower is required to, and reasonably expected to, continually adjust and replenish the amount of collateral securing the instrument to reflect changes in the fair value of such collateral. The Firm has elected to use this approach for certain securities-based loans, margin loans, securities purchased under agreements to resell and securities borrowed.

Credit quality indicators considered in developing the ACL include:

- Corporate loans, secured lending facilities, commercial real estate loans and securities, and other loans: Internal risk ratings developed by the CRM that are refreshed at least annually, and more frequently as necessary. These ratings generally correspond to external ratings published by S&P. The Firm also considers transaction structure, including type of collateral, collateral terms and position of the obligation within the capital structure. In addition, for commercial real estate, the Firm considers property type and location, net operating income and LTV ratios, among other factors, as well as commercial real estate price and credit spread indices and capitalization rates.
- Residential real estate loans: Loan origination Fair Isaac Corporation (“FICO”) credit scores as determined by independent credit agencies in the U.S. and LTV ratios.
- Employee loans: Employment status, which includes those currently employed by the Firm and for which the Firm can deduct any unpaid amounts due to it through certain compensation arrangements; and those no longer employed by the Firm where such arrangements are no longer applicable.

Qualitative and environmental factors such as economic and business conditions, the nature and volume of the portfolio,

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and lending terms and the volume and severity of past due loans are also considered in the ACL calculations.

Presentation of ACL and Provision for Credit Losses

	ACL	Provision for Credit Losses
Held for investment loans	Contra asset	Provision for credit losses
Other instruments measured at amortized cost (e.g., HTM securities and customer and other receivables)	Contra asset	Other revenues
Employee loans	Contra asset	Compensation and benefits expenses
Held for investment lending commitments	Other liabilities and accrued expenses	Provision for credit losses
Other off-balance sheet instruments (e.g., certain guarantees)	Other liabilities and accrued expenses	Other expenses

Nonaccrual

The Firm places financial instruments on nonaccrual status if principal or interest is not expected when contractually due or is past due for a period of 90 days or more unless the obligation is well-secured and is in the process of collection.

For any instrument placed on nonaccrual status, the Firm reverses any unpaid interest accrued with an offsetting reduction to Interest income. Principal and interest payments received on nonaccrual instruments are applied to principal if there is doubt regarding the ultimate collectability of principal. If collection of the principal is not in doubt, interest income is realized on a cash basis. If the instrument is brought current and neither principal nor interest collection is in doubt, instruments can generally return to accrual status, and interest income can be recognized.

ACL Charge-offs

The principal balance of a financial instrument is charged off in the period it is deemed uncollectible, resulting in a reduction in the ACL and in the balance of the financial instrument in the balance sheet. Accrued interest receivable balances that are separately recorded from the related financial instruments are charged off against Interest income when the related financial instrument is placed on nonaccrual status. Accordingly, the Firm elected not to measure an ACL for accrued interest receivables.

Transfers of Financial Assets

Transfers of financial assets are accounted for as sales when the Firm has relinquished control over the transferred assets. Any related gain or loss on sale is recorded in Net revenues. Transfers that are not accounted for as sales are treated as collateralized financings. Securities borrowed or purchased under agreements to resell and securities loaned or sold under agreements to repurchase are treated as collateralized financings (see Note 8).

Securities purchased under agreements to resell (“reverse repurchase agreements”) and Securities sold under agreements to repurchase (“repurchase agreements”),

including repurchase and reverse repurchase agreements-to-maturity, are carried in the balance sheet at the amount of cash paid or received plus accrued interest except for certain reverse repurchase and repurchase agreements for which the Firm has elected the fair value option (see Note 5). Where appropriate, repurchase agreements and reverse repurchase agreements with the same counterparty are reported on a net basis. Securities borrowed and securities loaned are recorded at the amount of cash collateral advanced or received.

In instances where the Firm is the lender in securities-for-securities transactions and is permitted to sell or repledge these securities, the fair value of the collateral received is reported in Trading assets, and the related obligation to return the collateral is reported in Trading liabilities in the balance sheet. Securities-for-securities transactions where the Firm is the borrower are not included in the balance sheet.

In order to manage credit exposure arising from these transactions, in appropriate circumstances, the Firm enters into master netting agreements and collateral agreements with its counterparties. These agreements provide the Firm with the right, in the event of a default by the counterparty, to net a counterparty’s rights and obligations under the agreement and to liquidate and set off collateral held by the Firm against the net amount owed by the counterparty.

The Firm’s policy is generally to take possession of securities purchased or borrowed in connection with reverse repurchase agreements and securities borrowed transactions, respectively, and to receive cash and/or securities delivered under repurchase agreements or securities loaned transactions (with rights of rehypothecation).

For information related to offsetting of certain collateralized transactions, see Note 8.

Premises, Equipment and Capitalized Software Costs

Premises, equipment and capitalized software costs consist of buildings, leasehold improvements, furniture, fixtures, computer and communications equipment, power generation assets and capitalized software (externally purchased and developed for internal use). Premises, equipment and capitalized software costs are stated at cost less accumulated depreciation and amortization and are included in Other assets in the balance sheet. Depreciation and amortization are provided by the straight-line method over the estimated useful life of the asset.

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Estimated Useful Life of Assets

<i>in years</i>	Estimated Useful Life
Buildings	39
Leasehold improvements—Building	term of lease to 25
Leasehold improvements—Other	term of lease to 15
Furniture and fixtures	7
Computer and communications equipment	3 to 9
Power generation assets	15 to 29
Capitalized software costs	2 to 10

Premises, equipment and capitalized software costs are tested for impairment whenever events or changes in circumstances suggest that an asset’s carrying value may not be fully recoverable.

Goodwill and Intangible Assets

The Firm tests goodwill and indefinite-lived intangible assets for impairment on an annual basis and on an interim basis when certain events or circumstances exist. The Firm tests goodwill for impairment at the reporting unit level, which is generally at the level of or one level below the Firm’s operating segments. The Firm’s operating segments are equivalent to its business segments. The Firm tests indefinite-lived intangible assets for impairment at the aggregate level of management contracts. For both the annual and interim tests, the Firm has the option to either (i) perform a quantitative impairment test or (ii) first perform a qualitative assessment to determine whether it is more likely than not that the fair value is less than its carrying amount, in which case, the quantitative test would be performed.

When performing a quantitative impairment test of goodwill, the Firm compares the fair value of the reporting unit with the carrying amount. If the fair value is less than the carrying amount, the impairment loss is equal to the excess of the carrying value over the fair value, limited to the carrying amount of goodwill within the reporting unit.

When performing a quantitative impairment test of indefinite-lived intangible assets, the Firm compares the fair value of the assets with the carrying amount. If the fair value is less than the carrying amount, the impairment loss is equal to the excess of the carrying value over the fair value, limited to the carrying amount of the assets.

The estimated fair values used in the quantitative impairment tests of goodwill and indefinite-lived intangible assets are derived based on valuation techniques the Firm believes market participants would use. The estimated fair values are generally determined by utilizing a discounted cash flow methodology or methodologies that incorporate price-to-book and price-to-earnings multiples of certain comparable companies for goodwill impairment testing.

Intangible assets with a finite life are amortized over their estimated useful life and are reviewed for impairment on an interim basis to assess whether impairment indicators are

present. Impairment losses are recorded within Other expenses in the income statement.

Earnings per Common Share

Basic EPS is computed by dividing earnings applicable to Morgan Stanley common shareholders by the weighted average number of common shares outstanding for the period. Earnings applicable to Morgan Stanley common shareholders represents net income applicable to Morgan Stanley reduced by preferred stock dividends. Common shares outstanding include common stock and vested RSUs where recipients have satisfied the relevant vesting terms. Diluted EPS reflects the assumed conversion of all dilutive securities.

Share-based awards, including awards that pay dividend equivalents subject to vesting, are included in diluted shares outstanding (if dilutive) under the treasury stock method.

The Firm has granted PSUs that vest and convert to shares of common stock only if predetermined performance and market goals are satisfied. Since the issuance of the shares is contingent upon the satisfaction of certain conditions, the PSUs are included in diluted EPS based on the number of shares (if any) that would be issuable if the reporting date was the end of the performance period.

For further information on diluted earnings (loss) per common share, see Note 17 to the financial statements.

Deferred Compensation

Stock-Based Compensation

The Firm measures compensation expense for stock-based awards at fair value. The Firm determines the fair value of RSUs (including PSUs with non-market performance conditions) based on the grant-date fair value of its common stock, measured as the volume-weighted average price on the date of grant (“VWAP”). The fair value of RSUs not entitled to dividends until conversion is measured at VWAP reduced by the present value of dividends expected to be paid on the underlying shares prior to scheduled conversion date. PSUs that contain market-based conditions are valued using a Monte Carlo valuation model.

Compensation expense is recognized over the vesting period relevant to each separately vesting portion of the award. Compensation expense for awards with performance conditions is recognized based on the probable outcome of the performance condition at each reporting date. Compensation expense for awards with market-based conditions is recognized irrespective of the probability of the market condition being achieved and is not reversed if the market condition is not met. The Firm accounts for forfeitures as they occur.

Stock-based awards generally contain clawback and cancellation provisions. Certain awards provide the Firm discretion to claw back or cancel all or a portion of the award

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under specified circumstances. Where award terms are considered to be subjective, a grant date cannot be established and the awards are subject to variable accounting which requires that compensation expense for those awards is adjusted for changes in the fair value of the Firm's common stock or the relevant model valuation, as appropriate, until conversion, exercise or expiration. Following amendments to clarify specific subjective award terms in the second quarter of 2023, a grant date for the awards was established such that compensation expense for those awards is no longer adjusted for changes in the fair value of the Firm's common stock. The Firm also operates an Employee Stock Purchase Plan ("ESPP") which allows eligible employees of the Firm to purchase shares of Morgan Stanley at a discount.

Employee Stock Trusts

In connection with certain stock-based compensation plans, the Firm has established employee stock trusts to provide, at its discretion, common stock voting rights to certain RSU holders. Following the grant of an RSU award, when a stock trust is utilized, the Firm contributes shares to be held in the stock trust until the RSUs convert to common shares. The assets of the employee stock trusts are consolidated with those of the Firm and are generally accounted for in a manner similar to treasury stock, where the shares of common stock outstanding reported in Common stock issued to employee stock trusts are offset by an equal amount reported in Employee stock trusts in the balance sheet.

The Firm uses the grant-date fair value of stock-based compensation as the basis for recording the movement of the assets to or from the employee stock trusts. Changes in the fair value are not recognized as the Firm's stock-based compensation must be settled by delivery of a fixed number of shares of the Firm's common stock.

Deferred Cash-Based Compensation

Compensation expense for DCP awards is calculated based on the notional value of the award granted, adjusted for changes in the fair value of the referenced investments that employees select. Compensation expense is recognized over the vesting period relevant to each separately vesting portion of deferred awards.

The Firm invests directly, as a principal, in financial instruments and other investments to economically hedge certain of its obligations under its DCP. Changes in the value of such investments are recorded in Trading revenues and Investments revenues. Although changes in compensation expense resulting from changes in the fair value of the referenced investments will generally be offset by changes in the fair value of investments made by the Firm, there is typically a timing difference between the immediate recognition of gains and losses on the Firm's investments and the deferred recognition of the related compensation expense over the vesting period.

Retirement-Eligible Employee Compensation

For year-end stock-based awards and DCP awards anticipated to be granted to retirement-eligible employees under award terms that do not contain a future service requirement, the Firm accrues the estimated cost of the awards over the course of the calendar year preceding the grant date, which reflects the period over which the compensation is earned.

Carried Interest Compensation

The Firm generally recognizes compensation expense for any portion of carried interest (both realized and unrealized) that is allocated to employees. For information on performance-based fees in the form of carried interest, which are directly related to carried interest compensation, see "Revenue Recognition—Carried Interest" herein.

Income Taxes

Deferred tax assets and liabilities are recorded based upon the temporary differences between the financial statement and income tax bases of assets and liabilities using currently enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income tax expense (benefit) in the period that includes the enactment date. Such effects are recorded in Provision for income taxes regardless of where deferred taxes were originally recorded.

The Firm recognizes net deferred tax assets to the extent that it believes these assets are more likely than not to be realized. In making such a determination, the Firm considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax planning strategies and results of recent operations. When performing the assessment, the Firm considers all types of deferred tax assets in combination with each other, regardless of the origin of the underlying temporary difference. If a deferred tax asset is determined to be unrealizable, a valuation allowance is established. If the Firm subsequently determines that it would be able to realize deferred tax assets in excess of their net recorded amount, it would make an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

The Firm recognizes tax expense associated with Global Intangible Low-Taxed Income as it is incurred as part of the current income taxes to be paid or refunded for the current period.

Uncertain tax positions are recorded on the basis of a two-step process, whereby (i) the Firm determines whether it is more likely than not that the tax positions will be sustained on the basis of the technical merits of the position and (ii) for those tax positions that meet this threshold, the Firm recognizes the largest amount of tax benefit that is more likely than not to be realized upon ultimate settlement with the related tax authority. Interest and penalties related to unrecognized tax

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benefits are recognized as a component of the provision for income taxes.

Foreign Currencies

Assets and liabilities of operations with non-U.S. dollar functional currencies are translated at year-end rates of exchange. Gains or losses resulting from translating foreign currency financial statements, net of hedge gains or losses and related tax effects, are reflected in AOCI in the balance sheet. Gains or losses resulting from remeasurement of foreign currency transactions are included in net income, and amounts recognized in the income statement are translated at the rate of exchange on the respective date of recognition for each amount.

Accounting Updates Adopted in 2024

Segment Reporting

The Firm adopted the *Segment Reporting - Improvements to Reportable Segment Disclosures* accounting update retrospectively, effective January 1, 2024. This accounting update requires additional reportable segment disclosures on an annual and interim basis, primarily about significant segment expenses and other segment items that are regularly provided to the chief operating decision maker and included within the reported measure of segment profit or loss. See Note 22 to the financial statements for disclosures on the Firm’s reportable segments.

Investments - Tax Credit Structures

The Firm adopted the *Investments - Equity Method and Joint Ventures - Tax Credit Structures* accounting update on January 1, 2024 using the modified retrospective method. This accounting update permits an election to account for tax equity investments using the proportional amortization method if certain conditions are met. Under the proportional amortization method, the initial cost of the investment is amortized in proportion to the income tax credits and other income tax benefits received and recognized net in the income statement as a component of provision for income taxes. The update requires a separate accounting policy election to be made for each tax credit program. Additional disclosures are required regarding (i) the nature of our tax equity investments and (ii) the effect of our tax equity investments and related income tax credits on the financial condition and results of operations (see Note 11).

The adoption resulted in a decrease to Retained earnings of \$60 million as of January 1, 2024, net of tax, and a corresponding reduction to Other assets.

Accounting Update Adopted in 2022

Reference Rate Reform

The Firm has adopted the Reference Rate Reform accounting update, which extends the period of time entities can utilize the reference rate reform relief guidance from December 31, 2022 to December 31, 2024. The relief provides optional expedients and exceptions for applying generally accepted accounting principles to contracts, hedging relationships and other transactions that reference LIBOR or other interest rate benchmarks for which the referenced rate is expected to be discontinued or replaced. The Firm is applying the accounting relief as relevant contract and hedge accounting relationship modifications are made during the course of the reference rate reform transition period. There was no impact to the Firm’s financial statements upon issuance of this accounting standard update.

3. Cash and Cash Equivalents

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Cash and due from banks	\$ 4,436	\$ 7,323
Interest bearing deposits with banks	100,950	81,909
Total Cash and cash equivalents	\$ 105,386	\$ 89,232
Restricted cash	\$ 29,643	\$ 30,571

For additional information on cash and cash equivalents, including restricted cash, see Note 2.

4. Fair Values

Recurring Fair Value Measurements

Assets and Liabilities Measured at Fair Value on a Recurring Basis

	At December 31, 2024				
<i>\$ in millions</i>	Level 1	Level 2	Level 3	Netting ¹	Total
Assets at fair value					
Trading assets:					
U.S. Treasury and agency securities	\$ 54,436	\$ 44,332	\$ —	\$ —	\$ 98,768
Other sovereign government obligations	25,179	9,969	17	—	35,165
State and municipal securities	—	2,993	—	—	2,993
MABS	—	2,231	281	—	2,512
Loans and lending commitments ²	—	7,602	1,059	—	8,661
Corporate and other debt	—	30,394	1,258	—	31,652
Corporate equities ^{3,5}	102,874	606	154	—	103,634
Derivative and other contracts:					
Interest rate	4,154	124,309	343	—	128,806
Credit	—	8,783	367	—	9,150
Foreign exchange	65	108,037	620	—	108,722
Equity	2,704	72,532	446	—	75,682
Commodity and other	1,366	12,370	2,195	—	15,931
Netting ¹	(6,471)	(251,771)	(645)	(40,835)	(299,722)
Total derivative and other contracts	1,818	74,260	3,326	(40,835)	38,569
Investments ^{4,5}	808	933	754	—	2,495
Physical commodities	—	1,229	—	—	1,229
Total trading assets ⁴	185,115	174,549	6,849	(40,835)	325,678
Investment securities — AFS	69,834	28,774	—	—	98,608
Total assets at fair value	\$254,949	\$203,323	\$ 6,849	\$(40,835)	\$424,286

	At December 31, 2024				
<i>\$ in millions</i>	Level 1	Level 2	Level 3	Netting ¹	Total
Liabilities at fair value					
Deposits	\$ —	\$ 6,498	\$ 1	\$ —	\$ 6,499
Trading liabilities:					
U.S. Treasury and agency securities	21,505	3	—	—	21,508
Other sovereign government obligations	20,724	3,712	84	—	24,520
Corporate and other debt	—	9,032	11	—	9,043
Corporate equities ³	60,653	95	15	—	60,763
Derivative and other contracts:					
Interest rate	3,615	114,179	396	—	118,190
Credit	—	9,302	270	—	9,572
Foreign exchange	147	104,793	31	—	104,971
Equity	3,241	90,639	1,594	—	95,474
Commodity and other	1,461	11,215	887	—	13,563
Netting ¹	(6,471)	(251,771)	(645)	(44,953)	(303,840)
Total derivative and other contracts	1,993	78,357	2,533	(44,953)	37,930
Total trading liabilities	104,875	91,199	2,643	(44,953)	153,764
Securities sold under agreements to repurchase	—	512	444	—	956
Other secured financings	—	14,012	76	—	14,088
Borrowings	—	102,385	947	—	103,332
Total liabilities at fair value	\$104,875	\$214,606	\$ 4,111	\$(44,953)	\$278,639

	At December 31, 2023				
<i>\$ in millions</i>	Level 1	Level 2	Level 3	Netting ¹	Total
Assets at fair value					
Trading assets:					
U.S. Treasury and agency securities	\$ 56,459	\$ 53,741	\$ —	\$ —	\$110,200
Other sovereign government obligations	22,580	9,946	94	—	32,620
State and municipal securities	—	2,148	34	—	2,182
MABS	—	1,540	489	—	2,029
Loans and lending commitments ²	—	6,122	2,066	—	8,188
Corporate and other debt	—	35,833	1,983	—	37,816
Corporate equities ^{3,5}	126,772	929	199	—	127,900
Derivative and other contracts:					
Interest rate	7,284	140,139	784	—	148,207
Credit	—	10,244	393	—	10,637
Foreign exchange	12	93,218	20	—	93,250
Equity	2,169	55,319	587	—	58,075
Commodity and other	1,608	11,862	2,811	—	16,281
Netting ¹	(7,643)	(237,497)	(1,082)	(42,915)	(289,137)
Total derivative and other contracts	3,430	73,285	3,513	(42,915)	37,313
Investments ^{4,5}	781	836	949	—	2,566
Physical commodities	—	736	—	—	736
Total trading assets ⁴	210,022	185,116	9,327	(42,915)	361,550
Investment securities — AFS	57,405	30,708	—	—	88,113
Securities purchased under agreements to resell	—	7	—	—	7
Total assets at fair value	\$267,427	\$215,831	\$ 9,327	\$(42,915)	\$449,670

Notes to Consolidated Financial Statements

\$ in millions	At December 31, 2023				
	Level 1	Level 2	Level 3	Netting ¹	Total
Liabilities at fair value					
Deposits	\$ —	\$ 6,439	\$ 33	\$ —	\$ 6,472
Trading liabilities:					
U.S. Treasury and agency securities	27,708	16	—	—	27,724
Other sovereign government obligations	26,829	3,955	6	—	30,790
Corporate and other debt	—	10,560	9	—	10,569
Corporate equities ³	46,809	300	45	—	47,154
Derivative and other contracts:					
Interest rate	8,000	129,983	857	—	138,840
Credit	—	10,795	297	—	11,092
Foreign exchange	96	89,880	385	—	90,361
Equity	2,411	64,794	1,689	—	68,894
Commodity and other	1,642	11,904	1,521	—	15,067
Netting ¹	(7,643)	(237,497)	(1,082)	(42,757)	(288,979)
Total derivative and other contracts	4,506	69,859	3,667	(42,757)	35,275
Total trading liabilities	105,852	84,690	3,727	(42,757)	151,512
Securities sold under agreements to repurchase					
Other secured financings	—	571	449	—	1,020
Borrowings	—	9,807	92	—	9,899
Total liabilities at fair value	\$105,852	\$193,529	\$ 6,179	\$(42,757)	\$262,803

MABS—Mortgage- and asset-backed securities

- For positions with the same counterparty that cross over the levels of the fair value hierarchy, both counterparty netting and cash collateral netting are included in the column titled "Netting." Positions classified within the same level that are with the same counterparty are netted within that level. For further information on derivative instruments and hedging activities, see Note 6.
- For a further breakdown by type, see the following Detail of Loans and Lending Commitments at Fair Value table.
- For trading purposes, the Firm holds or sells short equity securities issued by entities in diverse industries and of varying sizes.
- Amounts exclude certain investments that are measured based on NAV per share, which are not classified in the fair value hierarchy. For additional disclosure about such investments, see "Net Asset Value Measurements" herein.
- At December 31, 2024 and December 31, 2023, the Firm's Trading assets included an insignificant amount of equity securities subject to contractual sale restrictions that generally prohibit the Firm from selling the security for a period of time as of the measurement date.

Detail of Loans and Lending Commitments at Fair Value

\$ in millions	At	
	December 31, 2024	December 31, 2023
Commercial real estate	\$ 498	\$ 422
Residential real estate	1,922	2,909
Securities-based lending and Other loans	6,241	4,857
Total	\$ 8,661	\$ 8,188

Unsettled Fair Value of Futures Contracts¹

\$ in millions	At	
	December 31, 2024	December 31, 2023
Customer and other receivables, net	\$ 1,914	\$ 1,062

- These contracts are primarily Level 1, actively traded, valued based on quoted prices from the exchange and are excluded from the previous recurring fair value tables.

Valuation Techniques for Assets and Liabilities Measured at Fair Value on a Recurring Basis

U.S. Treasury and Agency Securities

U.S. Treasury Securities

Valuation Technique:

- Fair value is determined using quoted market prices.

Valuation Hierarchy Classification:

- Level 1—as inputs are observable and in an active market

U.S. Agency Securities

Valuation Techniques:

- Non-callable agency-issued debt securities are generally valued using quoted market prices, and callable agency-issued debt securities are valued by benchmarking model-derived prices to quoted market prices and trade data for comparable instruments.

- The fair value of agency mortgage pass-through pool securities is model-driven based on spreads of comparable to-be-announced securities.

- CMOs are generally valued using quoted market prices and trade data adjusted by subsequent changes in related indices for comparable instruments.

Valuation Hierarchy Classification:

- Level 1—on-the-run agency issued debt securities if actively traded and inputs are observable
- Level 2—all other agency issued debt securities, agency mortgage pass-through pool securities and CMOs if actively traded and inputs are observable
- Level 3—in instances where the trading activity is limited or inputs are unobservable

Other Sovereign Government Obligations

Valuation Techniques:

- Fair value is determined using quoted prices in active markets when available. When not available, quoted prices in less active markets are used. In the absence of position-specific quoted prices, fair value may be determined through benchmarking from comparable instruments.

Valuation Hierarchy Classification:

- Level 1—if actively traded and inputs are observable
- Level 2—if the market is less active or prices are dispersed
- Level 3—in instances where the prices are unobservable

State and Municipal Securities

Valuation Techniques:

- Fair value is determined using recently executed transactions, market price quotations or pricing models that factor in, where applicable, interest rates, bond or CDS spreads, adjusted for any basis difference between cash and derivative instruments.

Valuation Hierarchy Classification:

- Level 2—if value based on observable market data supported by market liquidity for comparable instruments
- Level 3—in instances where market data are not observable or supported by market liquidity

Mortgage- and Asset-Backed Securities

Valuation Techniques:

- Mortgage- and asset-backed securities may be valued based on price or spread data obtained from observed transactions or independent external parties such as vendors or brokers.
- When position-specific external price data are not observable, the fair value determination may require benchmarking to comparable instruments, and/or analyzing expected credit losses, default and recovery rates, and/or applying discounted cash flow techniques. When evaluating the comparable instruments for use in the valuation of each security, security collateral-specific attributes, including payment priority, credit enhancement levels, type of collateral, delinquency rates and loss severity, are considered. In addition, for RMBS borrowers, FICO scores and the level of documentation for the loan are considered.
- Market standard cash flow models may be utilized to model the specific collateral composition and cash flow structure of each transaction. Key inputs to these models are market spreads, forecasted credit losses, and default and prepayment rates for each asset category.
- Valuation levels of RMBS and CMBS indices are used as an additional data point for benchmarking purposes or to price outright index positions.

Valuation Hierarchy Classification:

- Level 2—if value based on observable market data supported by market liquidity for comparable instruments
- Level 3—if external prices or significant spread inputs are unobservable or not supported by market liquidity or if the comparability assessment involves significant subjectivity related to property type differences, cash flows, performance or other inputs

Loans and Lending Commitments

Valuation Techniques:

- Fair value of corporate loans is determined using recently executed transactions, market price quotations (where observable), implied yields from comparable debt, market observable CDS spread levels obtained from independent external parties adjusted for any basis difference between cash and derivative instruments, along with proprietary valuation models and default recovery analysis where such transactions and quotations are unobservable.
- Fair value of contingent corporate lending commitments is determined by using executed transactions on comparable loans and the anticipated market price based on pricing indications from syndicate banks and customers. The valuation of loans and lending commitments also takes into account fee income that is considered an attribute of the contract.
- Fair value of mortgage loans is determined using observable prices based on transactional data or third-party pricing for comparable instruments, when available.
- Where position-specific external prices are not observable, fair value is estimated based on benchmarking to prices and rates observed in the primary market for similar loan

or borrower types or based on the present value of expected future cash flows using the Firm's best available estimates of the key assumptions, including forecasted credit losses, prepayment rates, forward yield curves and discount rates commensurate with the risks involved or a methodology that utilizes the capital structure and credit spreads of recent comparable securitization transactions.

- Fair value of equity margin loans is determined by discounting future interest cash flows, net of potential losses resulting from large downward price movements of the underlying margin loan collateral. The potential losses are modeled using the margin loan rate, which is calibrated from market observable CDS spreads, implied debt yields or volatility metrics of the loan collateral.

Valuation Hierarchy Classification:

- Level 2—if value based on observable market data supported by market liquidity for comparable instruments
- Level 3—in instances where prices or significant spread inputs are unobservable or not supported by market liquidity or if the comparability assessment involves significant subjectivity

Corporate and Other Debt*Corporate Bonds*

Valuation Techniques:

- Fair value is determined using recently executed transactions, market price quotations, bond spreads and CDS spreads obtained from independent external parties, such as vendors and brokers, adjusted for any basis difference between cash and derivative instruments.
- The spread data used is for the same maturity as the bond. If the spread data does not reference the issuer, then data that references comparable issuers are used. When position-specific external price data is not observable, fair value is determined based on either benchmarking to comparable instruments or cash flow models with yield curves, bond or single-name CDS spreads and recovery rates or loss given default as significant inputs.

Valuation Hierarchy Classification:

- Level 2—if value based on observable market data for comparable instruments
- Level 3—in instances where prices or significant spread inputs are unobservable or if the comparability assessment involves significant subjectivity

CDOs

Valuation Techniques:

- The Firm holds cash CDOs that typically reference a tranche of an underlying synthetic portfolio of single-name CDS spreads collateralized by corporate bonds ("CLN") or cash portfolio of ABS/loans ("asset-backed CDOs").
- Credit correlation, a primary input used to determine the fair value of CLNs, is usually unobservable and derived using a benchmarking technique. Other model inputs, such as credit spreads, including collateral spreads and interest rates, are typically observable.
- Asset-backed CDOs are valued based on an evaluation of the market and model input parameters sourced from comparable instruments as indicated by market activity.

Each asset-backed CDO position is evaluated independently taking into consideration available comparable market levels, underlying collateral performance and pricing, deal structures and liquidity.

Valuation Hierarchy Classification:

- Level 2—when either comparable market transactions are observable or credit correlation input is insignificant
- Level 3—when either comparable market transactions are unobservable or the credit correlation input is significant

Equity Contracts with Financing Features

Valuation Techniques:

- Fair value of certain equity contracts, which are not classified as OTC derivatives because they do not meet the net investment criteria, is determined by discounting future interest cash flows, inclusive of the estimated value of the embedded optionality. The valuation uses the same derivative pricing models and valuation techniques as described under “OTC Derivative Contracts” herein.

Valuation Hierarchy Classification:

- Level 2—when the contract is valued using observable inputs or where the unobservable input is not deemed significant
- Level 3—when the contract is valued using an unobservable input that is deemed significant

Corporate Equities

Valuation Techniques:

- Exchange-traded equity securities are generally valued based on quoted prices from the exchange.
- Unlisted equity securities are generally valued based on an assessment of each security, considering rounds of financing and third-party transactions, discounted cash flow analyses and market-based information, including comparable transactions, trading multiples and changes in market outlook, among other factors.
- Listed fund units are generally marked to the exchange-traded price if actively traded, or to NAV if not. Unlisted fund units are generally marked to NAV.

Valuation Hierarchy Classification:

- Level 1—actively traded exchange-traded securities and fund units
- Level 2—if not actively traded, inputs are observable or if undergoing a recent M&A event or corporate action
- Level 3—if not actively traded, inputs are unobservable or if undergoing an aged M&A event or corporate action

Derivative and Other Contracts

Exchange-Traded Derivative Contracts

Valuation Techniques:

- Exchange-traded derivatives that are actively traded are valued based on quoted prices from the exchange.
- Exchange-traded derivatives that are not actively traded are valued using the same techniques as those applied to OTC derivatives as noted below.

Valuation Hierarchy Classification:

- Level 1—when actively traded
- Level 2—when not actively traded

OTC Derivative Contracts

Valuation Techniques:

- OTC derivative contracts include forward, swap and option contracts related to interest rates, foreign currencies, credit standing of reference entities, equity prices or commodity prices.
- Depending on the product and the terms of the transaction, the fair value of OTC derivative products can be modeled using a series of techniques, including closed-form analytic formulas, such as the Black-Scholes option-pricing model, simulation models or a combination thereof. Many pricing models do not entail material subjectivity as the methodologies employed do not necessitate significant judgment since model inputs may be observed from actively quoted markets, as is the case for generic interest rate swaps, many equity, commodity and foreign currency option contracts, and certain CDS. In the case of more established derivative products, the pricing models used by the Firm are widely accepted by the financial services industry.
- More complex OTC derivative products are typically less liquid and require more judgment in the implementation of the valuation technique since direct trading activity or quotes are unobservable. This includes certain types of interest rate derivatives with both volatility and correlation exposure, equity, commodity or foreign currency derivatives that are either longer-dated or include exposure to multiple underlyings, and credit derivatives, including CDS on certain mortgage- or asset-backed securities and basket CDS. Where required inputs are unobservable, relationships to observable data points, based on historical and/or implied observations, may be employed as a technique to estimate the model input values. For further information on the valuation techniques for OTC derivative products, see Note 2.

Valuation Hierarchy Classification:

- Level 2—when valued using observable inputs supported by market liquidity or where the unobservable input is not deemed significant
- Level 3—when valued using observable inputs with limited market liquidity or if an unobservable input is deemed significant

Investments

Valuation Techniques:

- Investments include direct investments in equity securities, as well as various investment management funds, which include DCP investments.
- Exchange-traded direct equity investments are generally valued based on quoted prices from the exchange.
- For direct investments, initially, the transaction price is generally considered by the Firm as the exit price and is its best estimate of fair value.
- After initial recognition, in determining the fair value of non-exchange-traded internally and externally managed funds, the Firm generally considers the NAV of the fund provided by the fund manager to be the best estimate of fair value. These investments are included in the Fund

Notes to Consolidated Financial Statements

Interests table in the “Net Asset Value Measurements” section herein.

- For non-exchange-traded investments either held directly or held within internally managed funds, fair value after initial recognition is based on an assessment of each underlying investment, considering rounds of financing and third-party transactions, discounted cash flow analyses and market-based information, including comparable Firm transactions, trading multiples and changes in market outlook, among other factors.

Valuation Hierarchy Classification:

- Level 1—if actively traded
- Level 2—when not actively traded and valued based on rounds of financing or third-party transactions
- Level 3—when not actively traded and rounds of financing or third-party transactions are not available

Physical Commodities

Valuation Techniques:

- Fair value is determined using observable inputs, including broker quotations and published indices.

Valuation Hierarchy Classification:

- Level 2—valued using observable inputs

Investment Securities—AFS Securities

Valuation Techniques:

- AFS securities are composed of U.S. government and agency securities (e.g., U.S. Treasury securities, agency-issued debt, agency mortgage pass-through securities and CMOs), CMBS, ABS, state and municipal securities. For further information on the determination of fair value, refer to the corresponding asset/liability Valuation Technique described herein for the same instruments.

Valuation Hierarchy Classification:

- For further information on the determination of valuation hierarchy classification, see the corresponding Valuation Hierarchy Classification described herein.

Deposits

Valuation Techniques:

- The Firm issues FDIC-insured certificates of deposit that pay either fixed coupons or that have repayment terms linked to the performance of debt or equity securities, indices or currencies. The fair value of these certificates of deposit is determined using valuation models that incorporate observable inputs referencing identical or comparable securities, including prices to which the deposits are linked, interest rate yield curves, option volatility and currency rates, equity prices, and the impact of the Firm’s own credit spreads, adjusted for the impact of the FDIC insurance, which is based on vanilla deposit issuance rates.

Valuation Hierarchy Classification:

- Level 2—when valuation inputs are observable
- Level 3—in instances where an unobservable input is deemed significant

Securities Purchased under Agreements to Resell and Securities Sold under Agreements to Repurchase

Valuation Techniques:

- Fair value is computed using a standard cash flow discounting methodology.
- The inputs to the valuation include contractual cash flows and collateral funding spreads, which are the incremental spread over the OIS rate for a specific collateral rate (which refers to the rate applicable to a specific type of security pledged as collateral).

Valuation Hierarchy Classification:

- Level 2—when the valuation inputs are observable and supported by market liquidity
- Level 3—in instances where the valuation input is observable but not supported by market liquidity or if an unobservable input is deemed significant

Other Secured Financings

Valuation Techniques:

- Other secured financings are composed of short-dated notes secured by Corporate equities, agreements to repurchase Physical commodities, the liabilities related to sales of Loans and lending commitments accounted for as financings, and secured contracts that are not classified as OTC derivatives because they fail net investment criteria. For further information on the determination of fair value, refer to the Valuation Techniques described herein for the corresponding instruments, which are the collateral referenced by the other secured financing liability.

Valuation Hierarchy Classification:

- For further information on the determination of valuation hierarchy classification, see the Valuation Hierarchy Classification described herein for the corresponding instruments, which are the collateral referenced by the other secured financing liability.

Borrowings

Valuation Techniques:

- The Firm carries certain borrowings at fair value that are primarily composed of: instruments whose payments and redemption values are linked to the performance of a specific index, a basket of stocks, a specific equity security, a commodity, a credit exposure or basket of credit exposures; and instruments with various interest rate-related features, including step-ups, step-downs and zero coupons. Also included are unsecured contracts that are not classified as OTC derivatives because they fail initial net investment criteria.
- Fair value is determined using valuation models for the derivative and debt portions of the instruments. These models incorporate observable inputs referencing identical or comparable securities, including prices to which the instruments are linked, interest rate yield curves, option volatility and currency rates, and commodity or equity prices.
- Independent, external and traded prices are considered, as well as the impact of the Firm’s own credit spreads, which are based on observed secondary bond market spreads.

Notes to Consolidated Financial Statements

Valuation Hierarchy Classification:

- Level 2—when valued using observable inputs or where the unobservable input is not deemed significant
- Level 3—in instances where an unobservable input is deemed significant

Rollforward of Level 3 Assets and Liabilities Measured at Fair Value on a Recurring Basis

<i>\$ in millions</i>	2024	2023	2022
U.S. Treasury and agency securities			
Beginning balance	\$ —	\$ 17	\$ 2
Realized and unrealized gains (losses)	—	—	(3)
Purchases	—	—	14
Sales	—	(10)	(1)
Net transfers	—	(7)	5
Ending balance	\$ —	\$ —	\$ 17
Unrealized gains (losses)	\$ —	\$ —	\$ (1)
Other sovereign government obligations			
Beginning balance	\$ 94	\$ 169	\$ 211
Realized and unrealized gains (losses)	(12)	5	(5)
Purchases	4	38	116
Sales	—	(86)	(107)
Net transfers	(69)	(32)	(46)
Ending balance	\$ 17	\$ 94	\$ 169
Unrealized gains (losses)	\$ (9)	\$ 2	\$ (14)
State and municipal securities			
Beginning balance	\$ 34	\$ 145	\$ 13
Realized and unrealized gains (losses)	—	—	(4)
Purchases	—	9	91
Sales	(29)	(6)	(82)
Net transfers	(5)	(114)	127
Ending balance	\$ —	\$ 34	\$ 145
Unrealized gains (losses)	\$ —	\$ —	\$ —
MABS			
Beginning balance	\$ 489	\$ 416	\$ 344
Realized and unrealized gains (losses)	9	(2)	(342)
Purchases	83	232	511
Sales	(121)	(165)	(130)
Net transfers	(179)	8	33
Ending balance	\$ 281	\$ 489	\$ 416
Unrealized gains (losses)	\$ (16)	\$ (14)	\$ 2
Loans and lending commitments			
Beginning balance	\$ 2,066	\$ 2,017	\$ 3,806
Realized and unrealized gains (losses)	(15)	(189)	(80)
Purchases and originations	235	1,502	793
Sales	(674)	(477)	(740)
Settlements	(221)	(843)	(1,526)
Net transfers	(332)	56	(236)
Ending balance	\$ 1,059	\$ 2,066	\$ 2,017
Unrealized gains (losses)	\$ (15)	\$ (76)	\$ 29

<i>\$ in millions</i>	2024	2023	2022
Corporate and other debt			
Beginning balance	\$ 1,983	\$ 2,096	\$ 1,973
Realized and unrealized gains (losses)	(72)	145	456
Purchases and originations	602	623	1,165
Sales	(631)	(664)	(1,889)
Settlements	(84)	(33)	(27)
Net transfers	(540)	(184)	418
Ending balance	\$ 1,258	\$ 1,983	\$ 2,096
Unrealized gains (losses)	\$ 55	\$ (10)	\$ 160
Corporate equities			
Beginning balance	\$ 199	\$ 116	\$ 115
Realized and unrealized gains (losses)	(119)	12	(97)
Purchases	40	85	73
Sales	(16)	(41)	(22)
Net transfers	50	27	47
Ending balance	\$ 154	\$ 199	\$ 116
Unrealized gains (losses)	\$ (44)	\$ 19	\$ 11
Investments			
Beginning balance	\$ 949	\$ 923	\$ 1,125
Realized and unrealized gains (losses)	33	35	(409)
Purchases	62	158	63
Sales	(288)	(183)	(107)
Net transfers	(2)	16	251
Ending balance	\$ 754	\$ 949	\$ 923
Unrealized gains (losses)	\$ (32)	\$ 27	\$ (397)
Investment securities—AFS			
Beginning balance	\$ —	\$ 35	\$ —
Realized and unrealized gains (losses)	—	—	(3)
Sales	—	(32)	—
Net transfers	—	(3)	38
Ending balance	\$ —	\$ —	\$ 35
Unrealized gains (losses)	\$ —	\$ —	\$ (3)
Net derivatives: Interest rate			
Beginning balance	\$ (73)	\$ (151)	\$ 708
Realized and unrealized gains (losses)	126	(336)	(643)
Purchases	59	140	1
Issuances	(9)	(43)	—
Settlements	(175)	241	(92)
Net transfers	19	76	(125)
Ending balance	\$ (53)	\$ (73)	\$ (151)
Unrealized gains (losses)	\$ (53)	\$ (210)	\$ (327)
Net derivatives: Credit			
Beginning balance	\$ 96	\$ 110	\$ 98
Realized and unrealized gains (losses)	(30)	5	84
Purchases	—	—	5
Issuances	—	—	(10)
Settlements	32	(21)	(61)
Net transfers	(1)	2	(6)
Ending balance	\$ 97	\$ 96	\$ 110
Unrealized gains (losses)	\$ (47)	\$ 2	\$ 70

Notes to Consolidated Financial Statements

<i>\$ in millions</i>	2024	2023	2022
Net derivatives: Foreign exchange			
Beginning balance	\$ (365)	\$ 66	\$ 52
Realized and unrealized gains (losses)	874	(290)	(8)
Purchases	—	—	1
Issuances	—	(1)	—
Settlements	(25)	(15)	(46)
Net transfers	105	(125)	67
Ending balance	\$ 589	\$ (365)	\$ 66
Unrealized gains (losses)	\$ 728	\$ (277)	\$ 43
Net derivatives: Equity			
Beginning balance	\$ (1,102)	\$ (736)	\$ (945)
Realized and unrealized gains (losses)	225	(91)	201
Purchases	214	221	77
Issuances	(710)	(572)	(339)
Settlements	132	87	348
Net transfers	93	(11)	(78)
Ending balance	\$ (1,148)	\$ (1,102)	\$ (736)
Unrealized gains (losses)	\$ 308	\$ (201)	\$ 328
Net derivatives: Commodity and other			
Beginning balance	\$ 1,290	\$ 1,083	\$ 1,529
Realized and unrealized gains (losses)	(1,361)	910	315
Purchases	87	78	185
Issuances	(153)	(136)	(210)
Settlements	1,336	(701)	(510)
Net transfers	109	56	(226)
Ending balance	\$ 1,308	\$ 1,290	\$ 1,083
Unrealized gains (losses)	\$ (142)	\$ 243	\$ (935)
Deposits			
Beginning balance	\$ 33	\$ 20	\$ 67
Realized and unrealized losses (gains)	—	1	—
Issuances	—	25	11
Settlements	—	—	(3)
Net transfers	(32)	(13)	(55)
Ending balance	\$ 1	\$ 33	\$ 20
Unrealized losses (gains)	\$ —	\$ 1	\$ —
Nonderivative trading liabilities			
Beginning balance	\$ 60	\$ 74	\$ 61
Realized and unrealized losses (gains)	(27)	8	(86)
Purchases	(27)	(38)	(35)
Sales	101	22	93
Net transfers	3	(6)	41
Ending balance	\$ 110	\$ 60	\$ 74
Unrealized losses (gains)	\$ (21)	\$ 8	\$ 17
Securities sold under agreements to repurchase			
Beginning balance	\$ 449	\$ 512	\$ 651
Realized and unrealized losses (gains)	(5)	2	(8)
Issuances	—	1	17
Settlements	—	(9)	(22)
Net transfers	—	(57)	(126)
Ending balance	\$ 444	\$ 449	\$ 512
Unrealized losses (gains)	\$ (5)	\$ 2	\$ —

<i>\$ in millions</i>	2024	2023	2022
Other secured financings			
Beginning balance	\$ 92	\$ 91	\$ 403
Realized and unrealized losses (gains)	(14)	5	(6)
Sales	(21)	—	—
Issuances	112	83	39
Settlements	(113)	(99)	(342)
Net transfers	20	12	(3)
Ending balance	\$ 76	\$ 92	\$ 91
Unrealized losses (gains)	\$ (14)	\$ 5	\$ (6)
Borrowings			
Beginning balance	\$ 1,878	\$ 1,587	\$ 2,157
Realized and unrealized losses (gains)	4	219	(133)
Issuances	288	708	513
Settlements	(255)	(391)	(285)
Net transfers	(968)	(245)	(665)
Ending balance	\$ 947	\$ 1,878	\$ 1,587
Unrealized losses (gains)	\$ 16	\$ 182	\$ (138)
Portion of unrealized losses (gains) recorded in OCI—Change in net DVA	7	29	(35)

Level 3 instruments may be hedged with instruments classified in Level 1 and Level 2. The realized and unrealized gains or losses for assets and liabilities within the Level 3 category presented in the previous tables do not reflect the related realized and unrealized gains or losses on hedging instruments that have been classified by the Firm within the Level 1 and/or Level 2 categories.

The unrealized gains (losses) during the period for assets and liabilities within the Level 3 category may include changes in fair value during the period that were attributable to both observable and unobservable inputs. Total realized and unrealized gains (losses) are primarily included in Trading revenues in the income statement.

Additionally, in the previous tables, consolidations of VIEs are included in Purchases, and deconsolidations of VIEs are included in Settlements.

Significant Unobservable Inputs Used in Recurring and Nonrecurring Level 3 Fair Value Measurements

Valuation Techniques and Unobservable Inputs

<i>\$ in millions, except inputs</i>	Balance / Range (Average ¹)	
	At December 31, 2024	At December 31, 2023
Assets at Fair Value on a Recurring Basis		
Other sovereign government obligations	\$ 17	\$ 94
Comparable pricing:		
Bond price	45 to 104 points (75 points)	61 to 110 points (87 points)
MABS	\$ 281	\$ 489
Comparable pricing:		
Bond price	27 to 98 points (67 points)	0 to 88 points (61 points)

Notes to Consolidated Financial Statements

\$ in millions, except inputs	Balance / Range (Average ¹)	
	At December 31, 2024	At December 31, 2023
Loans and lending commitments	\$ 1,059	\$ 2,066
Margin loan model:		
Margin loan rate	1% to 4% (3%)	2% to 4% (3%)
Comparable pricing:		
Loan price	49 to 102 points (90 points)	85 to 102 points (98 points)
Corporate and other debt	\$ 1,258	\$ 1,983
Comparable pricing:		
Bond price	28 to 130 points (83 points)	28 to 135 points (82 points)
Discounted cash flow:		
Loss given default	54% to 84% (62% / 54%)	54% to 84% (62% / 54%)
Corporate equities	\$ 154	\$ 199
Comparable pricing:		
Equity price	100%	100%
Investments	\$ 754	\$ 949
Discounted cash flow:		
WACC	12% to 21% (16%)	16% to 18% (17%)
Exit multiple	9 to 10 times (10 times)	9 to 17 times (15 times)
Market approach:		
EBITDA multiple	20 times	22 times
Comparable pricing:		
Equity price	24% to 100% (84%)	24% to 100% (86%)
Net derivative and other contracts:		
Interest rate	\$ (53)	\$ (73)
Option model:		
IR volatility skew	72% to 97% (81% / 79%)	70% to 100% (81% / 93%)
IR curve correlation	28% to 99% (83% / 86%)	49% to 99% (77% / 79%)
Bond volatility	78% to 148% (92% / 92%)	79% to 85% (82% / 85%)
Inflation volatility	30% to 68% (44% / 38%)	27% to 70% (43% / 39%)
Credit	\$ 97	\$ 96
Credit default swap model:		
Cash-synthetic basis	7 points	7 points
Bond price	0 to 90 points (48 points)	0 to 92 points (46 points)
Credit spread	10 to 360 bps (90 bps)	10 to 404 bps (94 bps)
Funding spread	10 to 590 bps (76 bps)	18 to 590 bps (67 bps)
Foreign exchange²	\$ 589	\$ (365)
Option model:		
IR curve	5% to 10% (8% / 8%)	-4% to 26% (7% / 5%)
Foreign exchange volatility skew	N/M	-3% to 12% (2% / 0%)
Contingency probability	90% to 95% (91% / 95%)	95%
Equity²	\$ (1,148)	\$ (1,102)
Option model:		
Equity volatility	7% to 98% (20%)	6% to 97% (23%)
Equity volatility skew	-2% to 0% (-1%)	-1% to 0% (0%)
Equity correlation	20% to 94% (58%)	25% to 97% (49%)
FX correlation	-68% to 60% (-36%)	-79% to 40% (-28%)
IR correlation	N/M	10% to 30% (15%)
Commodity and other	\$ 1,308	\$ 1,290
Option model:		
Forward power price	\$0 to \$185 (\$48) per MWh	\$0 to \$220 (\$49) per MWh
Commodity volatility	0% to 165% (37%)	8% to 123% (31%)
Cross-commodity correlation	54% to 100% (94%)	54% to 100% (94%)

\$ in millions, except inputs	Balance / Range (Average ¹)	
	At December 31, 2024	At December 31, 2023
Liabilities at Fair Value on a Recurring Basis		
Securities sold under agreements to repurchase	\$ 444	\$ 449
Discounted cash flow:		
Funding spread	11 to 102 bps (36 / 26 bps)	28 to 135 bps (79 bps)
Other secured financings	\$ 76	\$ 92
Comparable pricing:		
Loan price	0 to 100 points (33 points)	22 to 101 points (76 points)
Borrowings	\$ 947	\$ 1,878
Option model:		
Equity volatility	7% to 71% (21%)	6% to 69% (13%)
Equity volatility skew	-2% to 0% (0%)	-2% to 0% (0%)
Equity correlation	53% to 64% (58%)	41% to 97% (79%)
Equity - FX correlation	-52% to 24% (-12%)	-65% to 40% (-30%)
IR curve correlation	N/M	50% to 89% (71% / 70%)
Credit default swap model:		
Credit spread	247 to 433 bps (340 bps)	N/M
Discounted cash flow:		
Loss given default	54% to 84% (62% / 54%)	54% to 84% (62% / 54%)
Nonrecurring Fair Value Measurement		
Loans	\$ 4,518	\$ 4,532
Corporate loan model:		
Credit spread	109 to 1,469 bps (1,007 bps)	99 to 1,467 bps (1,015 bps)
Comparable pricing:		
Loan price	25 to 100 points (71 points)	25 to 93 points (70 points)
Warehouse model:		
Credit spread	207 to 280 bps (254 bps)	115 to 268 bps (185 bps)

Points—Percentage of par

IR—Interest rate

FX—Foreign exchange

1. A single amount is disclosed for range and average when there is no significant difference between the minimum, maximum and average. Amounts represent weighted averages except where simple averages and the median of the inputs are more relevant.

2. Includes derivative contracts with multiple risks (*i.e.*, hybrid products).

The previous table provides information on the valuation techniques, significant unobservable inputs, and the ranges and averages for each major category of assets and liabilities measured at fair value on a recurring and nonrecurring basis with a significant Level 3 balance. The level of aggregation and breadth of products cause the range of inputs to be wide and not evenly distributed across the inventory of financial instruments. Further, the range of unobservable inputs may differ across firms in the financial services industry because of diversity in the types of products included in each firm's inventory. Generally, there are no predictable relationships between multiple significant unobservable inputs attributable to a given valuation technique.

During 2024, there were no significant revisions made to the descriptions of the Firm's significant unobservable inputs.

An increase (decrease) to the following significant unobservable inputs would generally result in a higher (lower) fair value.

Notes to Consolidated Financial Statements

- *Comparable Bond or Loan Price.* A pricing input used when prices for the identical instrument are not available. Significant subjectivity may be involved when fair value is determined using pricing data available for comparable instruments. Valuation using comparable instruments can be done by calculating an implied yield (or spread over a liquid benchmark) from the price of a comparable bond or loan, then adjusting that yield (or spread) to derive a value for the bond or loan. The adjustment to yield (or spread) should account for relevant differences in the bonds or loans, such as maturity or credit quality. Alternatively, a price-to-price basis can be assumed between the comparable instrument and the bond or loan being valued in order to establish the value of the bond or loan.
- *Comparable Equity Price.* A price derived from equity raises, share buybacks and external bid levels, etc. A discount or premium may be included in the fair value estimate.
- *Contingency Probability.* Probability associated with the realization of an underlying event upon which the value of an asset is contingent.
- *EBITDA Multiple/Exit Multiple.* The ratio of enterprise value to EBITDA, where enterprise value is the aggregate value of equity and debt minus cash and cash equivalents. The EBITDA multiple reflects the value of a company in terms of its full-year EBITDA, whereas the exit multiple reflects the value of a company in terms of its full-year expected EBITDA at exit. Either multiple allows comparison between companies from an operational perspective as the effect of capital structure, taxation and depreciation/amortization is excluded.

An increase (decrease) to the following significant unobservable inputs would generally result in a lower (higher) fair value.

- *Cash-Synthetic Basis.* The measure of the price differential between cash financial instruments and their synthetic derivative-based equivalents. The range disclosed in the previous table signifies the number of points by which the synthetic bond equivalent price is higher than the quoted price of the underlying cash bonds.
- *Funding Spread.* The cost of borrowing defined as the incremental spread over the OIS rate for a specific collateral rate (which refers to the rate applicable to a specific type of security pledged as collateral).
- *Loss Given Default.* Amount expressed as a percentage of par that is the expected loss when a credit event occurs.
- *Margin Loan Rate.* The annualized rate that reflects the possibility of losses as a result of movements in the price of the underlying margin loan collateral. The rate is calibrated from the discount rate, credit spreads and/or volatility measures.

- *WACC.* WACC represents the theoretical rate of return required to debt and equity investors. The WACC is used in a discounted cash flow model that calculates the value of the equity. The model assumes that the cash flow assumptions, including projections, are fully reflected in the current equity value, while the debt to equity ratio is held constant.

An increase (decrease) to the following significant unobservable inputs would generally result in an impact to the fair value, but the magnitude and direction of the impact would depend on whether the Firm is long or short the exposure.

- *Correlation.* A pricing input where the payoff is driven by more than one underlying risk. Correlation is a measure of the relationship between the movement of two variables (i.e., how the change in one variable influences a change in the other variable).
- *Credit Spread.* The credit spread reflects the additional net yield an investor can earn from a security with more credit risk relative to one with less credit risk. The credit spread of a particular security is often quoted in relation to the yield on a credit risk-free benchmark security or reference rate.
- *Interest Rate Curve.* The term structure of interest rates (relationship between interest rates and the time to maturity) and a market’s measure of future interest rates at the time of observation. An interest rate curve is used to set interest rate and foreign exchange derivative cash flows and is a pricing input used in the discounting of any OTC derivative cash flow.
- *Volatility.* The measure of variability in possible returns for an instrument given how much that instrument changes in value over time. Volatility is a pricing input for options, and, generally, the lower the volatility, the less risky the option. The level of volatility used in the valuation of a particular option depends on a number of factors, including the nature of the risk underlying that option, the tenor and the strike price of the option.
- *Volatility Skew.* The measure of the difference in implied volatility for options with identical underliers and expiry dates but with different strikes.

Net Asset Value Measurements

Fund Interests

\$ in millions	At December 31, 2024		At December 31, 2023	
	Carrying Value	Commitment	Carrying Value	Commitment
Private equity and other	\$ 2,653	\$ 644	\$ 2,685	\$ 720
Real estate	3,461	214	2,765	240
Hedge	92	2	74	3
Total	\$ 6,206	\$ 860	\$ 5,524	\$ 963

Amounts in the previous table represent the Firm’s carrying value of general and limited partnership interests in fund

Notes to Consolidated Financial Statements

investments, as well as any related performance-based income in the form of carried interest. The carrying amounts are measured based on the NAV of the fund taking into account the distribution terms applicable to the interest held. This same measurement applies whether the fund investments are accounted for under the equity method or fair value.

Private Equity and Other. Amounts include private equity, private credit and other funds that pursue multiple strategies, including leveraged buyouts, venture capital, infrastructure growth capital, distressed investments and mezzanine capital. In addition, the funds may be structured with a focus on specific geographic regions.

Real Estate. Funds that invest in real estate assets such as commercial office buildings, retail properties, multifamily residential properties, developments or hotels. In addition, the funds may be structured with a focus on specific geographic regions.

Investments in Private Equity and Other funds and Real Estate funds generally are not redeemable due to the closed-end nature of these funds. Instead, distributions from each fund will be received as the underlying investments of the funds are disposed and monetized.

Hedge. Funds that pursue various investment strategies, including long-short equity, fixed income/credit, event-driven and multi-strategy. Investments in hedge funds may be subject to initial period lock-up or gate provisions, which restrict an investor from withdrawing from the fund during a certain initial period or restrict the redemption amount on any redemption date, respectively.

See Note 14 for information regarding general partner guarantees, which include potential obligations to return performance fee distributions previously received. See Note 22 for information regarding unrealized carried interest at risk of reversal.

Nonredeemable Funds by Contractual Maturity

\$ in millions	Carrying Value at December 31, 2024	
	Private Equity and Other	Real Estate
Less than 5 years	\$ 1,066	\$ 2,016
5-10 years	1,432	1,334
Over 10 years	155	111
Total	\$ 2,653	\$ 3,461

Nonrecurring Fair Value Measurements

Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis

\$ in millions	At December 31, 2024		
	Level 2	Level 3 ¹	Total
Assets			
Loans	\$ 1,607	\$ 4,518	\$ 6,125
Other assets—Other investments	—	58	58
Other assets—ROU assets	23	—	23
Total	\$ 1,630	\$ 4,576	\$ 6,206
Liabilities			
Other liabilities and accrued expenses—Lending commitments	\$ 48	\$ 33	\$ 81
Total	\$ 48	\$ 33	\$ 81

\$ in millions	At December 31, 2023		
	Level 2	Level 3 ¹	Total
Assets			
Loans	\$ 4,215	\$ 4,532	\$ 8,747
Other assets—Other investments	—	4	4
Other assets—ROU assets	23	—	23
Total	\$ 4,238	\$ 4,536	\$ 8,774
Liabilities			
Other liabilities and accrued expenses—Lending commitments	\$ 110	\$ 60	\$ 170
Total	\$ 110	\$ 60	\$ 170

1. For significant Level 3 balances, refer to "Significant Unobservable Inputs Used in Recurring and Nonrecurring Level 3 Fair Value Measurements" section herein for details of the significant unobservable inputs used for nonrecurring fair value measurement.

Gains (Losses) from Nonrecurring Fair Value Remeasurements¹

\$ in millions	2024	2023	2022
Assets			
Loans ²	\$ (64)	\$ (426)	\$ (563)
Other assets—Other investments ³	(9)	(15)	(14)
Other assets—Premises, equipment and software ⁴	(17)	(8)	(6)
Other assets—ROU assets ⁵	(33)	(35)	(11)
Total	\$ (123)	\$ (484)	\$ (594)
Liabilities			
Other liabilities and accrued expenses—Lending commitments ²	\$ 19	\$ 75	\$ (137)
Total	\$ 19	\$ 75	\$ (137)

- Gains and losses for Loans and Other assets—Other investments are classified in Other revenues. For other items, gains and losses are recorded in Other revenues if the item is held for sale; otherwise, they are recorded in Other expenses.
- Nonrecurring changes in the fair value of loans and lending commitments, which exclude the impact of related economic hedges, are calculated as follows: for the held-for-investment category, based on the value of the underlying collateral; and for the held-for-sale category, based on recently executed transactions, market price quotations, valuation models that incorporate market observable inputs where possible, such as comparable loan or debt prices and CDS spread levels adjusted for any basis difference between cash and derivative instruments, or default recovery analysis where such transactions and quotations are unobservable.
- Losses related to Other assets—Other investments were determined using techniques that included discounted cash flow models, methodologies that incorporate multiples of certain comparable companies and recently executed transactions.
- Losses related to Other assets—Premises, equipment and software generally include impairments as well as write-offs related to the disposal of certain assets.
- Losses related to Other Assets—ROU assets include impairments related to the discontinued leased properties.

Notes to Consolidated Financial Statements

Financial Instruments Not Measured at Fair Value

\$ in millions	At December 31, 2024				
	Carrying Value	Fair Value			Total
		Level 1	Level 2	Level 3	
Financial assets					
Cash and cash equivalents	\$ 105,386	\$105,386	\$ —	\$ —	\$105,386
Investment securities—HTM	61,071	15,803	34,180	1,220	51,203
Securities purchased under agreements to resell	118,565	—	117,151	1,450	118,601
Securities borrowed	123,859	—	123,859	—	123,859
Customer and other receivables	79,586	—	75,361	4,056	79,417
Loans ¹ :					
Held for investment	225,834	—	17,859	202,297	220,156
Held for sale	12,319	—	6,324	6,115	12,439
Other assets	839	—	839	—	839
Financial liabilities					
Deposits	\$ 369,508	\$ —	\$370,039	\$ —	\$370,039
Securities sold under agreements to repurchase	49,111	—	49,103	—	49,103
Securities loaned	15,226	—	15,228	—	15,228
Other secured financings	7,514	—	7,511	—	7,511
Customer and other payables	175,890	—	175,890	—	175,890
Borrowings	185,487	—	188,269	93	188,362
		Commitment Amount			
Lending commitments ²	\$ 175,774	\$ —	\$ 1,094	\$ 839	\$ 1,933

\$ in millions	At December 31, 2023				
	Carrying Value	Fair Value			Total
		Level 1	Level 2	Level 3	
Financial assets					
Cash and cash equivalents	\$ 89,232	\$89,232	\$ —	\$ —	\$89,232
Investment securities—HTM	66,694	21,937	34,411	1,105	57,453
Securities purchased under agreements to resell	110,733	—	108,099	2,674	110,773
Securities borrowed	121,091	—	121,091	—	121,091
Customer and other receivables	74,337	—	70,110	4,031	74,141
Loans ¹ :					
Held for investment	203,385	—	20,125	176,291	196,416
Held for sale	15,255	—	8,652	6,672	15,324
Other assets	704	—	704	—	704
Financial liabilities					
Deposits	\$ 345,332	\$ —	\$345,391	\$ —	\$345,391
Securities sold under agreements to repurchase	61,631	—	61,621	—	61,621
Securities loaned	15,057	—	15,055	—	15,055
Other secured financings	2,756	—	2,756	—	2,756
Customer and other payables	208,015	—	208,015	—	208,015
Borrowings	169,832	—	171,009	4	171,013
		Commitment Amount			
Lending commitments ²	\$ 149,464	\$ —	\$ 1,338	\$ 749	\$ 2,087

1. Amounts include loans measured at fair value on a nonrecurring basis.
 2. Represents Lending commitments accounted for as Held for Investment and Held for Sale. For a further discussion on lending commitments, see Note 14.

The previous tables exclude all non-financial assets and liabilities, such as Goodwill and Intangible assets, and certain

financial instruments, such as equity method investments and certain receivables.

5. Fair Value Option

The Firm has elected the fair value option for certain eligible instruments that are risk managed on a fair value basis to mitigate income statement volatility caused by measurement basis differences between the elected instruments and their associated risk management transactions or to eliminate complexities of applying certain accounting models.

Borrowings Measured at Fair Value on a Recurring Basis

\$ in millions	At December 31, 2024	At December 31, 2023
Business Unit Responsible for Risk Management		
Equity	\$ 49,144	\$ 46,073
Interest rates	34,451	31,055
Commodities	14,829	12,798
Credit	3,306	2,400
Foreign exchange	1,602	1,574
Total	\$ 103,332	\$ 93,900

Net Revenues from Liabilities under the Fair Value Option

\$ in millions	Trading Revenues	Interest Expense	Net Revenues ¹
2024			
Borrowings	\$ (1,118)	\$ 650	\$ (1,767)
Deposits	(134)	242	(376)
2023			
Borrowings	(7,991)	503	(8,494)
2022			
Borrowings	12,370	293	12,077

1. Amounts do not reflect any gains or losses from related economic hedges.

Gains (losses) from changes in fair value are recorded in Trading revenues and are mainly attributable to movements in the reference price or index, interest rates or foreign exchange rates.

Gains (Losses) Due to Changes in Instrument-Specific Credit Risk

\$ in millions	Trading Revenues	OCI
2024		
Loans and other receivables ¹	\$ (53)	\$ —
Lending commitments	(3)	—
Deposits	—	(39)
Borrowings	(27)	(663)
2023		
Loans and other receivables ¹	\$ (123)	\$ —
Lending commitments	14	—
Deposits	—	17
Borrowings	(19)	(1,726)
2022		
Loans and other receivables ¹	\$ (108)	\$ —
Lending commitments	(12)	—
Deposits	—	(24)
Borrowings	—	2,006

Notes to Consolidated Financial Statements

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Cumulative pre-tax DVA gain (loss) recognized in AOCI	\$ (2,868)	\$ (2,166)

1. Loans and other receivables-specific credit gains (losses) were determined by excluding the non-credit components of gains and losses.

Difference between Contractual Principal and Fair Value¹

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Loans and other receivables ²	\$ 10,207	\$ 11,086
Nonaccrual loans ²	7,719	8,566
Borrowings ³	3,249	3,030

1. Amounts indicate contractual principal greater than or (less than) fair value.
2. The majority of the difference between principal and fair value amounts for loans and other receivables relates to distressed debt positions purchased at amounts well below par.
3. Excludes borrowings where the repayment of the initial principal amount fluctuates based on changes in a reference price or index.

The previous tables exclude non-recourse debt from consolidated VIEs, liabilities related to transfers of financial assets treated as collateralized financings, pledged commodities and other liabilities that have specified assets attributable to them.

Fair Value Loans on Nonaccrual Status

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Nonaccrual loans	\$ 647	\$ 440
Nonaccrual loans 90 or more days past due	\$ 155	\$ 75

6. Derivative Instruments and Hedging Activities

The Firm trades and makes markets globally in listed futures, OTC swaps, forwards, options and other derivatives referencing, among other things, interest rates, equities, currencies, investment grade and non-investment grade corporate credits, loans, bonds, U.S. and other sovereign securities, emerging market bonds and loans, credit indices, ABS indices, property indices, mortgage-related and other ABS, and real estate loan products. The Firm uses these instruments for market-making, managing foreign currency and credit exposure, and asset/liability management.

The Firm manages its market-making positions by employing a variety of risk mitigation strategies. These strategies include diversification of risk exposures and hedging. Hedging activities consist of the purchase or sale of positions in related securities and financial instruments, including a variety of derivative products (e.g., futures, forwards, swaps and options). The Firm manages the market risk associated with its market-making activities on a Firmwide basis, on a worldwide trading division level and on an individual product basis.

Fair Values of Derivative Contracts

<i>\$ in millions</i>	Assets at December 31, 2024			
	Bilateral OTC	Cleared OTC	Exchange- Traded	Total
Designated as accounting hedges				
Interest rate	\$ 4	\$ —	\$ —	\$ 4
Foreign exchange	185	122	—	307
Total	189	122	—	311
Not designated as accounting hedges				
Economic hedges of loans				
Credit	—	28	—	28
Other derivatives				
Interest rate	115,520	13,163	119	128,802
Credit	4,711	4,411	—	9,122
Foreign exchange	104,024	4,301	90	108,415
Equity	24,368	—	51,314	75,682
Commodity and other	14,071	—	1,860	15,931
Total	262,694	21,903	53,383	337,980
Total gross derivatives	\$ 262,883	\$ 22,025	\$ 53,383	\$ 338,291
Amounts offset				
Counterparty netting	(188,069)	(20,276)	(51,168)	(259,513)
Cash collateral netting	(38,511)	(1,698)	—	(40,209)
Total in Trading assets	\$ 36,303	\$ 51	\$ 2,215	\$ 38,569
Amounts not offset¹				
Financial instruments collateral	(17,837)	—	—	(17,837)
Net amounts	\$ 18,466	\$ 51	\$ 2,215	\$ 20,732
Net amounts for which master netting or collateral agreements are not in place or may not be legally enforceable				\$ 3,354

<i>\$ in millions</i>	Liabilities at December 31, 2024			
	Bilateral OTC	Cleared OTC	Exchange- Traded	Total
Designated as accounting hedges				
Interest rate	\$ 533	\$ —	\$ —	\$ 533
Foreign exchange	3	—	—	3
Total	536	—	—	536
Not designated as accounting hedges				
Economic hedges of loans				
Credit	53	718	—	771
Other derivatives				
Interest rate	104,495	13,038	124	117,657
Credit	4,941	3,860	—	8,801
Foreign exchange	100,730	4,085	153	104,968
Equity	42,332	—	53,142	95,474
Commodity and other	11,584	—	1,979	13,563
Total	264,135	21,701	55,398	341,234
Total gross derivatives	\$ 264,671	\$ 21,701	\$ 55,398	\$ 341,770
Amounts offset				
Counterparty netting	(188,070)	(20,276)	(51,168)	(259,514)
Cash collateral netting	(43,126)	(1,200)	—	(44,326)
Total in Trading liabilities	\$ 33,475	\$ 225	\$ 4,230	\$ 37,930
Amounts not offset¹				
Financial instruments collateral	(6,338)	—	(2,658)	(8,996)
Net amounts	\$ 27,137	\$ 225	\$ 1,572	\$ 28,934
Net amounts for which master netting or collateral agreements are not in place or may not be legally enforceable				\$ 4,321

\$ in millions	Assets at December 31, 2023			
	Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Designated as accounting hedges				
Interest rate	\$ 25	\$ —	\$ —	\$ 25
Foreign exchange	5	5	—	10
Total	30	5	—	35
Not designated as accounting hedges				
Economic hedges of loans				
Credit	2	27	—	29
Other derivatives				
Interest rate	127,414	19,914	854	148,182
Credit	5,712	4,896	—	10,608
Foreign exchange	90,654	2,570	16	93,240
Equity	20,338	—	37,737	58,075
Commodity and other	13,928	—	2,353	16,281
Total	258,048	27,407	40,960	326,415
Total gross derivatives	\$ 258,078	\$ 27,412	\$ 40,960	\$ 326,450
Amounts offset				
Counterparty netting	(184,553)	(23,851)	(38,510)	(246,914)
Cash collateral netting	(39,493)	(2,730)	—	(42,223)
Total in Trading assets	\$ 34,032	\$ 831	\$ 2,450	\$ 37,313
Amounts not offset¹				
Financial instruments collateral	(15,690)	—	—	(15,690)
Net amounts	\$ 18,342	\$ 831	\$ 2,450	\$ 21,623
Net amounts for which master netting or collateral agreements are not in place or may not be legally enforceable				
				\$ 2,641

\$ in millions	Liabilities at December 31, 2023			
	Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Designated as accounting hedges				
Interest rate	\$ 467	\$ —	\$ —	\$ 467
Foreign exchange	414	43	—	457
Total	881	43	—	924
Not designated as accounting hedges				
Economic hedges of loans				
Credit	43	702	—	745
Other derivatives				
Interest rate	120,604	17,179	590	138,373
Credit	5,920	4,427	—	10,347
Foreign exchange	87,104	2,694	106	89,904
Equity	31,545	—	37,349	68,894
Commodity and other	12,237	—	2,830	15,067
Total	257,453	25,002	40,875	323,330
Total gross derivatives	\$ 258,334	\$ 25,045	\$ 40,875	\$ 324,254
Amounts offset				
Counterparty netting	(184,553)	(23,851)	(38,510)	(246,914)
Cash collateral netting	(41,082)	(983)	—	(42,065)
Total in Trading liabilities	\$ 32,699	\$ 211	\$ 2,365	\$ 35,275
Amounts not offset¹				
Financial instruments collateral	(6,864)	(8)	(37)	(6,909)
Net amounts	\$ 25,835	\$ 203	\$ 2,328	\$ 28,366
Net amounts for which master netting or collateral agreements are not in place or may not be legally enforceable				
				\$ 5,911

1. Amounts relate to master netting agreements and collateral agreements that have been determined by the Firm to be legally enforceable in the event of default but where certain other netting criteria are not met in accordance with applicable offsetting accounting guidance.

See Note 4 for information related to the unsettled fair value of futures contracts not designated as accounting hedges, which are excluded from the previous tables.

Notionals of Derivative Contracts

\$ in billions	Assets at December 31, 2024			
	Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Designated as accounting hedges				
Interest rate	\$ —	\$ 108	\$ —	\$ 108
Foreign exchange	14	4	—	18
Total	14	112	—	126
Not designated as accounting hedges				
Economic hedges of loans				
Credit	—	—	—	—
Other derivatives				
Interest rate	3,713	4,367	442	8,522
Credit	208	149	—	357
Foreign exchange	2,717	171	9	2,897
Equity	591	—	609	1,200
Commodity and other	137	—	77	214
Total	7,366	4,687	1,137	13,190
Total gross derivatives	\$ 7,380	\$ 4,799	\$ 1,137	\$ 13,316

\$ in billions	Liabilities at December 31, 2024			
	Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Designated as accounting hedges				
Interest rate	\$ 2	\$ 193	\$ —	\$ 195
Foreign exchange	1	—	—	1
Total	3	193	—	196
Not designated as accounting hedges				
Economic hedges of loans				
Credit	2	20	—	22
Other derivatives				
Interest rate	3,626	4,468	417	8,511
Credit	230	133	—	363
Foreign exchange	2,763	178	18	2,959
Equity	754	—	826	1,580
Commodity and other	100	—	89	189
Total	7,475	4,799	1,350	13,624
Total gross derivatives	\$ 7,478	\$ 4,992	\$ 1,350	\$ 13,820

\$ in billions	Assets at December 31, 2023			
	Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Designated as accounting hedges				
Interest rate	\$ —	\$ 92	\$ —	\$ 92
Foreign exchange	1	1	—	2
Total	1	93	—	94
Not designated as accounting hedges				
Economic hedges of loans				
Credit	—	1	—	1
Other derivatives				
Interest rate	4,153	8,357	560	13,070
Credit	214	176	—	390
Foreign exchange	3,378	165	7	3,550
Equity	528	—	440	968
Commodity and other	142	—	65	207
Total	8,415	8,699	1,072	18,186
Total gross derivatives	\$ 8,416	\$ 8,792	\$ 1,072	\$ 18,280

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\$ in billions	Liabilities at December 31, 2023			
	Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Designated as accounting hedges				
Interest rate	\$ 3	\$ 183	\$ —	\$ 186
Foreign exchange	14	3	—	17
Total	17	186	—	203
Not designated as accounting hedges				
Economic hedges of loans				
Credit	2	22	—	24
Other derivatives				
Interest rate	4,631	8,197	455	13,283
Credit	229	155	—	384
Foreign exchange	3,496	167	33	3,696
Equity	587	—	712	1,299
Commodity and other	101	—	79	180
Total	9,046	8,541	1,279	18,866
Total gross derivatives	\$ 9,063	\$ 8,727	\$ 1,279	\$ 19,069

The notional amounts of derivative contracts generally overstate the Firm's exposure. In most circumstances, notional amounts are used only as a reference point from which to calculate amounts owed between the parties to the contract. Furthermore, notional amounts do not reflect the benefit of legally enforceable netting arrangements or risk mitigating transactions.

Gains (Losses) on Accounting Hedges

\$ in millions	2024	2023	2022
Fair value hedges—Recognized in Interest income			
Interest rate contracts	\$ 291	\$ (576)	\$ 1,928
Investment Securities—AFS	(204)	638	(1,838)
Fair value hedges—Recognized in Interest expense			
Interest rate contracts	\$ (822)	\$ 3,664	\$ (15,159)
Deposits	(75)	(88)	124
Borrowings	889	(3,564)	15,042
Net investment hedges—Foreign exchange contracts			
Recognized in OCI	\$ 1,084	\$ (168)	\$ 657
Forward points excluded from hedge effectiveness testing—Recognized in Interest income	214	211	(33)
Cash flow hedges—Interest rate contracts¹			
Recognized in OCI	\$ (100)	\$ 9	\$ (4)
Less: Realized gains (losses) (pre-tax) reclassified from AOCI to interest income	(32)	(16)	—
Net change in cash flow hedges included within AOCI	(68)	25	(4)

1. For the year ended 2024, there were no forecasted transactions that failed to occur. The net gains (losses) associated with cash flow hedges expected to be reclassified from AOCI within 12 months as of December 31, 2024 is approximately \$31 million. The maximum length of time over which forecasted cash flows are hedged is 28 months.

Fair Value Hedges—Hedged Items

\$ in millions	At December 31, 2024	At December 31, 2023
Investment securities—AFS		
Amortized cost basis currently or previously hedged ¹	\$ 54,809	\$ 47,179
Basis adjustments included in amortized cost ²	\$ (741)	\$ (732)
Deposits		
Carrying amount currently or previously hedged	\$ 21,524	\$ 10,569
Basis adjustments included in carrying amount ²	\$ 44	\$ (31)
Borrowings		
Carrying amount currently or previously hedged	\$ 171,834	\$ 158,659
Basis adjustments included in carrying amount—Outstanding hedges	\$ (10,072)	\$ (9,219)
Basis adjustments included in amortized cost—Terminated hedges	\$ (648)	\$ (671)

- Carrying amount represents the amortized cost, net of allowance if applicable. At December 31, 2024, the amortized cost of the portfolio layer method closed portfolios was \$325 million, of which \$178 million was designated as hedged. The cumulative amount of basis adjustments was \$(2) million as of December 31, 2024. Refer to Note 2 and Note 7 for additional information.
- Hedge accounting basis adjustments are primarily related to outstanding hedges.

Gains (Losses) on Economic Hedges of Loans

\$ in millions	2024	2023	2022
Recognized in Other revenues			
Credit contracts ¹	(294)	(522)	(62)

1. Amounts related to hedges of certain held-for-investment and held-for-sale loans.

Derivatives with Credit Risk-Related Contingencies**Net Derivative Liabilities and Collateral Posted**

\$ in millions	At December 31, 2024	At December 31, 2023
Net derivative liabilities with credit risk-related contingent features	\$ 22,414	\$ 21,957
Collateral posted	16,252	16,389

The previous table presents the aggregate fair value of certain derivative contracts that contain credit risk-related contingent features that are in a net liability position for which the Firm has posted collateral in the normal course of business.

Incremental Collateral and Termination Payments upon Potential Future Ratings Downgrade

\$ in millions	At December 31, 2024
One-notch downgrade	\$ 235
Two-notch downgrade	411
Bilateral downgrade agreements included in the amounts above ¹	\$ 524

1. Amount represents arrangements between the Firm and other parties where upon the downgrade of one party, the downgraded party must deliver collateral to the other party. These bilateral downgrade arrangements are used by the Firm to manage the risk of counterparty downgrades.

The additional collateral or termination payments that may be called in the event of a future credit rating downgrade vary by contract and can be based on ratings by Moody's Investors Service, Inc., S&P Global Ratings and/or other rating agencies. The previous table shows the future potential

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collateral amounts and termination payments that could be called or required by counterparties or exchange and clearing organizations in the event of one-notch or two-notch downgrade scenarios based on the relevant contractual downgrade triggers.

Maximum Potential Payout/Notional of Credit Protection Sold¹

\$ in billions	Years to Maturity at December 31, 2024				
	< 1	1-3	3-5	Over 5	Total
Single-name CDS					
Investment grade	\$ 15	\$ 31	\$ 37	\$ 10	\$ 93
Non-investment grade	7	16	16	1	40
Total	\$ 22	\$ 47	\$ 53	\$ 11	\$ 133
Index and basket CDS					
Investment grade	\$ 3	\$ 12	\$ 10	\$ —	\$ 25
Non-investment grade	11	22	158	16	207
Total	\$ 14	\$ 34	\$ 168	\$ 16	\$ 232
Total CDS sold	\$ 36	\$ 81	\$ 221	\$ 27	\$ 365
Other credit contracts	—	—	—	3	3
Total credit protection sold	\$ 36	\$ 81	\$ 221	\$ 30	\$ 368
CDS protection sold with identical protection purchased					\$ 303

\$ in billions	Years to Maturity at December 31, 2023				
	< 1	1-3	3-5	Over 5	Total
Single-name CDS					
Investment grade	\$ 19	\$ 29	\$ 39	\$ 10	\$ 97
Non-investment grade	7	14	17	1	39
Total	\$ 26	\$ 43	\$ 56	\$ 11	\$ 136
Index and basket CDS					
Investment grade	\$ 8	\$ 19	\$ 85	\$ 4	\$ 116
Non-investment grade	8	14	95	17	134
Total	\$ 16	\$ 33	\$ 180	\$ 21	\$ 250
Total CDS sold	\$ 42	\$ 76	\$ 236	\$ 32	\$ 386
Other credit contracts	—	—	—	3	3
Total credit protection sold	\$ 42	\$ 76	\$ 236	\$ 35	\$ 389
CDS protection sold with identical protection purchased					\$ 330

Fair Value Asset (Liability) of Credit Protection Sold¹

\$ in millions	At December 31, 2024	At December 31, 2023
Single-name CDS		
Investment grade	\$ 1,890	\$ 1,904
Non-investment grade	585	399
Total	\$ 2,475	\$ 2,303
Index and basket CDS		
Investment grade	\$ 799	\$ 1,929
Non-investment grade	489	45
Total	\$ 1,288	\$ 1,974
Total CDS sold	\$ 3,763	\$ 4,277
Other credit contracts	133	314
Total credit protection sold	\$ 3,896	\$ 4,591

1. Investment grade/non-investment grade determination is based on the internal credit rating of the reference obligation. Internal credit ratings serve as the CRM's assessment of credit risk and the basis for a comprehensive credit limits framework used to control credit risk. The Firm uses quantitative models and judgment to estimate the various risk parameters related to each obligor.

Protection Purchased with CDS

\$ in billions	Notional	
	At December 31, 2024	At December 31, 2023
Single name	\$ 156	\$ 166
Index and basket	193	213
Tranched index and basket	28	30
Total	\$ 377	\$ 409

\$ in millions	Fair Value Asset (Liability)	
	At December 31, 2024	At December 31, 2023
Single name	\$ (2,693)	\$ (2,799)
Index and basket	(654)	(1,208)
Tranched index and basket	(962)	(1,012)
Total	\$ (4,309)	\$ (5,019)

The Firm enters into credit derivatives, principally CDS, under which it receives or provides protection against the risk of default on a set of debt obligations issued by a specified reference entity or entities. A majority of the Firm's counterparties for these derivatives are banks, broker-dealers, and insurance and other financial institutions.

The fair value amounts as shown in the previous tables are prior to cash collateral or counterparty netting.

The purchase of credit protection does not represent the sole manner in which the Firm risk manages its exposure to credit derivatives. The Firm manages its exposure to these derivative contracts through a variety of risk mitigation strategies, which include managing the credit and correlation risk across single-name, non-tranched indices and baskets, tranched indices and baskets, and cash positions. Aggregate market risk limits have been established for credit derivatives, and market risk measures are routinely monitored against these limits. The Firm may also recover amounts on the underlying reference obligation delivered to the Firm under CDS where credit protection was sold.

Single-Name CDS. A CDS protects the buyer against the loss of principal on a bond or loan in case of a default by the issuer. The protection buyer pays a periodic premium (generally quarterly) over the life of the contract and is protected for the period. The Firm, in turn, performs under a CDS if a credit event as defined under the contract occurs. Typical credit events include bankruptcy, dissolution or insolvency of the referenced entity, failure to pay and restructuring of the obligations of the referenced entity.

Index and Basket CDS. Index and basket CDS are products where credit protection is provided on a portfolio of single-name CDS. Generally, in the event of a default on one of the underlying names, the Firm pays a pro rata portion of the total notional amount of the CDS.

The Firm also enters into tranched index and basket CDS where credit protection is provided on a particular portion of the portfolio loss distribution. The most junior tranches cover initial defaults, and once losses exceed the notional of the

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tranche, they are passed on to the next most senior tranche in the capital structure.

Other Credit Contracts. The Firm has invested in CLNs and CDOs, which are hybrid instruments containing embedded derivatives, in which credit protection has been sold to the issuer of the note. If there is a credit event of a reference entity underlying the instrument, the principal balance of the note may not be repaid in full to the Firm.

7. Investment Securities

AFS and HTM Securities

\$ in millions	At December 31, 2024			
	Amortized Cost ¹	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
AFS securities				
U.S. Treasury securities	\$ 70,160	\$ 62	\$ 388	69,834
U.S. agency securities ²	24,113	6	2,652	21,467
Agency CMBS	5,704	—	388	5,316
State and municipal securities	1,373	18	4	1,387
FFELP student loan ABS ³	612	1	9	604
Unallocated basis adjustment ⁴	(2)	2	—	—
Total AFS securities	101,960	89	3,441	98,608
HTM securities				
U.S. Treasury securities	16,885	—	1,082	15,803
U.S. agency securities ²	41,582	4	8,592	32,994
Agency CMBS	1,154	—	88	1,066
Non-agency CMBS	1,450	3	113	1,340
Total HTM securities	61,071	7	9,875	51,203
Total investment securities	\$ 163,031	\$ 96	\$ 13,316	\$149,811

\$ in millions	At December 31, 2023			
	Amortized Cost ¹	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
AFS securities				
U.S. Treasury securities	\$ 58,484	\$ 24	\$ 1,103	\$57,405
U.S. agency securities ²	25,852	4	2,528	23,328
Agency CMBS	5,871	—	456	5,415
State and municipal securities	1,132	46	5	1,173
FFELP student loan ABS ³	810	—	18	792
Total AFS securities	92,149	74	4,110	88,113
HTM securities				
U.S. Treasury securities	23,222	—	1,285	21,937
U.S. agency securities ²	40,894	—	7,699	33,195
Agency CMBS	1,337	—	121	1,216
Non-agency CMBS	1,241	2	138	1,105
Total HTM securities	66,694	2	9,243	57,453
Total investment securities	\$ 158,843	\$ 76	\$ 13,353	\$145,566

- Amounts are net of any ACL.
- U.S. agency securities consist mainly of agency mortgage pass-through pool securities, CMOs and agency-issued debt.
- Underlying loans are backed by a guarantee, ultimately from the U.S. Department of Education, of at least 95% of the principal balance and interest outstanding.
- Represents the amount of unallocated portfolio layer method basis adjustments related to AFS securities hedged in a closed portfolio. Portfolio layer method basis adjustments are not allocated to individual securities. Refer to Note 2 and Note 6 for additional information.

Investment Securities in an Unrealized Loss Position

\$ in millions	At December 31, 2024		At December 31, 2023	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
U.S. Treasury securities				
Less than 12 months	\$ 18,338	\$ 65	\$ 14,295	\$ 22
12 months or longer	19,629	323	33,458	1,081
Total	37,967	388	47,753	1,103
U.S. agency securities				
Less than 12 months	765	11	4,297	43
12 months or longer	18,996	2,641	18,459	2,485
Total	19,761	2,652	22,756	2,528
Agency CMBS				
12 months or longer	5,018	388	5,415	456
Total	5,018	388	5,415	456
State and municipal securities				
Less than 12 months	242	2	524	3
12 months or longer	62	2	35	2
Total	304	4	559	5
FFELP student loan ABS				
Less than 12 months	—	—	56	1
12 months or longer	442	9	616	17
Total	442	9	672	18
Total AFS securities in an unrealized loss position				
Less than 12 months	19,345	78	19,172	69
12 months or longer	44,147	3,363	57,983	4,041
Total	\$ 63,492	\$ 3,441	\$ 77,155	\$ 4,110

For AFS securities, the Firm believes there are no securities in an unrealized loss position that have credit losses after performing the analysis described in Note 2. Additionally, the Firm does not intend to sell these securities and is not likely to be required to sell these securities prior to recovery of the amortized cost basis. As of December 31, 2024 and December 31, 2023, the securities in an unrealized loss position are predominantly investment grade.

The HTM securities net carrying amounts at December 31, 2024 and December 31, 2023 reflect an ACL of \$52 million and \$44 million, respectively, predominantly related to Non-agency CMBS. See Note 2 for a description of the ACL methodology used for HTM Securities.

As of December 31, 2024 and December 31, 2023, 98% of the Firm's portfolio of HTM securities were investment grade U.S. agency securities, U.S. Treasury securities and Agency CMBS, which were on accrual status and for which there is an underlying assumption of zero credit losses. Non-investment grade HTM securities primarily consisted of certain Non-agency CMBS securities, for which the expected credit losses were insignificant and were predominantly on accrual status at December 31, 2024 and December 31, 2023.

See Note 15 for additional information on securities issued by VIEs, including U.S. agency mortgage-backed securities, non-agency CMBS, and FFELP student loan ABS.

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Investment Securities by Contractual Maturity

\$ in millions	At December 31, 2024		
	Amortized Cost ¹	Fair Value	Annualized Average Yield ^{2,3}
AFS securities			
U.S. Treasury securities:			
Due within 1 year	\$ 18,575	\$ 18,393	2.2 %
After 1 year through 5 years	46,529	46,395	3.7 %
After 5 years through 10 years	5,056	5,046	4.2 %
Total	70,160	69,834	
U.S. agency securities:			
Due within 1 year	11	11	1.0 %
After 1 year through 5 years	254	241	1.6 %
After 5 years through 10 years	414	380	1.8 %
After 10 years	23,434	20,835	3.4 %
Total	24,113	21,467	
Agency CMBS:			
After 1 year through 5 years	4,054	3,899	2.0 %
After 5 years through 10 years	547	535	1.6 %
After 10 years	1,103	882	1.5 %
Total	5,704	5,316	
State and municipal securities:			
Due within 1 year	852	852	4.9 %
After 1 year through 5 years	215	214	4.7 %
After 5 years through 10 years	49	48	5.8 %
After 10 years	257	273	4.6 %
Total	1,373	1,387	
FFELP student loan ABS:			
Due within 1 year	12	11	5.3 %
After 1 year through 5 years	113	110	5.6 %
After 5 years through 10 years	24	23	5.4 %
After 10 years	463	460	5.8 %
Total	612	604	
Unallocated basis adjustment ⁴ :	(2)	—	—
Total AFS securities	101,960	98,608	3.3 %

\$ in millions	At December 31, 2024		
	Amortized Cost ¹	Fair Value	Annualized Average Yield ²
HTM securities			
U.S. Treasury securities:			
Due within 1 year	\$ 4,635	\$ 4,558	1.2 %
After 1 year through 5 years	10,191	9,777	2.3 %
After 5 years through 10 years	503	414	1.1 %
After 10 years	1,556	1,054	2.3 %
Total	16,885	15,803	
U.S. agency securities:			
After 1 year through 5 years	8	8	1.8 %
After 5 years through 10 years	223	208	2.1 %
After 10 years	41,351	32,778	2.1 %
Total	41,582	32,994	
Agency CMBS:			
Due within 1 year	294	289	1.5 %
After 1 year through 5 years	632	591	1.2 %
After 5 years through 10 years	176	144	1.6 %
After 10 years	52	42	1.3 %
Total	1,154	1,066	
Non-agency CMBS:			
Due within 1 year	146	124	3.9 %
After 1 year through 5 years	648	618	4.5 %
After 5 years through 10 years	455	403	4.0 %
After 10 years	201	195	7.4 %
Total	1,450	1,340	
Total HTM securities	61,071	51,203	2.1 %
Total investment securities	\$ 163,031	\$ 149,811	2.9 %

1. Amounts are net of any ACL.
2. Annualized average yield is computed using the effective yield, weighted based on the amortized cost of each security. The effective yield is shown pre-tax and excludes the effect of related hedging derivatives.
3. At December 31, 2024, the annualized average yield, including the interest rate swap accrual of related hedges, was 2.7% for AFS securities contractually maturing within 1 year and 3.8% for all AFS securities.
4. Represents the amount of unallocated portfolio layer method basis adjustments related to AFS securities hedged in a closed portfolio. Portfolio layer method basis adjustments are not allocated to individual securities. Refer to Note 2 and Note 6 for additional information.

Gross Realized Gains (Losses) on Sales of AFS Securities

\$ in millions	2024	2023	2022
Gross realized gains	\$ 52	\$ 70	\$ 164
Gross realized (losses)	—	(21)	(94)
Total¹	\$ 52	\$ 49	\$ 70

1. Realized gains and losses are recognized in Other revenues in the income statement.

8. Collateralized Transactions

The Firm enters into securities purchased under agreements to resell, securities sold under agreements to repurchase, securities borrowed and securities loaned transactions to, among other things, acquire securities to cover short positions and settle other securities obligations, to accommodate customers' needs and to finance its inventory positions.

The Firm monitors the fair value of the underlying securities as compared with the related receivable or payable, including accrued interest, and, as necessary, requests additional collateral, as provided under the applicable agreement to ensure such transactions are adequately collateralized, or returns excess collateral.

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The risk related to a decline in the market value of collateral pledged or received is managed by setting appropriate market-based margin requirements. Increases in collateral margin calls on secured financing due to market value declines may be mitigated by increases in collateral margin calls on securities purchased under agreements to resell and securities borrowed transactions with similar quality collateral. Additionally, the Firm may request lower quality collateral pledged be replaced with higher quality collateral through collateral substitution rights in the underlying agreements.

The Firm actively manages its secured financings in a manner that reduces the potential refinancing risk of secured financings of less liquid assets and also considers the quality of collateral when negotiating collateral eligibility with counterparties. The Firm utilizes shorter term secured financing for highly liquid assets and has established longer tenor limits for less liquid assets, for which funding may be at risk in the event of a market disruption.

Offsetting of Certain Collateralized Transactions

At December 31, 2024					
<i>\$ in millions</i>	Gross Amounts	Amounts Offset	Balance Sheet Net Amounts	Amounts Not Offset ¹	Net Amounts
Assets					
Securities purchased under agreements to resell	\$409,635	\$(291,070)	\$ 118,565	\$(116,157)	\$ 2,408
Securities borrowed	165,642	(41,783)	123,859	(117,573)	6,286
Liabilities					
Securities sold under agreements to repurchase	\$341,137	\$(291,070)	\$ 50,067	\$(45,520)	\$ 4,547
Securities loaned	57,009	(41,783)	15,226	(15,211)	15
Net amounts for which master netting agreements are not in place or may not be legally enforceable					
Securities purchased under agreements to resell					\$ 2,054
Securities borrowed					2,079
Securities sold under agreements to repurchase					3,448
Securities loaned					—

At December 31, 2023					
<i>\$ in millions</i>	Gross Amounts	Amounts Offset	Balance Sheet Net Amounts	Amounts Not Offset ¹	Net Amounts
Assets					
Securities purchased under agreements to resell	\$300,242	\$(189,502)	\$ 110,740	\$(108,893)	\$ 1,847
Securities borrowed	142,453	(21,362)	121,091	(115,969)	5,122
Liabilities					
Securities sold under agreements to repurchase	\$252,153	\$(189,502)	\$ 62,651	\$(58,357)	\$ 4,294
Securities loaned	36,419	(21,362)	15,057	(15,046)	11
Net amounts for which master netting agreements are not in place or may not be legally enforceable					
Securities purchased under agreements to resell					\$ 1,741
Securities borrowed					607
Securities sold under agreements to repurchase					3,014
Securities loaned					2

1. Amounts relate to master netting agreements that have been determined by the Firm to be legally enforceable in the event of default but where certain other criteria are not met in accordance with applicable offsetting accounting guidance.

For information related to offsetting of derivatives, see Note 6.

Gross Secured Financing Balances by Remaining Contractual Maturity

At December 31, 2024					
<i>\$ in millions</i>	Overnight and Open	Less than 30 Days	30-90 Days	Over 90 Days	Total
Securities sold under agreements to repurchase	\$ 180,793	\$ 104,551	\$ 25,071	\$ 30,722	\$ 341,137
Securities loaned	42,473	—	317	14,219	57,009
Total included in the offsetting disclosure	\$ 223,266	\$ 104,551	\$ 25,388	\$ 44,941	\$ 398,146
Trading liabilities—Obligation to return securities received as collateral	18,067	—	—	—	18,067
Total	\$ 241,333	\$ 104,551	\$ 25,388	\$ 44,941	\$ 416,213

At December 31, 2023					
<i>\$ in millions</i>	Overnight and Open	Less than 30 Days	30-90 Days	Over 90 Days	Total
Securities sold under agreements to repurchase	\$ 80,376	\$ 114,826	\$ 25,510	\$ 31,441	\$ 252,153
Securities loaned	21,508	1,345	709	12,857	36,419
Total included in the offsetting disclosure	\$ 101,884	\$ 116,171	\$ 26,219	\$ 44,298	\$ 288,572
Trading liabilities—Obligation to return securities received as collateral	13,528	—	—	—	13,528
Total	\$ 115,412	\$ 116,171	\$ 26,219	\$ 44,298	\$ 302,100

Gross Secured Financing Balances by Class of Collateral Pledged

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Securities sold under agreements to repurchase		
U.S. Treasury and agency securities	\$ 177,464	\$ 98,377
Other sovereign government obligations	135,806	122,342
Corporate equities	14,993	18,144
Other	12,874	13,290
Total	\$ 341,137	\$ 252,153
Securities loaned		
Other sovereign government obligations	\$ 1,805	\$ 1,379
Corporate equities	54,144	34,434
Other	1,060	606
Total	\$ 57,009	\$ 36,419
Total included in the offsetting disclosure	\$ 398,146	\$ 288,572
Trading liabilities—Obligation to return securities received as collateral		
Corporate equities	\$ 18,059	\$ 13,502
Other	8	26
Total	\$ 18,067	\$ 13,528
Total	\$ 416,213	\$ 302,100

Carrying Value of Assets Loaned or Pledged without Counterparty Right to Sell or Repledge

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Trading assets	\$ 30,867	\$ 37,522

The Firm pledges certain of its trading assets to collateralize securities sold under agreements to repurchase, securities

Notes to Consolidated Financial Statements

loaned, other secured financings and derivatives and to cover customer short sales.

Pledged financial instruments that can be sold or repledged by the secured party are identified as Trading assets (pledged to various parties) in the balance sheet. Pledged financial instruments that cannot be sold or repledged by the secured party are included within Trading Assets, but not identified as pledged assets parenthetically in the balance sheet.

Fair Value of Collateral Received with Right to Sell or Repledge

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Collateral received with right to sell or repledge	\$ 932,626	\$ 735,830
Collateral that was sold or repledged ¹	724,177	553,386

1. Does not include securities used to meet federal regulations for the Firm's U.S. broker-dealers.

The Firm receives collateral in the form of securities in connection with securities purchased under agreements to resell, securities borrowed, securities-for-securities transactions, derivative transactions, customer margin loans and securities-based lending. In many cases, the Firm is permitted to sell or repledge this collateral to secure securities sold under agreements to repurchase, to enter into securities lending and derivative transactions or to deliver to counterparties to cover short positions.

Securities Segregated for Regulatory Purposes

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Segregated securities ¹	\$ 26,329	\$ 20,670

1. Securities segregated under federal regulations for the Firm's U.S. broker-dealers are sourced from Securities purchased under agreements to resell and Trading assets in the balance sheet.

Concentration Based on the Firm's Total Assets

U.S. government and agency securities and other sovereign government obligations	At December 31, 2024	At December 31, 2023
Trading assets ¹	11 %	12 %
Off balance sheet—Collateral received ²	12 %	11 %

1. Other sovereign government obligations included in Trading assets primarily consist of obligations of the U.K., Japan and Brazil.
2. Collateral received is primarily related to Securities purchased under agreements to resell and Securities borrowed.

The Firm is subject to concentration risk by holding large positions in certain types of securities, loans or commitments to purchase securities of a single issuer, including sovereign governments and other entities, issuers located in a particular country or geographic area, public and private issuers involving developing countries or issuers engaged in a particular industry.

Positions taken and underwriting and financing commitments, including those made in connection with the Firm's private equity, principal investment and lending activities, often

involve substantial amounts and significant exposure to individual issuers and businesses, including investment grade and non-investment grade issuers.

Customer Margin and Other Lending

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Margin and other lending	\$ 55,882	\$ 45,644

The Firm provides margin lending arrangements that allow customers to borrow against the value of qualifying securities. Receivables from these arrangements are included within Customer and other receivables in the balance sheet. Under these arrangements, the Firm receives collateral, which includes U.S. government and agency securities, other sovereign government obligations, corporate and other debt, and corporate equities. Margin loans are collateralized by customer-owned securities held by the Firm. The Firm monitors required margin levels and established credit terms daily and, pursuant to such guidelines, requires customers to deposit additional collateral, or reduce positions, when necessary.

Margin loans are extended on a demand basis and generally are not committed facilities. Factors considered in the review of margin loans are the amount of the loan, the intended purpose, the degree of leverage being employed in the account and the amount of collateral, as well as an overall evaluation of the portfolio to ensure proper diversification or, in the case of concentrated positions, appropriate liquidity of the underlying collateral or potential hedging strategies to reduce risk. Underlying collateral for margin loans is reviewed with respect to the liquidity of the proposed collateral positions, valuation of securities, historic trading range, volatility analysis and an evaluation of industry concentrations. For these transactions, adherence to the Firm's collateral policies significantly limits its credit exposure in the event of a customer default. The Firm may request additional margin collateral from customers, if appropriate, and, if necessary, may sell securities that have not been paid for or purchase securities sold but not delivered from customers.

Also included in the amounts in the previous table is non-purpose securities-based lending on entities in the Wealth Management business segment.

Other Secured Financings

Other secured financings include the liabilities related to collateralized notes, transfers of financial assets that are accounted for as financings rather than sales and consolidated VIEs where the Firm is deemed to be the primary beneficiary. These liabilities are generally payable from the cash flows of the related assets accounted for as Trading assets (see Notes 13 and 15). Additionally, for certain secured financing transactions that meet applicable netting criteria, the Firm offset Other secured financing liabilities against financing receivables recorded within Trading assets in the amount of

Notes to Consolidated Financial Statements

\$437 million at December 31, 2024 and \$3,472 million at December 31, 2023.

9. Loans, Lending Commitments and Related Allowance for Credit Losses

The Firm's held-for-investment and held-for-sale loan portfolios consist of the following types of loans:

- *Corporate.* Corporate includes revolving lines of credit, term loans and bridge loans made to corporate entities for a variety of purposes.
- *Secured Lending Facilities.* Secured lending facilities include loans provided to clients, which are collateralized by various assets, including residential and commercial real estate mortgage loans, investor commitments for capital calls, corporate loans and other assets.
- *Commercial Real Estate.* Commercial real estate loans include owner-occupied loans and income-producing loans.
- *Residential Real Estate.* Residential real estate loans mainly include non-conforming loans and HELOC.
- *Securities-based Lending and Other.* Securities-based lending includes loans that allow clients to borrow money against the value of qualifying securities, generally for any suitable purpose other than purchasing, trading, or carrying securities or refinancing margin debt. The majority of these loans are structured as revolving lines of credit. Other primarily includes certain loans originated in the tailored lending business within the Wealth Management business segment.

Loans by Type

\$ in millions	At December 31, 2024		
	HFI Loans	HFS Loans	Total Loans
Corporate	\$ 6,889	\$ 9,183	\$ 16,072
Secured lending facilities	48,842	2,507	51,349
Commercial real estate	8,412	628	9,040
Residential real estate	66,738	—	66,738
Securities-based lending and Other	96,019	1	96,020
Total loans	226,900	12,319	239,219
ACL	(1,066)		(1,066)
Total loans, net	\$ 225,834	\$ 12,319	\$ 238,153
Loans to non-U.S. borrowers, net	\$ 23,335	\$ 4,763	\$ 28,098

\$ in millions	At December 31, 2023		
	HFI Loans	HFS Loans	Total Loans
Corporate	\$ 6,758	\$ 11,862	\$ 18,620
Secured lending facilities	39,498	3,161	42,659
Commercial real estate	8,678	209	8,887
Residential real estate	60,375	22	60,397
Securities-based lending and Other	89,245	1	89,246
Total loans	204,554	15,255	219,809
ACL	(1,169)		(1,169)
Total loans, net	\$ 203,385	\$ 15,255	\$ 218,640
Loans to non-U.S. borrowers, net	\$ 21,152	\$ 5,043	\$ 26,195

Loans by Interest Rate Type

\$ in millions	At December 31, 2024		At December 31, 2023	
	Fixed Rate	Floating or Adjustable Rate	Fixed Rate	Floating or Adjustable Rate
Corporate	\$ —	\$ 16,071	\$ —	\$ 18,620
Secured lending facilities	—	51,349	—	42,659
Commercial real estate	—	9,041	141	8,746
Residential real estate	31,014	35,724	28,934	31,464
Securities-based lending and Other	25,478	70,542	23,922	65,323
Total loans, before ACL	\$ 56,492	\$ 182,727	\$ 52,997	\$ 166,812

See Note 4 for further information regarding Loans and lending commitments held at fair value. See Note 14 for details of current commitments to lend in the future.

Credit Quality

The CRM evaluates new obligors before credit transactions are initially approved and at least annually thereafter for corporate and commercial real estate loans. For Corporate, Secured lending facilities and Other loans, credit evaluations typically involve the evaluation of financial statements, assessment of leverage, liquidity, capital strength, asset composition and quality, market capitalization and access to capital markets, cash flow projections and debt service requirements, and the adequacy of collateral, if applicable. The CRM also evaluates strategy, market position, industry dynamics, obligor's management and other factors that could affect an obligor's risk profile.

For Commercial real estate loans, the credit evaluation is focused on property and transaction metrics, including property type, LTV ratio, occupancy levels, debt service ratio, prevailing capitalization rates and market dynamics.

For Residential real estate and Securities-based loans, the initial credit evaluation typically includes, but is not limited to, review of the obligor's income, net worth, liquidity, collateral, LTV ratio and credit bureau information. Subsequent credit monitoring for residential real estate loans is performed at the portfolio level. Securities-based loan collateral values are monitored on an ongoing basis.

For information related to credit quality indicators considered in developing the ACL, see Note 2.

Notes to Consolidated Financial Statements

Loans Held for Investment before Allowance by Credit Quality and Origination Year

\$ in millions	At December 31, 2024			At December 31, 2023		
	Corporate					
	IG	NIG	Total	IG	NIG	Total
Revolving	\$ 2,668	\$ 3,963	\$ 6,631	\$ 2,350	\$ 3,863	\$ 6,213
2024	76	58	134			
2023	—	50	50	—	88	88
2022	—	25	25	—	166	166
2021	15	—	15	15	89	104
2020	31	3	34	29	25	54
Prior	—	—	—	—	133	133
Total	\$ 2,790	\$ 4,099	\$ 6,889	\$ 2,394	\$ 4,364	\$ 6,758

\$ in millions	At December 31, 2024			At December 31, 2023		
	Secured Lending Facilities					
	IG	NIG	Total	IG	NIG	Total
Revolving	\$ 11,405	\$ 27,753	\$ 39,158	\$ 9,494	\$ 22,240	\$ 31,734
2024	818	2,863	3,681			
2023	1,371	1,359	2,730	1,535	1,459	2,994
2022	279	1,909	2,188	392	2,390	2,782
2021	—	198	198	—	365	365
2020	—	—	—	—	80	80
Prior	100	787	887	356	1,187	1,543
Total	\$ 13,973	\$ 34,869	\$ 48,842	\$ 11,777	\$ 27,721	\$ 39,498

\$ in millions	At December 31, 2024			At December 31, 2023		
	Commercial Real Estate					
	IG	NIG	Total	IG	NIG	Total
Revolving	\$ —	\$ 161	\$ 161	\$ —	\$ 170	\$ 170
2024	147	2,202	2,349			
2023	351	772	1,123	261	1,067	1,328
2022	305	1,488	1,793	284	1,900	2,184
2021	166	1,603	1,769	370	1,494	1,864
2020	—	430	430	—	756	756
Prior	—	787	787	195	2,181	2,376
Total	\$ 969	\$ 7,443	\$ 8,412	\$ 1,110	\$ 7,568	\$ 8,678

\$ in millions	At December 31, 2024					
	Residential Real Estate					
	by FICO Scores			by LTV Ratio		Total
	≥ 740	680-739	≤ 679	≤ 80%	> 80%	
Revolving	\$ 136	\$ 39	\$ 5	\$ 180	\$ —	\$ 180
2024	8,653	1,607	191	9,458	993	10,451
2023	6,778	1,431	201	7,529	881	8,410
2022	10,294	2,298	370	11,941	1,021	12,962
2021	10,510	2,247	228	12,094	891	12,985
2020	6,494	1,346	97	7,529	408	7,937
Prior	10,594	2,825	394	12,826	987	13,813
Total	\$ 53,459	\$ 11,793	\$ 1,486	\$ 61,557	\$ 5,181	\$ 66,738

\$ in millions	At December 31, 2023					
	Residential Real Estate					
	by FICO Scores			by LTV Ratio		Total
	≥ 740	680-739	≤ 679	≤ 80%	> 80%	
Revolving	\$ 108	\$ 33	\$ 8	\$ 149	\$ —	\$ 149
2023	7,390	1,517	230	8,168	969	9,137
2022	10,927	2,424	389	12,650	1,090	13,740
2021	11,075	2,376	239	12,763	927	13,690
2020	6,916	1,430	104	8,017	433	8,450
Prior	11,642	3,131	436	14,106	1,103	15,209
Total	\$ 48,058	\$ 10,911	\$ 1,406	\$ 55,853	\$ 4,522	\$ 60,375

\$ in millions	At December 31, 2024			
	Securities-based lending ¹	Other ²		Total
		IG	NIG	
Revolving	\$ 76,432	\$ 6,342	\$ 1,551	\$ 84,325
2024	1,291	719	453	2,463
2023	949	424	685	2,058
2022	449	472	1,053	1,974
2021	100	14	538	652
2020	39	219	497	755
Prior	231	1,211	2,350	3,792
Total	\$ 79,491	\$ 9,401	\$ 7,127	\$ 96,019

\$ in millions	At December 31, 2023			
	Securities-based lending	Other ²		Total
		IG	NIG	
Revolving	\$ 71,474	\$ 5,230	\$ 1,362	\$ 78,066
2023	1,612	627	346	2,585
2022	1,128	816	804	2,748
2021	165	330	377	872
2020	—	435	414	849
Prior	215	2,096	1,814	4,125
Total	\$ 74,594	\$ 9,534	\$ 5,117	\$ 89,245

IG—Investment Grade

NIG—Non-investment Grade

1. Securities-based loans are subject to collateral maintenance provisions, and at December 31, 2024 and December 31, 2023, these loans are predominantly over-collateralized. For more information on the ACL methodology related to securities-based loans, see Note 2.

2. Other loans primarily include tailored lending. For a further discussion of Other loans, see "Quantitative and Qualitative Disclosures about Risk—Credit Risk" herein.

Past Due Loans Held for Investment before Allowance¹

\$ in millions	At December 31, 2024	At December 31, 2023
Corporate	\$ —	\$ 47
Commercial real estate	272	185
Residential real estate	186	160
Securities-based lending and Other	86	1
Total	\$ 544	\$ 393

1. As of December 31, 2024, the majority of the amounts are 90 days or more past due. As of December 31, 2023, the majority of the amounts are past due for a period of less than 90 days.

Nonaccrual Loans Held for Investment before Allowance¹

\$ in millions	At December 31, 2024	At December 31, 2023
Corporate	\$ 108	\$ 95
Secured lending facilities	6	87
Commercial real estate	447	426
Residential real estate	160	95
Securities-based lending and Other	298	174
Total	\$ 1,019	\$ 877
Nonaccrual loans without an ACL	\$ 162	\$ 86

1. There were no loans held for investment that were 90 days or more past due and still accruing as of December 31, 2024 and December 31, 2023. For further information on the Firm's nonaccrual policy, see Note 2 to the financial statements.

Loan Modifications to Borrowers Experiencing Financial Difficulty

The Firm may modify the terms of certain loans for economic or legal reasons related to a borrower's financial difficulties, and these modifications include interest rate reductions, principal forgiveness, term extensions and other-than-

Notes to Consolidated Financial Statements

Allowance for Credit Losses Rollforward and Allocation—
Loans and Lending Commitments

\$ in millions	Year Ended December 31, 2024					Total
	Corporate	Secured Lending Facilities	CRE	Residential Real Estate	SBL and Other	
ACL—Loans						
Beginning balance	\$ 241	\$ 153	\$ 463	\$ 100	\$ 212	\$ 1,169
Gross charge-offs	(39)	(11)	(165)	—	(27)	(242)
Recoveries	—	—	4	—	3	7
Net (charge-offs)/ recoveries	(39)	(11)	(161)	—	(24)	(235)
Provision (release)	2	1	77	(3)	69	146
Other	(4)	(3)	(6)	—	(1)	(14)
Ending balance	\$ 200	\$ 140	\$ 373	\$ 97	\$ 256	\$ 1,066
Percent of loans to total loans ¹	3 %	22 %	4 %	29 %	42 %	100 %
ACL—Lending commitments						
Beginning balance	\$ 431	\$ 70	\$ 26	\$ 4	\$ 20	\$ 551
Provision (release)	86	19	16	—	(3)	118
Other	(10)	(1)	(2)	—	—	(13)
Ending balance	\$ 507	\$ 88	\$ 40	\$ 4	\$ 17	\$ 656
Total ending balance	\$ 707	\$ 228	\$ 413	\$ 101	\$ 273	\$ 1,722

\$ in millions	Year Ended December 31, 2023					Total
	Corporate	Secured Lending Facilities	CRE	Residential Real Estate	SBL and Other	
ACL—Loans						
Beginning balance	\$ 235	\$ 153	\$ 275	\$ 87	\$ 89	\$ 839
Gross charge-offs	(34)	—	(129)	—	(4)	(167)
Recoveries	1	—	—	1	—	2
Net (charge-offs)/ recoveries	(33)	—	(129)	1	(4)	(165)
Provision (release)	37	—	314	13	124	488
Other	2	—	3	(1)	3	7
Ending balance	\$ 241	\$ 153	\$ 463	\$ 100	\$ 212	\$ 1,169
Percent of loans to total loans ¹	3 %	19 %	4 %	30 %	44 %	100 %
ACL—Lending commitments						
Beginning balance	\$ 411	\$ 51	\$ 15	\$ 4	\$ 23	\$ 504
Provision (release)	16	18	11	—	(1)	44
Other	4	1	—	—	(2)	3
Ending balance	\$ 431	\$ 70	\$ 26	\$ 4	\$ 20	\$ 551
Total ending balance	\$ 672	\$ 223	\$ 489	\$ 104	\$ 232	\$ 1,720

\$ in millions	Year Ended December 31, 2022					Total
	Corporate	Secured Lending Facilities	CRE	Residential Real Estate	SBL and Other	
ACL—Loans						
Beginning balance	\$ 165	\$ 163	\$ 206	\$ 60	\$ 60	\$ 654
Gross charge-offs	—	(3)	(7)	—	(21)	(31)
Recoveries	6	—	—	1	—	7
Net (charge-offs)/ recoveries	6	(3)	(7)	1	(21)	(24)
Provision (release)	65	(6)	80	26	51	216
Other	(1)	(1)	(4)	—	(1)	(7)
Ending balance	\$ 235	\$ 153	\$ 275	\$ 87	\$ 89	\$ 839
Percent of loans to total loans ¹	3 %	18 %	4 %	27 %	48 %	100 %
ACL—Lending commitments						
Beginning balance	\$ 356	\$ 41	\$ 20	\$ 1	\$ 26	\$ 444
Provision (release)	59	10	(5)	3	(3)	64
Other	(4)	—	—	—	—	(4)
Ending balance	\$ 411	\$ 51	\$ 15	\$ 4	\$ 23	\$ 504
Total ending balance	\$ 646	\$ 204	\$ 290	\$ 91	\$ 112	\$ 1,343

1. Percent of loans to total loans represents loans held for investment by loan type to total loans held for investment.

The allowance for credit losses for loans and lending commitments was relatively unchanged in 2024, reflecting provisions for certain specific commercial real estate loans and growth in the corporate loan portfolio, offset by charge-offs related to commercial real estate lending, mainly in the office sector, and improvements in the macroeconomic outlook. The base scenario used in our ACL models as of December 31, 2024 was generated using a combination of consensus economic forecasts, forward rates, and internally developed and validated models. This scenario assumes continued economic growth as well as lower interest rates relative to the prior year forecast. The ACL calculation incorporates key macroeconomic variables, including U.S. real GDP growth rate. The significance of key macroeconomic variables on the ACL calculation varies depending on portfolio composition and economic conditions. Other key macroeconomic variables used in the ACL calculation include corporate credit spreads, interest rates and commercial real estate indices.

See Note 2 for a description of the ACL calculated under the CECL methodology, including credit quality indicators, used for held-for-investment loans.

Gross Charge-offs by Origination Year

\$ in millions	Year Ended December 31, 2024					Total
	Corporate	Secured Lending Facilities	CRE	Residential Real Estate	SBL and Other	
Revolving	\$ (39)	\$ —	\$ —	\$ —	\$ —	\$ (39)
2022	—	—	(18)	—	—	(18)
2021	—	—	(14)	—	(2)	(16)
2020	—	(11)	—	—	—	(11)
Prior	—	—	(133)	—	(25)	(158)
Total	\$ (39)	\$ (11)	\$ (165)	\$ —	\$ (27)	\$ (242)

\$ in millions	Year Ended December 31, 2023					Total
	Corporate	Secured Lending Facilities	CRE	Residential Real Estate	SBL and Other	
Revolving	\$ (34)	\$ —	\$ —	\$ —	\$ —	(34)
2020	—	—	—	—	(3)	(3)
2019	—	—	(85)	—	(1)	(86)
Prior	—	—	(44)	—	—	(44)
Total	\$ (34)	\$ —	\$ (129)	\$ —	\$ (4)	\$ (167)

CRE—Commercial real estate
SBL—Securities-based lending

Selected Credit Ratios

	At December 31, 2024	At December 31, 2023
ACL for loans to total HFI loans	0.5 %	0.6 %
Nonaccrual HFI loans to total HFI loans	0.4 %	0.4 %
ACL for loans to nonaccrual HFI loans	104.6 %	133.3 %

Employee Loans

\$ in millions	At December 31, 2024	At December 31, 2023
Currently employed by the Firm ¹	\$ 4,255	\$ 4,257
No longer employed by the Firm ²	83	92
Employee loans	\$ 4,338	\$ 4,349
ACL	(112)	(121)
Employee loans, net of ACL	\$ 4,226	\$ 4,228
Remaining repayment term, weighted average in years	5.6	5.8

1. These loans are predominantly current.

2. These loans are predominantly past due for a period of 90 days or more.

Employee loans are granted in conjunction with a program established primarily to recruit certain Wealth Management financial advisors, are full recourse and generally require periodic repayments, and are due in full upon termination of employment with the Firm. These loans are recorded in Customer and other receivables in the balance sheet. See Note 2 for a description of the CECL allowance methodology, including credit quality indicators, for employee loans.

10. Goodwill and Intangible Assets

Goodwill Rollforward

\$ in millions	IS	WM	IM	Total
At December 31, 2022 ¹	\$ 429	\$ 10,202	\$ 6,021	\$ 16,652
Foreign currency	(5)	2	7	4
Acquired	—	—	56	56
Disposals	—	(5)	—	(5)
At December 31, 2023 ¹	\$ 424	\$ 10,199	\$ 6,084	\$ 16,707
Foreign currency	(12)	(8)	(3)	(23)
Acquired	23	—	—	23
Disposals	—	(1)	—	(1)
At December 31, 2024 ¹	\$ 435	\$ 10,190	\$ 6,081	\$ 16,706
Accumulated impairments ²	\$ 673	\$ —	\$ 27	\$ 700

1. Balances represent the amount of the Firm's goodwill after accumulated impairments.

2. There were no impairments recorded in 2024, 2023 or 2022.

Intangible Assets Rollforward

\$ in millions	IS	WM	IM	Total
At December 31, 2022	\$ 36	\$ 3,911	\$ 3,671	\$ 7,618
Acquired	—	9	37	46
Disposals	—	(13)	—	(13)
Amortization expense	(10)	(481)	(110)	(601)
Other	—	1	4	5
At December 31, 2023	\$ 26	\$ 3,427	\$ 3,602	\$ 7,055
Acquired	13	—	—	13
Disposals	—	(6)	—	(6)
Amortization expense	(10)	(479)	(113)	(602)
Other	(2)	(3)	(2)	(7)
At December 31, 2024	\$ 27	\$ 2,939	\$ 3,487	\$ 6,453

Intangible Assets by Type

\$ in millions	Non-amortizable		Amortizable	
	Gross Carrying Amount		Gross Carrying Amount	Accumulated Amortization
At December 31, 2024				
Management contracts	\$ 2,112	\$ 245	\$ 93	
Customer relationships	—	8,746	5,121	
Trade names	—	769	223	
Other	—	26	8	
Total	\$ 2,112	\$ 9,786	\$ 5,445	
At December 31, 2023				
Management contracts	2,113	245	72	
Customer relationships	—	8,763	4,582	
Trade names	—	767	187	
Other	—	14	6	
Total	\$ 2,113	\$ 9,789	\$ 4,847	

Intangible Assets Estimated Future Amortization Expense

\$ in millions	At December 31, 2024	
2025	\$	451
2026		343
2027		340
2028		336
2029		333

The Firm's annual goodwill and non-amortizable intangible asset impairment testing as of July 1, 2024 did not indicate any impairment. For more information, see Note 2.

Notes to Consolidated Financial Statements

11. Other Assets and Leases

Equity Method Investments

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Investments	\$ 1,869	\$ 1,915

<i>\$ in millions</i>	2024	2023	2022
Income (loss)	\$ 241	\$ 124	\$ 39

Equity method investments, other than investments in certain fund interests, are summarized above and are included in Other assets in the balance sheet with related income or loss included in Other revenues in the income statement. See “Net Asset Value Measurements—Fund Interests” in Note 4 for the carrying value of certain of the Firm’s fund interests, which are composed of general and limited partnership interests, as well as any related carried interest.

Japanese Securities Joint Venture

<i>\$ in millions</i>	2024	2023	2022
Income (loss) from investment in MUMSS	\$ 146	\$ 129	\$ 35

The Firm and Mitsubishi UFJ Financial Group, Inc. (“MUFG”) formed a joint venture in Japan comprising their respective investment banking and securities businesses by forming two joint venture companies, Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. (“MUMSS”) and Morgan Stanley MUFG Securities Co., Ltd. (“MSMS”) (collectively, the “Joint Venture”). The Firm owns a 40% economic interest in the Joint Venture, and MUFG owns the other 60%.

The Firm’s 40% voting interest in MUMSS is accounted for under the equity method within the Institutional Securities business segment and is included in the equity method investment balances above. The Firm consolidates MSMS into the Institutional Securities business segment, based on its 51% voting interest.

The Firm engages in transactions in the ordinary course of business with MUFG and its affiliates; for example, investment banking, financial advisory, sales and trading, derivatives, investment management, lending, securitization and other financial services transactions. Such transactions are on substantially the same terms as those that would be available to unrelated third parties for comparable transactions.

Additionally, during 2024 the Firm further expanded its alliance with MUFG to collaborate in the foreign exchange trading and Japanese research and equity businesses for institutional clients.

Tax Equity Investments

The Firm invests in tax equity investment interests which entitle the Firm to a share of tax credits and other income tax benefits generated by the projects underlying the investments.

Effective January 1, 2024, the Firm made an election to account for certain renewable energy and other tax equity investments programs using the proportional amortization method under newly adopted accounting guidance.

Tax Equity Investments under the Proportional Amortization Method

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Low-income housing ¹	\$ 1,787	\$ 1,699
Renewable energy and other ²	67	—
Total³	\$ 1,854	\$ 1,699

1. Amounts include unfunded equity contributions of \$613 million and \$661 million as of December 31, 2024 and December 31, 2023, respectively. The corresponding liabilities for the commitments to fund these equity contributions are recorded in Other liabilities and accrued expenses. The majority of these commitments are expected to be funded within 5 years.
2. Prior to adoption of the *Investments - Tax Credit Structures* accounting update on January 1, 2024, Renewable energy and other investments were accounted for under the equity method.
3. At December 31, 2024, this amount excludes \$48 million of tax equity investments within programs for which the Firm elected the proportional amortization method that do not meet the conditions to apply the proportional amortization method, which are accounted for as equity method investments.

Income tax credits and other income tax benefits recognized as well as proportional amortization are included in the Provision for income taxes line in the consolidated income statement and in the Depreciation and amortization line in the consolidated cash flow statement.

Net Benefits Attributable to Tax Equity Investments under the Proportional Amortization Method

<i>\$ in millions</i>	2024	2023	2022
Income tax credits and other income tax benefits	\$ 301	\$ 237	\$ 208
Proportional amortization	(239)	(197)	(174)
Net benefits	\$ 62	\$ 40	\$ 34

Leases

The Firm’s leases are principally non-cancelable operating real estate leases.

Balance Sheet Amounts Related to Leases

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Other assets—ROU assets	\$ 4,114	\$ 4,368
Other liabilities and accrued expenses— Lease liabilities	4,937	5,417
Weighted average:		
Remaining lease term, in years	8.5	8.7
Discount rate	4.3 %	4.0 %

Notes to Consolidated Financial Statements

Lease Liabilities

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
2024	\$	\$ 913
2025	\$ 772	846
2026	790	774
2027	736	716
2028	716	644
2029	562	500
Thereafter	2,405	2,137
Total undiscounted cash flows	5,981	6,530
Imputed interest	(1,044)	(1,113)
Amount on balance sheet	\$ 4,937	\$ 5,417
Committed leases not yet commenced	\$ 63	\$ 248

Lease Costs

<i>\$ in millions</i>	2024	2023	2022
Fixed costs	\$ 917	\$ 938	\$ 841
Variable costs ¹	181	206	170
Less: Sublease income	(6)	(10)	(7)
Total lease cost, net	\$ 1,092	\$ 1,134	\$ 1,004

1. Includes common area maintenance charges and other variable costs not included in the measurement of ROU assets and lease liabilities.

Cash Flows Statement Supplemental Information

<i>\$ in millions</i>	2024	2023	2022
Cash outflows—Lease liabilities	\$ 942	\$ 892	\$ 881
Non-cash—ROU assets recorded for new and modified leases	489	1,055	544

Occupancy lease agreements, in addition to base rentals, generally provide for rent and operating expense escalations resulting from increased assessments for real estate taxes and other charges.

12. Deposits

Deposits

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Savings and demand deposits	\$ 299,898	\$ 288,252
Time deposits	76,109	63,552
Total deposits	\$ 376,007	\$ 351,804
Deposits subject to FDIC insurance	\$ 298,351	\$ 276,598
Deposits not subject to FDIC insurance	\$ 77,656	\$ 75,206

Time Deposit Maturities

<i>\$ in millions</i>	At December 31, 2024
2025	\$ 38,046
2026	18,016
2027	9,433
2028	6,047
2029	4,148
Thereafter	419
Total	\$ 76,109

Uninsured Non-U.S. Time Deposit Maturities

<i>\$ in millions</i>	At December 31, 2024
Less than 3 months	\$ 2,659
3 - 6 months	431
6 - 12 months	390
Over 12 months	—
Total	\$ 3,480

Deposits in U.S. Bank Subsidiaries from Non-U.S. Depositors

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Deposits in U.S. bank subsidiaries from non-U.S. depositors	\$ 700	\$ 880

13. Borrowings and Other Secured Financings

Maturities and Terms of Borrowings

<i>\$ in millions</i>	Parent Company		Subsidiaries		At December 31, 2024	At December 31, 2023
	Fixed Rate ¹	Variable Rate ²	Fixed Rate ¹	Variable Rate ²		
Original maturities of one year or less:						
Next 12 months	\$ —	\$ —	\$ 146	\$ 4,366	\$ 4,512	\$ 3,188
Original maturities greater than one year:						
2024						\$ 20,151
2025	\$ 6,617	\$ 927	\$ 2,672	\$ 11,705	\$ 21,921	\$ 35,523
2026	23,288	1,450	3,828	9,403	37,969	35,423
2027	18,833	1,883	3,452	9,882	34,050	25,338
2028	12,478	1,366	5,808	9,067	28,719	21,239
2029	16,129	189	1,278	8,563	26,159	22,193
Thereafter	96,378	2,508	11,499	25,104	135,489	100,677
Total greater than one year	\$ 173,723	\$ 8,323	\$ 28,537	\$ 73,724	\$ 284,307	\$ 260,544
Total	\$ 173,723	\$ 8,323	\$ 28,683	\$ 78,090	\$ 288,819	\$ 263,732
Weighted average coupon at period end ³	3.9 %	4.9 %	5.1 %	5.9 %	4.1 %	3.6 %

- Fixed rate borrowings include instruments with step-up, step-down and zero coupon features.
- Variable rate borrowings include those that bear interest based on a variety of indices, including SOFR and federal funds rates, in addition to certain notes carried at fair value with various payment provisions, including notes linked to the performance of a specific index, a basket of stocks, a specific equity security, a commodity, a credit exposure or basket of credit exposures.
- Only includes borrowings with original maturities greater than one year. Weighted average coupon is calculated utilizing U.S. and non-U.S. dollar interest rates and excludes the effect of related hedging derivatives and financial instruments for which the fair value option was elected. See "Rates for Borrowings with Original Maturities Greater than One Year" table herein for more information.

Borrowings with Original Maturities Greater than One Year

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Senior	\$ 270,594	\$ 248,174
Subordinated	13,713	12,370
Total	\$ 284,307	\$ 260,544
Weighted average stated maturity, in years	6.6	6.6

Certain senior debt securities are denominated in various non-U.S. dollar currencies and may be structured to provide a return that is linked to equity, credit, commodity or other indices (e.g., the consumer price index). Senior debt also may be structured to be callable by the Firm or extendible at the option of holders of the senior debt securities.

Notes to Consolidated Financial Statements

The Firm's Borrowings include notes carried and managed on a fair value basis. These include instruments whose payments and redemption values are linked to the performance of a specific index, a basket of stocks, a specific equity security, a commodity, a credit exposure or basket of credit exposures; and instruments with various interest rate-related features, including step-ups, step-downs and zero coupons. Also included are unsecured contracts that are not classified as OTC derivatives because they fail initial net investment criteria. To minimize the exposure from such instruments, the Firm has entered into various swap contracts and purchased options that effectively convert the borrowing costs into floating rates. The swaps and purchased options used to economically hedge the embedded features are derivatives and also are carried at fair value. Changes in fair value related to the notes and economic hedges are reported in Trading revenues. See Notes 2 and 5 for further information on borrowings carried at fair value.

Senior Debt Subject to Put Options or Liquidity Obligations

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Put options embedded in debt agreements	\$ 429	\$ 1,571
Liquidity obligations ¹	\$ 3,597	\$ 3,166

1. Includes obligations to support secondary market trading.

Subordinated Debt

	2024	2023
Contractual weighted average coupon	4.5 %	4.3 %

Subordinated debt generally is issued to meet the capital requirements of the Firm or its regulated subsidiaries and primarily is U.S. dollar denominated. Maturities of subordinated debt range from 2025 to 2039.

Rates for Borrowings with Original Maturities Greater than One Year

	At December 31,		
	2024	2023	2022
Contractual weighted average coupon ¹	4.1 %	3.6 %	3.2 %
Weighted average coupon after hedging derivatives	5.6 %	6.5 %	5.1 %

1. Weighted average coupon was calculated utilizing U.S. and non-U.S. dollar interest rates and excludes financial instruments for which the fair value option was elected.

In general, other than securities inventories and customer balances financed by secured funding sources, the majority of the Firm's assets are financed with a combination of deposits, short-term funding, floating rate long-term debt or fixed rate long-term debt swapped to a floating rate. The Firm uses interest rate swaps to more closely match these borrowings to the duration, holding period and interest rate characteristics of the assets being funded and to manage interest rate risk. These swaps effectively convert certain of the Firm's fixed rate borrowings into floating rate obligations. In addition, for non-U.S. dollar currency borrowings that are not used to fund assets in the same currency, the Firm has entered into currency swaps that effectively convert the borrowings into U.S. dollar obligations.

The Firm's use of swaps for asset and liability management affects its effective average borrowing rate.

Other Secured Financings

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Original maturities:		
One year or less	\$ 17,133	\$ 5,732
Greater than one year	4,469	6,923
Total	\$ 21,602	\$ 12,655
Transfers of assets accounted for as secured financings	10,275	5,848

Maturities and Terms of Other Secured Financings¹

<i>\$ in millions</i>	At December 31, 2024			At December 31, 2023
	Fixed Rate	Variable Rate ²	Total	
Original maturities of one year or less:				
Next 12 months	\$ 3,055	\$ 3,951	\$ 7,006	\$ 8
Original maturities greater than one year:				
2024				\$ 5,085
2025	\$ —	\$ 2,389	\$ 2,389	95
2026	7	683	690	92
2027	—	107	107	—
2028	—	453	453	434
2029	—	—	—	—
Thereafter	7	675	682	1,093
Total	\$ 14	\$ 4,307	\$ 4,321	\$ 6,799
Weighted average coupon at period-end ³	4.6 %	4.9 %	4.6 %	5.6 %

1. Excludes transfers of assets accounted for as secured financings. See subsequent table.
2. Variable rate other secured financings bear interest based on a variety of indices, including SOFR and federal funds rates. Amounts include notes carried at fair value with various payment provisions, including notes linked to equity, credit, commodity or other indices.
3. Includes only other secured financings with original maturities greater than one year. Weighted average coupon is calculated utilizing U.S. and non-U.S. dollar interest rates and excludes other secured financings that are linked to non-interest indices and for which the fair value option was elected.

Other secured financings include the liabilities related to collateralized notes, transfers of financial assets that are accounted for as financings rather than sales and consolidated VIEs where the Firm is deemed to be the primary beneficiary. These liabilities are generally payable from the cash flows of the related assets accounted for as Trading assets. See Note 15 for further information on other secured financings related to VIEs and securitization activities.

Maturities of Transfers of Assets Accounted for as Secured Financings¹

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
2024	\$ —	\$ 5,749
2025	10,184	9
2026	42	36
2027	5	21
2028	12	11
2029	5	3
Thereafter	27	19
Total	\$ 10,275	\$ 5,848

1. Excludes Securities sold under agreements to repurchase and Securities loaned.

Notes to Consolidated Financial Statements

For transfers of assets that fail to meet accounting criteria for a sale, the Firm continues to record the assets and recognizes the associated liabilities in the balance sheet.

14. Commitments, Guarantees and Contingencies

Commitments

\$ in millions	Years to Maturity at December 31, 2024				Total
	Less than 1	1-3	3-5	Over 5	
Lending:					
Corporate	\$ 17,393	\$ 40,373	\$ 64,851	\$ 6,357	\$ 128,974
Secured lending facilities	6,894	6,646	7,169	3,874	24,583
Commercial and Residential real estate	762	404	126	411	1,703
Securities-based lending and Other	16,453	3,418	788	612	21,271
Forward-starting secured financing receivables ¹	122,535	1,503	—	—	124,038
Central counterparty	300	—	—	20,747	21,047
Investment activities	1,509	107	84	466	2,166
Letters of credit and other financial guarantees	39	2	—	6	47
Total	\$ 165,885	\$ 52,453	\$ 73,018	\$ 32,473	\$ 323,829
Lending commitments participated to third parties					\$ 10,859

1. These amounts primarily include secured financing receivables yet to settle as of December 31, 2024, with settlement generally occurring within three business days. These amounts also include commitments to enter into certain collateralized financing transactions.

Since commitments associated with these instruments may expire unused, the amounts shown do not necessarily reflect the actual future cash funding requirements.

Types of Commitments

Lending Commitments. Lending commitments primarily represent the notional amount of legally binding obligations to provide funding to clients for different types of loan transactions. For syndications that are led by the Firm, the lending commitments accepted by the borrower but not yet closed are net of the amounts agreed to by counterparties that will participate in the syndication. For syndications that the Firm participates in and does not lead, lending commitments accepted by the borrower but not yet closed include only the amount that the Firm expects it will be allocated from the lead syndicate bank. Due to the nature of the Firm's obligations under the commitments, these amounts include certain commitments participated to third parties.

Forward-Starting Secured Financing Receivables. These amounts include securities purchased under agreements to resell and securities borrowed that the Firm has entered into prior to the balance sheet date that will settle after the balance sheet date. These transactions are primarily secured by collateral from U.S. government agency securities and other sovereign government obligations when they are funded.

Central Counterparty. These commitments relate to the Firm's membership in certain clearinghouses and are

contingent upon the default of a clearinghouse member or other stress events.

Underwriting Commitments. The Firm provides underwriting commitments in connection with its capital raising sources to a diverse group of corporate and other institutional clients.

Investment Activities. The Firm sponsors several non-consolidated investment management funds for third-party investors where it typically acts as general partner of, and investment adviser to, these funds and typically commits to invest a minority of the capital of such funds, with subscribing third-party investors contributing the majority. The Firm has contractual capital commitments, guarantees and counterparty arrangements with respect to these investment management funds.

Letters of Credit and Other Financial Guarantees. The Firm has outstanding letters of credit and other financial guarantees issued by third-party banks to certain of the Firm's counterparties. The Firm is contingently liable for these letters of credit and other financial guarantees, which are primarily used to provide collateral for securities and commodities traded and to satisfy various margin requirements in lieu of depositing cash or securities with these counterparties.

Guarantees

\$ in millions	At December 31, 2024				Carrying Amount Asset (Liability)
	Less than 1	1-3	3-5	Over 5	
Non-credit derivatives ¹	1,161,382	626,951	152,534	460,222	(40,849)
Standby letters of credit and other financial guarantees issued ^{2,3}	1,599	732	1,031	2,581	18
Liquidity facilities	2,453	—	—	—	2
Whole loan sales guarantees	24	63	—	23,050	—
Securitization representations and warranties ⁴	—	—	—	87,305	—
General partner guarantees	180	133	53	35	(98)
Client clearing guarantees	816	—	—	—	—

1. The carrying amounts of derivative contracts that meet the accounting definition of a guarantee are shown on a gross basis. For further information on derivative contracts, see Note 6.
2. These amounts include certain issued standby letters of credit participated to third parties, totaling \$0.6 billion of notional and collateral/recourse, due to the nature of the Firm's obligations under these arrangements.
3. As of December 31, 2024, the carrying amount of standby letters of credit and other financial guarantees issued includes an allowance for credit losses of \$56 million.
4. Related to commercial, residential mortgage and asset backed securitizations.

Types of Guarantees

Non-Credit Derivatives. Certain derivative contracts meet the accounting definition of a guarantee, including certain written options, contingent-forward contracts and CDS (see Note 6 regarding credit derivatives in which the Firm has sold credit protection to the counterparty which are excluded from the previous table). For non-credit derivative contracts that meet the accounting definition of a guarantee, the notional amount is used as the maximum potential payout for certain derivative contracts, such as written interest rate caps and written foreign

Notes to Consolidated Financial Statements

currency options. The Firm evaluates collateral requirements for all derivatives, including derivatives that do not meet the accounting definition of a guarantee. For the effects of cash collateral and counterparty netting, see Note 6.

In certain situations, collateral may be held by the Firm for those contracts that meet the definition of a guarantee. Generally, the Firm sets collateral requirements by counterparty so that the collateral covers various transactions and products and is not allocated specifically to individual contracts. Also, the Firm may recover amounts related to the underlying asset delivered to the Firm under the derivative contract.

Standby Letters of Credit and Other Financial Guarantees Issued. Generally, in connection with its lending businesses, the Firm provides standby letters of credit and other financial guarantees to counterparties. Such arrangements represent obligations to make payments to third parties if the counterparty fails to fulfill its obligation under a borrowing arrangement or other contractual obligation. A majority of the Firm's standby letters of credit are provided on behalf of counterparties that are investment grade. If the counterparty fails to fulfill its contractual obligation, the Firm has access to collateral or recourse that would approximate its obligation.

Liquidity Facilities. The Firm has entered into liquidity facilities with SPEs and other counterparties, whereby the Firm is required to make certain payments if losses or defaults occur. Primarily, the Firm acts as liquidity provider to municipal bond securitization SPEs and for stand-alone municipal bonds in which the holders of beneficial interests issued by these SPEs or the holders of the individual bonds, respectively, have the right to tender their interests for purchase by the Firm on specified dates at a specified price. The Firm often may have recourse to the underlying assets held by the SPEs in the event payments are required under such liquidity facilities, as well as make-whole or recourse provisions with the trust sponsors. The recourse amount often exceeds the maximum potential payout amount of the guarantee. Substantially all of the underlying assets in the SPEs are investment grade. Liquidity facilities provided to municipal tender option bond trusts are classified as derivatives.

Whole Loan Sales Guarantees. The Firm has provided, or otherwise agreed to be responsible for, representations and warranties regarding certain whole loan sales. Under certain circumstances, the Firm may be required to repurchase such assets or make other payments related to such assets if such representations and warranties are breached. The Firm's maximum potential payout related to such representations and warranties is equal to the current UPB of such loans. Since the Firm no longer services these loans, it has no information on the current UPB of those loans, and, accordingly, the amount included in the previous table represents the UPB at the time of the whole loan sale or at the time when the Firm last serviced any of those loans. The current UPB balances could be substantially lower than the maximum potential payout

amount included in the previous table. The related liability primarily relates to sales of loans to the federal mortgage agencies.

Securitization Representations and Warranties. As part of the Firm's Institutional Securities business segment's securitizations and related activities, the Firm has provided, or otherwise agreed to be responsible for, representations and warranties regarding certain assets transferred in securitization transactions sponsored by the Firm. The extent and nature of the representations and warranties, if any, vary among different securitizations. Under certain circumstances, the Firm may be required to repurchase certain assets or make other payments related to such assets if such representations and warranties are breached. The maximum potential amount of future payments the Firm could be required to make would be equal to the current outstanding balances of, or losses associated with, the assets subject to breaches of such representations and warranties. The amount included in the previous table for the maximum potential payout includes the current UPB or historical losses where known and the UPB at the time of sale when the current UPB is not known.

General Partner Guarantees. As a general partner in certain investment management funds, the Firm receives certain distributions from the partnerships when the return exceeds specified performance targets according to the provisions of the partnership agreements. The Firm may be required to return all or a portion of such distributions to the limited partners in the event the limited partners do not achieve a certain return as specified in the various partnership agreements, subject to certain limitations.

Client Clearing Guarantees. The Firm is a sponsoring member of the Government Securities Division of the FICC's Sponsored Clearing Model. Clients of the Firm, as sponsored members, can transact in overnight and term securities repurchase and resale agreements, which are cleared through the FICC. As sponsoring member, the Firm guarantees to the FICC the prompt and full payment and performance of its clients' obligations. In 2020, the FICC's sponsored clearing model was updated such that the Firm could be responsible for liquidation of a sponsored member's account and guarantees any resulting loss to the FICC in the event the sponsored member fails to fully pay any net liquidation amount due from the sponsored member to the FICC. Accordingly, the Firm's maximum potential payout amount reflects the total of the estimated net liquidation amounts for sponsored member accounts. The Firm minimizes credit exposure under this guarantee by obtaining a security interest in its sponsored member clients' collateral and their contractual rights under sponsored member transactions. Therefore, the Firm's exposure is estimated to be an amount substantially lower than the maximum potential payout amount. The collateral amount in which the Firm has a security interest is approximately equal to the maximum potential payout amount of the guarantee.

Other Guarantees and Indemnities

In the normal course of business, the Firm provides guarantees and indemnifications in a variety of transactions. These provisions generally are standard contractual terms. Certain of these guarantees and indemnifications are described below:

- *Indemnities.* The Firm provides standard indemnities to counterparties for certain contingent exposures and taxes, including U.S. and foreign withholding taxes, on interest and other payments made on derivatives, securities and stock lending transactions, certain annuity products and other financial arrangements. These indemnity payments could be required based on a change in the tax laws, a change in interpretation of applicable tax rulings or a change in factual circumstances. Certain contracts contain provisions that enable the Firm to terminate the agreement upon the occurrence of such events. The Firm may also provide indemnities when it sells a business or assets to a third-party, pursuant to which it indemnifies the third-party for losses incurred on assets acquired or liabilities assumed or due to actions taken by the Firm prior to the sale of the business or assets. The Firm expects the risk of loss associated with indemnities related to the sale of businesses or assets to be remote. The maximum potential amount of future payments that the Firm could be required to make under these indemnifications cannot be estimated.
- *Market Value Guarantees.* Market value guarantees are issued to guarantee timely payment of a specified return to investors in certain affordable housing tax credit funds. These guarantees are designed to return an investor's contribution to a fund and the investor's share of tax losses and tax credits expected to be generated by a fund.
- *Exchange/Clearinghouse Member Guarantees.* The Firm is a member of various exchanges and clearinghouses that trade and clear securities and/or derivative contracts. Associated with its membership, the Firm may be required to pay a certain amount as determined by the exchange or the clearinghouse in case of a default of any of its members or pay a proportionate share of the financial obligations of another member that may default on its obligations to the exchange or the clearinghouse. While the rules governing different exchange or clearinghouse memberships and the forms of these guarantees may vary, in general the Firm's obligations under these rules would arise only if the exchange or clearinghouse had previously exhausted its resources.

In addition, some clearinghouse rules require members to assume a proportionate share of losses resulting from the clearinghouse's investment of guarantee fund contributions and initial margin and of other losses unrelated to the default of a clearing member, if such losses exceed the specified resources allocated for such purpose by the clearinghouse.

The maximum potential payout under these rules cannot be estimated. The Firm has not recorded any contingent liability in its financial statements for these agreements and believes that any potential requirement to make payments under these agreements is remote.

- *Futures and Over-the-Counter Derivatives Clearing.* The Firm provides clearing services on central counterparty clearinghouses ("CCPs") for clients that need to clear exchange-traded and OTC derivatives contracts with CCPs. The Firm acts as an agent in its role as clearing member for these client transactions. As such, the Firm does not reflect the underlying exchange-traded or OTC derivatives contracts in its Consolidated Financial Statements. See Note 6 for a discussion of the Firm's derivatives activities that are reflected in its Consolidated Financial Statements.

As a clearing member, the Firm is responsible to the CCP for the performance of its clients, collects cash and securities collateral (margin) as well as any settlement amounts due from or to clients, and remits them to the relevant CCP or client in whole or part. There are two types of margin: (1) variation margin is posted on a daily basis based on the value of clients' derivative contracts and (2) initial margin is posted at inception of a derivative contract, generally on the basis of the potential changes in the variation margin requirement for the contract.

As a clearing member, the Firm is exposed to the risk of nonperformance by its clients to CCPs but is not liable to clients for the performance of the CCPs. Where possible, the Firm seeks to mitigate its risk to the client through the collection of appropriate amounts of margin at inception and throughout the life of the transactions. In the event of nonperformance by a client, the Firm would close out the client's positions and access available margin. The CCP would utilize any margin it holds to make itself whole, with any remaining shortfalls required to be paid by the Firm as a clearing member. It is difficult to estimate the Firm's maximum possible exposure through its role as a clearing member as it depends on the nature and volume of client's future transactions, market conditions and potential client defaults. However, based upon historical experience, the Firm's exposure is significantly mitigated by the credit risk mitigants available to the Firm. As a result, management believes that the risk of material loss to the Firm is expected to be remote.

- *Merger and Acquisition Guarantees.* The Firm may, from time to time, in its role as investment banking advisor be required to provide guarantees in connection with certain European merger and acquisition transactions. If required by the regulating authorities, the Firm provides a guarantee that the acquirer in the transaction has or will have sufficient funds to complete the transaction and would then be required to make the acquisition payments in the event the acquirer's funds are insufficient at the completion date of the transaction. These arrangements generally cover the time frame from the transaction offer date to its closing date

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and, therefore, are generally short term in nature. The Firm believes the likelihood of any payment by the Firm under these arrangements is remote given the level of its due diligence in its role as investment banking advisor.

In addition, in the ordinary course of business, the Firm guarantees the debt and/or certain trading obligations (including obligations associated with derivatives, foreign exchange contracts and the settlement of physical commodities) of certain subsidiaries. These guarantees generally are entity or product specific and are required by investors or trading counterparties. The activities of the Firm’s subsidiaries covered by these guarantees (including any related debt or trading obligations) are included in the financial statements.

Finance Subsidiary

The Parent Company fully and unconditionally guarantees the securities issued by Morgan Stanley Finance LLC, a wholly owned finance subsidiary. No other subsidiary of the Parent Company guarantees these securities.

Contingencies

Legal

In addition to the matters described below, in the normal course of business, the Firm has been named, from time to time, as a defendant in various legal actions, including arbitrations, class actions and other litigation, arising in connection with its activities as a global diversified financial services institution. Certain of the actual or threatened legal actions include claims for substantial compensatory and/or punitive damages or claims for indeterminate amounts of damages. In some cases, the third-party entities that are, or would otherwise be, the primary defendants in such cases are bankrupt, in financial distress, or may not honor applicable indemnification obligations. These actions have included, but are not limited to, antitrust claims, claims under various false claims act statutes, and matters arising from our wealth management businesses, sales and trading businesses, and our activities in the capital markets.

The Firm is also involved, from time to time, in other reviews, investigations and proceedings (both formal and informal) by governmental or other regulatory agencies regarding the Firm’s business, and involving, among other matters, sales, financing, prime brokerage, market-making activities, investment banking advisory services, capital markets activities, financial products or offerings sponsored, underwritten or sold by the Firm, wealth and investment management services, and accounting and operational matters, certain of which may result in adverse judgments, settlements, fines, penalties, disgorgement, restitution, forfeiture, injunctions, limitations on our ability to conduct certain business, or other relief.

The Firm contests liability and/or the amount of damages as appropriate in each pending matter. Where available information indicates that it is probable a liability had been incurred at the date of the financial statements and the Firm can reasonably estimate the amount of that loss or the range of loss, the Firm accrues an estimated loss by a charge to income, including with respect to certain of the individual proceedings or investigations described below.

<i>\$ in millions</i>	2024	2023	2022
Legal expenses	\$ 106	\$ 488	\$ 443

The Firm’s legal expenses can, and may in the future, fluctuate from period to period, given the current environment regarding government or regulatory agency investigations and private litigation affecting global financial services firms, including the Firm.

In many legal proceedings and investigations, it is inherently difficult to determine whether any loss is probable or reasonably possible, or to estimate the amount of any loss. In addition, even where the Firm has determined that a loss is probable or reasonably possible or an exposure to loss or range of loss exists in excess of the liability already accrued with respect to a previously recognized loss contingency, the Firm may be unable to reasonably estimate the amount of the loss or range of loss. It is particularly difficult to determine if a loss is probable or reasonably possible, or to estimate the amount of loss, where the factual record is being developed or contested or where plaintiffs or government entities seek substantial or indeterminate damages, restitution, forfeiture, disgorgement or penalties. Numerous issues may need to be resolved in an investigation or proceeding before a determination can be made that a loss or additional loss (or range of loss or range of additional loss) is probable or reasonably possible, or to estimate the amount of loss, including through potentially lengthy discovery or determination of important factual matters, determination of issues related to class certification, the calculation of damages or other relief, and consideration of novel or unsettled legal questions relevant to the proceedings or investigations in question.

The Firm has identified below any individual proceedings or investigations where the Firm believes a material loss to be reasonably possible. In certain legal proceedings in which the Firm has determined that a material loss is reasonably possible, the Firm is unable to reasonably estimate the loss or range of loss. There are other matters in which the Firm has determined a loss or range of loss to be reasonably possible, but the Firm does not believe, based on current knowledge and after consultation with counsel, that such losses could have a material adverse effect on the Firm’s financial statements as a whole, although the outcome of such proceedings or investigations may significantly impact the Firm’s business or results of operations for any particular reporting period, or cause significant reputational harm.

Notes to Consolidated Financial Statements

While the Firm has identified below certain proceedings or investigations that the Firm believes to be material, individually or collectively, there can be no assurance that material losses will not be incurred from claims that have not yet been asserted or those where potential losses have not yet been determined to be probable or reasonably possible.

Antitrust Related Matters

The Firm and other financial institutions are responding to a number of governmental investigations and civil litigation matters related to allegations of anticompetitive conduct in various aspects of the financial services industry, including the matters described below.

Beginning in February of 2016, the Firm was named as a defendant in multiple purported antitrust class actions now consolidated into a single proceeding in the United States District Court for the Southern District of New York (“SDNY”) styled *In Re: Interest Rate Swaps Antitrust Litigation*. Plaintiffs allege, inter alia, that the Firm, together with a number of other financial institution defendants, violated U.S. and New York state antitrust laws from 2008 through December of 2016 in connection with alleged efforts to prevent the development of electronic exchange-based platforms for interest rate swaps trading. Complaints were filed both on behalf of a purported class of investors who purchased interest rate swaps from defendants, as well as on behalf of three operators of swap execution facilities that allegedly were thwarted by the defendants in their efforts to develop such platforms. The consolidated complaints seek, inter alia, certification of the investor class of plaintiffs and treble damages. On July 28, 2017, the court granted in part and denied in part the defendants’ motion to dismiss the complaints. On December 15, 2023, the court denied the class plaintiffs’ motion for class certification. On December 29, 2023, the class plaintiffs petitioned the United States Court of Appeals for the Second Circuit for leave to appeal that decision. On February 28, 2024, the parties reached an agreement in principle to settle the class claims. On July 11, 2024, the court granted preliminary approval of the settlement.

The Firm is a defendant in three antitrust class action complaints which have been consolidated into one proceeding in the United States District Court for the SDNY under the caption *City of Philadelphia, et al. v. Bank of America Corporation, et al.* Plaintiffs allege, inter alia, that the Firm, together with a number of other financial institution defendants, violated U.S. antitrust laws and relevant state laws in connection with alleged efforts to artificially inflate interest rates for Variable Rate Demand Obligations (“VRDO”). The consolidated complaint seeks, inter alia, certification of the class of plaintiffs and treble damages. The complaint was filed on behalf of a class of municipal issuers of VRDO for which defendants served as remarketing agent. On November 2, 2020, the court granted in part and denied in part the defendants’ motion to dismiss the consolidated

complaint, dismissing state law claims, but denying dismissal of the U.S. antitrust claims. On September 21, 2023, the court granted plaintiffs’ motion for class certification. On February 5, 2024, the United States Court of Appeals for the Second Circuit granted leave to appeal that decision.

European Matters

Tax

In matters styled *Case number 15/3637* and *Case number 15/4353*, the Dutch Tax Authority (“Dutch Authority”) challenged in the Dutch courts the prior set-off by the Firm of approximately €124 million (approximately \$128 million) plus accrued interest of withholding tax credits against the Firm’s corporation tax liabilities for the tax years 2007 to 2012. The Dutch Authority alleged that the Firm was not entitled to receive the withholding tax credits on the basis, inter alia, that a Firm subsidiary did not hold legal title to certain securities subject to withholding tax on the relevant dates. On April 26, 2018, the District Court in Amsterdam issued a decision dismissing the Dutch Authority’s claims with respect to certain of the tax years in dispute. On May 12, 2020, the Court of Appeal in Amsterdam granted the Dutch Authority’s appeal in matters re-styled *Case number 18/00318* and *Case number 18/00319*. On January 19, 2024, the Dutch High Court granted the Firm’s appeal in matters re-styled *Case number 20/01884* and referred the case to the Court of Appeal in The Hague. On November 11, 2024, the Firm reached an agreement to settle the Dutch Authority’s challenges for the tax years 2007 to 2012 and made payment of the prior set-off amounts and interest indicated above. The case has been withdrawn.

On June 22, 2021, Dutch criminal authorities sought various documents in connection with an investigation of the Firm related to the civil claims asserted by the Dutch Authority concerning the accuracy of the Firm subsidiary’s tax returns for 2007 to 2012. The Dutch criminal authorities have requested additional information, and the Firm is continuing to respond to them in connection with their ongoing investigation, and is engaging with them as the criminal process progresses.

U.K. Government Bond Matter

On February 21, 2025, the U.K. Competition and Markets Authority announced a settlement with the Firm, as well as other financial institutions, in connection with its investigation of suspected anti-competitive arrangements in the financial services sector, specifically regarding the Firm’s activities concerning certain liquid fixed income products between 2009 and 2012. Separately, on June 16, 2023, the Firm was named as a defendant in a purported antitrust class action in the United States District Court for the SDNY styled *Oklahoma Firefighters Pension and Retirement System v. Deutsche Bank Aktiengesellschaft, et al.*, alleging, inter alia, that the Firm, together with a number of other financial institution defendants, violated U.S. antitrust laws in

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connection with their alleged effort to fix prices of gilts traded in the United States between 2009 and 2013. The complaint seeks, inter alia, certification of the class of plaintiffs and treble damages. On September 16, 2024, the court granted defendants' joint motion to dismiss, and the complaint was dismissed without prejudice. The Firm and certain other defendants have reached an agreement in principle to settle the U.S. litigation.

Other

On August 13, 2021, the plaintiff in *Camelot Event Driven Fund, a Series of Frank Funds Trust v. Morgan Stanley & Co. LLC, et al.* filed in the Supreme Court of the State of New York, New York County ("Supreme Court of NY") a purported class action complaint alleging violations of federal securities laws against ViacomCBS ("Viacom"), certain of its officers and directors, and the underwriters, including the Firm, of two March 2021 Viacom offerings: a \$1.7 billion Viacom Class B Common Stock offering and a \$1 billion offering of 5.75% Series A Mandatory Convertible Preferred Stock (collectively, the "Offerings"). The complaint seeks certification of the class of plaintiffs and unspecified compensatory damages and alleges, inter alia, that the Viacom offering documents for both issuances contained material misrepresentations and omissions because they did not disclose that certain of the underwriters, including the Firm, had prime brokerage relationships and/or served as counterparties to certain derivative transactions with Archegos Capital Management LP ("Archegos"), a fund with significant exposure to Viacom securities across multiple prime brokers. The complaint also alleges that the offering documents did not adequately disclose the risks associated with Archegos's concentrated Viacom positions at the various prime brokers, including that the unwind of those positions could have a deleterious impact on the stock price of Viacom. On November 5, 2021, the complaint was amended to add allegations that defendants failed to disclose that certain underwriters, including the Firm, had intended to unwind Archegos's Viacom positions while simultaneously distributing the Offerings. On February 6, 2023, the court issued a decision denying motions to dismiss as to the Firm and the other underwriters, but granting the motion to dismiss as to Viacom and the Viacom individual defendants. On February 15, 2023, the underwriters, including the Firm, filed their notices of appeal of the denial of their motions to dismiss. On March 10, 2023, the plaintiff appealed the dismissal of Viacom and the individual Viacom defendants. On April 4, 2024, the Appellate Division upheld the lower court's decision as to the Firm and other underwriter defendants that had prime brokerage relationships and/or served as counterparties to certain derivative transactions with Archegos, dismissed the remaining underwriters, and upheld the dismissal of Viacom and its officers and directors. On July 25, 2024, the Appellate Division denied the plaintiff's and the Firm's respective motions for leave to reargue or appeal the April 4, 2024 decision. On January 4, 2024, the court granted

the plaintiff's motion for class certification, which the defendants have appealed.

On May 17, 2013, the plaintiff in *IKB International S.A. in Liquidation, et al. v. Morgan Stanley, et al.* filed a complaint against the Firm and certain affiliates in the Supreme Court of NY. The complaint alleges that defendants made material misrepresentations and omissions in the sale to the plaintiff of certain mortgage pass-through certificates backed by securitization trusts containing residential mortgage loans. The total amount of certificates allegedly sponsored, underwritten and/or sold by the Firm to the plaintiff was approximately \$133 million. The complaint alleges causes of action against the Firm for common law fraud, fraudulent concealment, aiding and abetting fraud, and negligent misrepresentation, and seeks, inter alia, compensatory and punitive damages. On October 29, 2014, the court granted in part and denied in part the Firm's motion to dismiss. All claims regarding four certificates were dismissed. After these dismissals, the remaining amount of certificates allegedly issued by the Firm or sold to the plaintiff by the Firm was approximately \$116 million. On August 11, 2016, the Appellate Division affirmed the trial court's order denying in part the Firm's motion to dismiss the complaint. On July 15, 2022, the Firm filed a motion for summary judgment on all remaining claims. On March 1, 2023, the court granted in part and denied in part the Firm's motion for summary judgment, narrowing the alleged misrepresentations at issue in the case. On March 26, 2024, the Appellate Division affirmed the trial court's summary judgment order. On August 27, 2024, the plaintiff notified the court that in light of the court's rulings to exclude certain evidence at trial, the plaintiff could not prove its claims at trial, and requested that the court dismiss the case, subject to its right to appeal the evidentiary rulings. On August 28, 2024, the court dismissed the case, and judgment was entered in the Firm's favor. The plaintiff has filed notices of appeal.

Beginning in February of 2024, Morgan Stanley Smith Barney LLC ("MSSB") and E*TRADE Securities LLC ("E*TRADE Securities"), among others, have been named as defendants in multiple putative class actions pending in the federal district courts for the District of New Jersey and SDNY. The class action claims have been brought on behalf of brokerage, advisory and retirement account holders, alleging various contractual, fiduciary, and statutory claims (including under the Racketeer Influenced and Corrupt Organizations Act, 18 U.S.C. §1962(c)-(d)) that MSSB and/or E*TRADE Securities failed to pay a reasonable rate of interest on its cash sweep products. The cases are at an early stage with motions for consolidation and transfer currently pending. Together, the complaints seek, inter alia, certification of a class of plaintiffs, unspecified compensatory damages, equitable and injunctive relief, and treble damages.

The Firm has been engaged with and is responding to requests for information from the Enforcement Division of the SEC regarding advisory account cash balances swept to the

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affiliate bank deposit program and compliance with the Investment Advisers Act of 1940, and from a state securities regulator regarding brokerage account cash balances swept to the affiliate bank deposit program.

15. Variable Interest Entities and Securitization Activities

Overview

The Firm is involved with various SPEs in the normal course of business. In most cases, these entities are deemed to be VIEs.

The Firm’s variable interests in VIEs include debt and equity interests, commitments, guarantees, derivative instruments and certain fees. The Firm’s involvement with VIEs arises primarily from:

- Interests purchased in connection with market-making activities, securities held in its Investment securities portfolio and retained interests held as a result of securitization activities, including re-securitization transactions.
- Guarantees issued and residual interests retained in connection with municipal bond securitizations.
- Loans made to and investments in VIEs that hold debt, equity, real estate or other assets.
- Derivatives entered into with VIEs.
- Structuring of CLNs or other asset-repackaging notes designed to meet the investment objectives of clients.
- Other structured transactions designed to provide tax-efficient yields to the Firm or its clients.

The Firm determines whether it is the primary beneficiary of a VIE upon its initial involvement with the VIE and reassesses whether it is the primary beneficiary on an ongoing basis as long as it has any continuing involvement with the VIE. This determination is based upon an analysis of the design of the VIE, including the VIE’s structure and activities, the power to make significant economic decisions held by the Firm and by other parties, and the variable interests owned by the Firm and other parties.

The power to make the most significant economic decisions may take a number of different forms in different types of VIEs. The Firm considers servicing or collateral management decisions as representing the power to make the most significant economic decisions in transactions such as securitizations or CDOs. As a result, the Firm does not consolidate securitizations or CDOs for which it does not act as the servicer or collateral manager unless it holds certain other rights to replace the servicer or collateral manager or to require the liquidation of the entity. If the Firm serves as servicer or collateral manager, or has certain other rights described in the previous sentence, the Firm analyzes the interests in the VIE that it holds and consolidates only those VIEs for which it holds a potentially significant interest in the VIE.

For many transactions, such as re-securitization transactions, CLNs and other asset-repackaging notes, there are no significant economic decisions made on an ongoing basis. In these cases, the Firm focuses its analysis on decisions made prior to the initial closing of the transaction and at the termination of the transaction. The Firm concluded in most of these transactions that decisions made prior to the initial closing were shared between the Firm and the initial investors based upon the nature of the assets, including whether the assets were issued in a transaction sponsored by the Firm and the extent of the information available to the Firm and to investors, the number, nature and involvement of investors, other rights held by the Firm and investors, the standardization of the legal documentation and the level of continuing involvement by the Firm, including the amount and type of interests owned by the Firm and by other investors. The Firm focused its control decision on any right held by the Firm or investors related to the termination of the VIE. Most re-securitization transactions, CLNs and other asset-repackaging notes have no such termination rights.

Consolidated VIE Assets and Liabilities by Type of Activity

<i>\$ in millions</i>	At December 31, 2024		At December 31, 2023	
	VIE Assets	VIE Liabilities	VIE Assets	VIE Liabilities
MABS ¹	\$ 575	\$ 236	\$ 597	\$ 256
Investment vehicles ²	378	189	753	502
MTOB	619	578	582	520
Other	156	4	378	97
Total	\$ 1,728	\$ 1,007	\$ 2,310	\$ 1,375

MTOB—Municipal tender option bonds
 1. Amounts include transactions backed by residential mortgage loans, commercial mortgage loans and other types of assets, including consumer or commercial assets and may be in loan or security form. The value of assets is determined based on the fair value of the liabilities and the interests owned by the Firm in such VIEs as the fair values for the liabilities and interests owned are more observable.
 2. Amounts include investment funds and CLOs.

Consolidated VIE Assets and Liabilities by Balance Sheet Caption

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Assets		
Cash and cash equivalents	\$ 37	\$ 164
Trading assets at fair value	1,395	1,557
Investment securities	278	492
Securities purchased under agreements to resell	—	67
Customer and other receivables	16	26
Other assets	2	4
Total	\$ 1,728	\$ 2,310
Liabilities		
Other secured financings	\$ 921	\$ 1,222
Other liabilities and accrued expenses	82	121
Borrowings	4	32
Total	\$ 1,007	\$ 1,375
Noncontrolling interests	\$ 42	\$ 54

Consolidated VIE assets and liabilities are presented in the previous tables after intercompany eliminations. Generally, most assets owned by consolidated VIEs cannot be removed unilaterally by the Firm and are not available to the Firm

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while the related liabilities issued by consolidated VIEs are non-recourse to the Firm. However, in certain consolidated VIEs, the Firm either has the unilateral right to remove assets or provides additional recourse through derivatives such as total return swaps, guarantees or other forms of involvement.

In general, the Firm's exposure to loss in consolidated VIEs is limited to losses that would be absorbed on the VIE net assets recognized in its financial statements, net of amounts absorbed by third-party variable interest holders.

Non-consolidated VIEs

\$ in millions	At December 31, 2024				
	MABS ¹	CDO	MTOB	OSF	Other ²
VIE assets (UPB)	\$179,686	\$1,621	\$3,654	\$3,603	\$74,665
Maximum exposure to loss³					
Debt and equity interests	\$26,974	\$62	\$—	\$2,267	\$12,097
Derivative and other contracts	—	—	2,454	—	3,936
Commitments, guarantees and other	8,554	—	—	—	535
Total	\$35,528	\$62	\$2,454	\$2,267	\$16,568
Carrying value of variable interests—Assets					
Debt and equity interests	\$26,974	\$62	\$—	\$1,821	\$12,067
Derivative and other contracts	—	—	6	—	1,772
Total	\$26,974	\$62	\$6	\$1,821	\$13,839
Additional VIE assets owned ⁴					\$15,777
Carrying value of variable interests—Liabilities					
Derivative and other contracts	\$—	\$—	\$4	\$—	\$448

\$ in millions	At December 31, 2023				
	MABS ¹	CDO	MTOB	OSF	Other ²
VIE assets (UPB)	\$144,906	\$1,526	\$3,152	\$3,102	\$50,052
Maximum exposure to loss³					
Debt and equity interests	\$21,203	\$52	\$—	\$2,049	\$9,076
Derivative and other contracts	—	—	2,092	—	4,452
Commitments, guarantees and other	3,439	—	—	—	55
Total	\$24,642	\$52	\$2,092	\$2,049	\$13,583
Carrying value of variable interests—Assets					
Debt and equity interests	\$21,203	\$52	\$—	\$1,682	\$9,075
Derivative and other contracts	—	—	2	—	1,330
Total	\$21,203	\$52	\$2	\$1,682	\$10,405
Additional VIE assets owned ⁴					\$15,002
Carrying value of variable interests—Liabilities					
Derivative and other contracts	\$—	\$—	\$3	\$—	\$452

1. Amounts include transactions backed by residential mortgage loans, commercial mortgage loans and other types of assets, including consumer or commercial assets, and may be in loan or security form.
2. Other primarily includes exposures to commercial real estate property and investment funds.
3. Where notional amounts are utilized in quantifying the maximum exposure related to derivatives, such amounts do not reflect changes in fair value recorded by the Firm.
4. Additional VIE assets owned represents the carrying value of total exposure to non-consolidated VIEs for which the maximum exposure to loss is less than specific thresholds, primarily interests issued by securitization SPEs. The Firm's maximum exposure to loss generally equals the fair value of the assets owned. These assets are primarily included in Trading assets and Investment securities and are measured at fair value (see Note 4). The Firm does not provide additional support in these transactions through contractual facilities, guarantees or similar derivatives.

The previous tables include VIEs sponsored by unrelated parties, as well as VIEs sponsored by the Firm; examples of the Firm's involvement with these VIEs include its secondary market-making activities and the securities held in its Investment securities portfolio (see Note 7).

The Firm's maximum exposure to loss is dependent on the nature of the Firm's variable interest in the VIE and is limited to the notional amounts of certain liquidity facilities and other credit support, total return swaps and written put options, as well as the fair value of certain other derivatives and investments the Firm has made in the VIE.

The Firm's maximum exposure to loss in the previous tables does not include the offsetting benefit of hedges or any reductions associated with the amount of collateral held as part of a transaction with the VIE or any party to the VIE directly against a specific exposure to loss.

Liabilities issued by VIEs generally are non-recourse to the Firm.

Detail of Mortgage- and Asset-Backed Securitization Assets

\$ in millions	At December 31, 2024		At December 31, 2023	
	UPB	Debt and Equity Interests	UPB	Debt and Equity Interests
Residential mortgages	\$17,316	\$2,497	\$17,346	\$3,355
Commercial mortgages	82,730	8,445	74,590	8,342
U.S. agency collateralized mortgage obligations	39,317	6,260	42,917	6,675
Other consumer or commercial loans	40,323	9,772	10,053	2,831
Total	\$179,686	\$26,974	\$144,906	\$21,203

Securitization Activities

In a securitization transaction, the Firm transfers assets (generally commercial or residential mortgage loans or securities) to an SPE; sells to investors most of the beneficial interests, such as notes or certificates, issued by the SPE; and, in many cases, retains other beneficial interests. The purchase of the transferred assets by the SPE is financed through the sale of these interests.

In many securitization transactions involving commercial mortgage loans, the Firm transfers a portion of the assets to the SPE with unrelated parties transferring the remaining assets. In addition, mainly in securitization transactions involving residential mortgage loans, the Firm may also enter into derivative transactions, primarily interest rate swaps or interest rate caps, with the SPE.

Although not obligated, the Firm generally makes a market in the securities issued by SPEs in securitization transactions. As a market maker, the Firm offers to buy these securities from, and sell these securities to, investors. Securities purchased through these market-making activities are not considered to be retained interests; these beneficial interests generally are included in Trading assets—Corporate and other debt and are measured at fair value.

The Firm enters into derivatives, generally interest rate swaps and interest rate caps, with a senior payment priority in many securitization transactions. The risks associated with these and similar derivatives with SPEs are essentially the same as similar derivatives with non-SPE counterparties and are

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managed as part of the Firm's overall exposure. See Note 6 for further information on derivative instruments and hedging activities.

Investment Securities

The Firm holds securities issued by VIEs within the Investment securities portfolio. These securities are composed of those related to transactions sponsored by the federal mortgage agencies and predominantly the most senior securities issued by VIEs backed by student loans and commercial mortgage loans. Transactions sponsored by the federal mortgage agencies include an explicit or implicit guarantee provided by the U.S. government. Additionally, the Firm holds certain commercial mortgage-backed securities issued by VIEs retained as a result of the Firm's securitization activities. See Note 7 for further information on the Investment securities portfolio.

Municipal Tender Option Bond Trusts

In a municipal tender option bond trust transaction, the client transfers a municipal bond to a trust. The trust issues short-term securities that the Firm, as the remarketing agent, sells to investors. The client generally retains a residual interest. The short-term securities are supported by a liquidity facility pursuant to which the investors may put their short-term interests. In most programs, a third-party provider will provide such liquidity facility; in some programs, the Firm provides this liquidity facility.

The Firm may, in lieu of purchasing short-term securities for remarketing, decide to extend a temporary loan to the trust. The client can generally terminate the transaction at any time. The liquidity provider can generally terminate the transaction upon the occurrence of certain events. When the transaction is terminated, the municipal bond is generally sold or returned to the client. Any losses suffered by the liquidity provider upon the sale of the bond are the responsibility of the client. This obligation is generally collateralized. Liquidity facilities provided to municipal tender option bond trusts are classified as derivatives. The Firm consolidates any municipal tender option bond trusts in which it holds the residual interest.

Credit Protection Purchased through Credit-Linked Notes

CLN transactions are designed to provide investors with exposure to certain credit risk on referenced assets. In these transactions, the Firm transfers assets (generally high-quality securities or money-market investments) to an SPE, enters into a derivative transaction in which the SPE sells protection on an unrelated referenced asset or group of assets, through a credit derivative, and sells the securities issued by the SPE to investors. In some transactions, the Firm may also enter into interest rate or currency swaps with the SPE. Depending on the structure, the assets and liabilities of the SPE may be consolidated and recognized in the Firm's balance sheet or accounted for as a sale of assets.

Upon the occurrence of a credit event related to the referenced asset, the SPE will deliver securities collateral as payment to the Firm, which exposes the Firm to changes in the collateral's value.

Derivative payments by the SPE are collateralized. The risks associated with these and similar derivatives with SPEs are essentially the same as those with non-SPE counterparties and are managed as part of the Firm's overall exposure.

Other Structured Financings

The Firm invests in tax equity investment interests issued by entities that develop and own low-income communities (including low-income housing projects) and entities that construct and own facilities that will generate energy from renewable resources. The interests entitle the Firm to a share of tax credits and tax losses generated by these projects. In addition, the Firm has issued guarantees to investors in certain low-income housing funds. The guarantees are designed to return an investor's contribution to a fund and the investor's share of tax losses and tax credits expected to be generated by the fund. The Firm is also involved with entities designed to provide tax-efficient yields to the Firm or its clients.

Collateralized Loan and Debt Obligations

CLOs and CDOs are SPEs that purchase a pool of assets consisting of corporate loans, corporate bonds, ABS or synthetic exposures on similar assets through derivatives and issue multiple tranches of debt and equity securities to investors. The Firm underwrites the securities issued in certain CLO transactions on behalf of unaffiliated sponsors and provides advisory services to these unaffiliated sponsors. The Firm sells corporate loans to many of these SPEs, in some cases representing a significant portion of the total assets purchased. Although not obligated, the Firm generally makes a market in the securities issued by SPEs in these transactions and may retain unsold securities. These beneficial interests are included in Trading assets and are measured at fair value.

Equity-Linked Notes

ELN transactions are designed to provide investors with exposure to certain risks related to the specific equity security, equity index or other index. In an ELN transaction, the Firm typically transfers to an SPE either a note issued by the Firm, the payments on which are linked to the performance of a specific equity security, equity index or other index, or debt securities issued by other companies and a derivative contract, the terms of which will relate to the performance of a specific equity security, equity index or other index. These ELN transactions with SPEs were not consolidated at December 31, 2024 or December 31, 2023.

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Transferred Assets with Continuing Involvement

\$ in millions	At December 31, 2024			
	RML	CML	U.S. Agency CMO	CLN and Other ¹
SPE assets (UPB) ^{2,3}	\$ 6,989	\$ 78,232	\$ 18,174	\$ 12,725
Retained interests				
Investment grade	\$ 198	\$ 543	\$ 967	\$ —
Non-investment grade	175	923	—	71
Total	\$ 373	\$ 1,466	\$ 967	\$ 71
Interests purchased in the secondary market³				
Investment grade	\$ 45	\$ 34	\$ 79	\$ —
Non-investment grade	5	24	—	—
Total	\$ 50	\$ 58	\$ 79	\$ —
Derivative assets	\$ —	\$ —	\$ —	\$ 1,408
Derivative liabilities	—	—	—	400

\$ in millions	At December 31, 2023			
	RML	CML	U.S. Agency CMO	CLN and Other ¹
SPE assets (UPB) ^{2,3}	\$ 4,333	\$ 73,818	\$ 12,083	\$ 12,438
Retained interests				
Investment grade	\$ 149	\$ 653	\$ 460	\$ —
Non-investment grade	83	788	—	69
Total	\$ 232	\$ 1,441	\$ 460	\$ 69
Interests purchased in the secondary market³				
Investment grade	\$ 20	\$ 22	\$ 42	\$ —
Non-investment grade	—	16	—	—
Total	\$ 20	\$ 38	\$ 42	\$ —
Derivative assets	\$ —	\$ —	\$ —	\$ 1,073
Derivative liabilities	—	—	—	426

\$ in millions	Fair Value at December 31, 2024		
	Level 2	Level 3	Total
Retained interests			
Investment grade	\$ 1,080	\$ —	\$ 1,080
Non-investment grade	71	50	121
Total	\$ 1,151	\$ 50	\$ 1,201
Interests purchased in the secondary market³			
Investment grade	\$ 158	\$ —	\$ 158
Non-investment grade	18	11	29
Total	\$ 176	\$ 11	\$ 187
Derivative assets	\$ 1,408	\$ —	\$ 1,408
Derivative liabilities	400	—	400

\$ in millions	Fair Value at December 31, 2023		
	Level 2	Level 3	Total
Retained interests			
Investment grade	\$ 576	\$ —	\$ 576
Non-investment grade	10	56	66
Total	\$ 586	\$ 56	\$ 642
Interests purchased in the secondary market³			
Investment grade	\$ 77	\$ 7	\$ 84
Non-investment grade	12	4	16
Total	\$ 89	\$ 11	\$ 100
Derivative assets	\$ 1,073	\$ —	\$ 1,073
Derivative liabilities	426	—	426

RML—Residential mortgage loans

CML—Commercial mortgage loans

1. Amounts include CLO transactions managed by unrelated third parties.

2. Amounts include assets transferred by unrelated transferees.

3. Amounts include transactions where the Firm also holds retained interests as part of the transfer.

The previous tables include transactions with SPEs in which the Firm, acting as principal, transferred financial assets with

continuing involvement and received sales treatment. The transferred assets are carried at fair value prior to securitization, and any changes in fair value are recognized in the income statement. The Firm may act as underwriter of the beneficial interests issued by these securitization vehicles, for which Investment banking revenues are recognized. The Firm may retain interests in the securitized financial assets as one or more tranches of the securitization. Certain retained interests are carried at fair value in the balance sheet with changes in fair value recognized in the income statement. Fair value for these interests is measured using techniques that are consistent with the valuation techniques applied to the Firm's major categories of assets and liabilities as described in Notes 2 and 4. Further, as permitted by applicable guidance, certain transfers of assets where the Firm's only continuing involvement is a derivative are only reported in the following Assets Sold with Retained Exposure table.

Proceeds from New Securitization Transactions and Sales of Loans

\$ in millions	2024	2023	2022
New transactions ¹	\$ 36,326	\$ 21,051	\$ 22,136
Retained interests	7,956	4,311	4,862
Sales of corporate loans to CLO SPEs ^{1,2}	—	24	62

1. Net gains on new transactions and sales of corporate loans to CLO entities at the time of the sale were not material for all periods presented.
2. Sponsored by non-affiliates.

The Firm has provided, or otherwise agreed to be responsible for, representations and warranties regarding certain assets transferred in securitization transactions sponsored by the Firm (see Note 14).

Assets Sold with Retained Exposure

\$ in millions	At December 31, 2024	At December 31, 2023
Gross cash proceeds from sale of assets ¹	\$ 92,229	\$ 60,766
Fair value		
Assets sold	\$ 92,580	\$ 62,221
Derivative assets recognized in the balance sheet	998	1,546
Derivative liabilities recognized in the balance sheet	648	93

1. The carrying value of assets derecognized at the time of sale approximates gross cash proceeds.

The Firm enters into transactions in which it sells securities, primarily equities, and contemporaneously enters into bilateral OTC derivatives with the purchasers of the securities, through which it retains exposure to the sold securities.

16. Regulatory Requirements

Regulatory Capital Framework

The Firm is an FHC under the Bank Holding Company Act of 1956, as amended, and is subject to the regulation and oversight of the Board of Governors of the Federal Reserve System (“Federal Reserve”). The Federal Reserve establishes capital requirements for the Firm, including “well-capitalized” standards, and evaluates the Firm’s compliance with such capital requirements. The OCC establishes similar capital requirements and standards for the Firm’s U.S. bank subsidiaries, including, among others, MSBNA and MSPBNA (together, “U.S. Bank Subsidiaries”). The regulatory capital requirements are largely based on the Basel III capital standards established by the Basel Committee on Banking Supervision and also implement certain provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act. In addition, many of the Firm’s regulated subsidiaries are subject to regulatory capital requirements, including regulated subsidiaries registered as swap dealers with the CFTC or conditionally registered as security-based swap dealers with the SEC or registered as broker-dealers or futures commission merchants.

Regulatory Capital Requirements

The Firm is required to maintain minimum risk-based and leverage-based capital ratios under regulatory capital requirements. A summary of the calculations of regulatory capital and RWA follows.

Risk-Based Regulatory Capital. Risk-based capital ratio requirements apply to Common Equity Tier 1 (“CET1”) capital, Tier 1 capital and Total capital (which includes Tier 2 capital), each as a percentage of RWA, and consist of regulatory minimum required ratios plus the Firm’s capital buffer requirement. Capital requirements require certain adjustments to, and deductions from, capital for purposes of determining these ratios.

CECL Deferral. Beginning on January 1, 2020, the Firm elected to defer the effect of the adoption of CECL on its risk-based and leverage-based capital amounts and ratios, as well as RWA, adjusted average assets and supplementary leverage exposure calculations, over a five-year transition period. The deferral impacts began to phase in at 25% per year from January 1, 2022 and were phased-in at 75% from January 1, 2024. The deferral impacts were fully phased-in from January 1, 2025.

Capital Buffer Requirements

	At December 31, 2024	At December 31, 2023	At December 31, 2024 and December 31, 2023
	Standardized	Standardized	Advanced
Capital buffers			
Capital conservation buffer	—	—	2.5%
SCB	6.0%	5.4%	N/A
G-SIB capital surcharge	3.0%	3.0%	3.0%
CCyB ¹	0%	0%	0%
Capital buffer requirement	9.0%	8.4%	5.5%

1. The CCyB can be set up to 2.5% but is currently set by the Federal Reserve at zero.

The capital buffer requirement represents the amount of CET1 capital the Firm must maintain above the minimum risk-based capital requirements in order to avoid restrictions on the Firm’s ability to make capital distributions, including the payment of dividends and the repurchase of stock, and to pay discretionary bonuses to executive officers. The Firm’s capital buffer requirement computed under the standardized approaches for calculating credit risk and market risk RWA (“Standardized Approach”) is equal to the sum of the SCB, G-SIB capital surcharge and CCyB, and the capital buffer requirement computed under the applicable advanced approaches for calculating credit risk, market risk and operational risk RWA (“Advanced Approach”) is equal to the sum of the 2.5% capital conservation buffer, G-SIB capital surcharge and CCyB.

Risk-Based Regulatory Capital Ratio Requirements

	Regulatory Minimum	At December 31, 2024	At December 31, 2023	At December 31, 2024 and December 31, 2023
		Standardized	Standardized	Advanced
Required ratios¹				
CET1 capital ratio	4.5%	13.5%	12.9%	10.0%
Tier 1 capital ratio	6.0%	15.0%	14.4%	11.5%
Total capital ratio	8.0%	17.0%	16.4%	13.5%

1. Required ratios represent the regulatory minimum plus the capital buffer requirement.

Risk-Weighted Assets

RWA reflects both the Firm’s on- and off-balance sheet risk, as well as capital charges attributable to the risk of loss arising from the following:

- Credit Risk: The failure of a borrower, counterparty or issuer to meet its financial obligations to the Firm;
- Market Risk: Adverse changes in the level of one or more market prices, rates, indices, volatilities, correlations or other market factors, such as market liquidity; and
- Operational Risk: Inadequate or failed processes or systems from human factors or from external events (e.g., fraud, theft, legal and compliance risks, cyberattacks or damage to physical assets).

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The Firm’s risk-based capital ratios are computed under both (i) the Standardized Approach and (ii) the Advanced Approach. The credit risk RWA calculations between the two approaches differ in that the Standardized Approach requires calculation of RWA using prescribed risk weights, whereas the Advanced Approach utilizes models to calculate exposure amounts and risk weights. At December 31, 2024 and December 31, 2023, the differences between the actual and required ratio were lower under the Standardized Approach.

Leverage-Based Regulatory Capital. Leverage-based capital requirements include a minimum Tier 1 leverage ratio of 4%, a minimum SLR of 3% and an enhanced SLR capital buffer of at least 2%.

The Firm’s Regulatory Capital and Capital Ratios

Risk-based capital

<i>\$ in millions</i>	Standardized	
	At December 31, 2024	At December 31, 2023
Risk-based capital		
CET1 capital	\$ 75,095	\$ 69,448
Tier 1 capital	84,790	78,183
Total capital	95,567	88,874
Total RWA	471,834	456,053
Risk-based capital ratio		
CET1 capital	15.9%	15.2%
Tier 1 capital	18.0%	17.1%
Total capital	20.3%	19.5%
Required ratio¹		
CET1 capital	13.5%	12.9%
Tier 1 capital	15.0%	14.4%
Total capital	17.0%	16.4%

1. Required ratios are inclusive of any buffers applicable as of the date presented.

Leveraged-based capital

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Leveraged-based capital		
Adjusted average assets ¹	\$ 1,223,779	\$ 1,159,626
Supplementary leverage exposure ²	1,517,687	1,429,552
Leveraged-based capital ratio		
Tier 1 leverage	6.9%	6.7%
SLR	5.6%	5.5%
Required ratio³		
Tier 1 leverage	4.0%	4.0%
SLR	5.0%	5.0%

1. Adjusted average assets represents the denominator of the Tier 1 leverage ratio and is composed of the average daily balance of consolidated on-balance sheet assets for the quarters ending on the respective balance sheet dates, reduced by disallowed goodwill, intangible assets, investments in covered funds, defined benefit pension plan assets, after-tax gain on sale from assets sold into securitizations, investments in our own capital instruments, certain deferred tax assets and other capital deductions.

2. Supplementary leverage exposure is the sum of Adjusted average assets used in the Tier 1 leverage ratio and other adjustments, primarily: (i) for derivatives, potential future exposure and the effective notional principal amount of sold credit protection offset by qualifying purchased credit protection; (ii) the counterparty credit risk for repo-style transactions; and (iii) the credit equivalent amount for off-balance sheet exposures.

3. Required ratios are inclusive of any buffers applicable as of the date presented.

U.S. Bank Subsidiaries’ Regulatory Capital and Capital Ratios

The OCC establishes capital requirements for the U.S. Bank Subsidiaries, and evaluates their compliance with such capital requirements. Regulatory capital requirements for the U.S. Bank Subsidiaries are calculated in a similar manner to the Firm’s regulatory capital requirements, although G-SIB capital surcharge and SCB requirements do not apply to the U.S. Bank Subsidiaries.

The OCC’s regulatory capital framework includes Prompt Corrective Action (“PCA”) standards, including “well-capitalized” PCA standards that are based on specified regulatory capital ratio minimums. For the Firm to remain an FHC, its U.S. Bank Subsidiaries must remain well-capitalized in accordance with the OCC’s PCA standards. In addition, failure by the U.S. Bank Subsidiaries to meet minimum capital requirements may result in certain mandatory and discretionary actions by regulators that, if undertaken, could have a direct material effect on the U.S. Bank Subsidiaries’ and the Firm’s financial statements.

At December 31, 2024 and December 31, 2023, MSBNA and MSPBNA risk-based capital ratios are based on the Standardized Approach rules. Beginning on January 1, 2020, MSBNA and MSPBNA elected to defer the effect of the adoption of CECL on risk-based capital amounts and ratios, as well as RWA, adjusted average assets and supplementary leverage exposure calculations, over a five-year transition period. The deferral impacts began to phase in at 25% per year from January 1, 2022 and were phased-in at 75% from January 1, 2024. The deferral impacts were fully phased-in from January 1, 2025.

MSBNA’s Regulatory Capital

<i>\$ in millions</i>	Well-Capitalized Requirement	Required Ratio ¹	At December 31, 2024		At December 31, 2023	
			Amount	Ratio	Amount	Ratio
Risk-based capital						
CET1 capital	6.5 %	7.0 %	\$ 22,165	20.1 %	\$ 21,925	21.7 %
Tier 1 capital	8.0 %	8.5 %	22,165	20.1 %	21,925	21.7 %
Total capital	10.0 %	10.5 %	22,993	20.9 %	22,833	22.6 %
Leverage-based capital						
Tier 1 leverage	5.0 %	4.0 %	\$ 22,165	9.7 %	\$ 21,925	10.6 %
SLR	6.0 %	3.0 %	22,165	7.4 %	21,925	8.2 %

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MSPBNA's Regulatory Capital

\$ in millions	Well-Capitalized Requirement	Required Ratio ¹	At December 31, 2024		At December 31, 2023	
			Amount	Ratio	Amount	Ratio
Risk-based capital						
CET1 capital	6.5 %	7.0 %	\$ 16,672	26.1 %	\$15,388	25.8 %
Tier 1 capital	8.0 %	8.5 %	16,672	26.1 %	15,388	25.8 %
Total capital	10.0 %	10.5 %	17,004	26.6 %	15,675	26.3 %
Leverage-based capital						
Tier 1 leverage	5.0 %	4.0 %	\$ 16,672	7.7 %	\$15,388	7.5 %
SLR	6.0 %	3.0 %	16,672	7.5 %	15,388	7.2 %

1. Required ratios are inclusive of any buffers applicable as of the date presented. Failure to maintain the buffers would result in restrictions on the ability to make capital distributions, including the payment of dividends.

Additionally, MSBNA is conditionally registered with the SEC as a security-based swap dealer and is registered with the CFTC as a swap dealer. However, as MSBNA is prudentially regulated as a bank, its capital requirements continue to be determined by the OCC.

Other Regulatory Capital Requirements

MS&Co. Regulatory Capital

\$ in millions	At December 31, 2024	At December 31, 2023
Net capital	\$ 18,483	\$ 18,121
Excess net capital	13,883	13,676

MS&Co. is registered as a broker-dealer and a futures commission merchant with the SEC and the CFTC, respectively, and is registered as a swap dealer with the CFTC.

As an Alternative Net Capital broker-dealer, and in accordance with Securities Exchange Act of 1934 ("Exchange Act") Rule 15c3-1, Appendix E, MS&Co. is subject to minimum net capital and tentative net capital requirements and operates with capital in excess of its regulatory capital requirements. As a futures commission merchant and registered swap dealer, MS&Co. is subject to CFTC capital requirements. In addition, MS&Co. must notify the SEC if its tentative net capital falls below certain levels. At December 31, 2024 and December 31, 2023, MS&Co. exceeded its net capital requirement and had tentative net capital in excess of the minimum and notification requirements.

Other Regulated Subsidiaries

Certain other subsidiaries are also subject to various regulatory capital requirements. Such subsidiaries include the following, each of which operated with capital in excess of their respective regulatory capital requirements as of December 31, 2024 and December 31, 2023, as applicable:

- MSSB, a registered U.S. broker-dealer and introducing broker for the futures business, is subject to, respectively, the minimum net capital requirements of the SEC and CFTC.

- MSIP, a London-based broker-dealer subsidiary, is subject to the capital requirements of the Prudential Regulation Authority ("PRA"). MSIP is also conditionally registered with the SEC as a security-based swap dealer and registered with the CFTC as a swap dealer. It currently complies with home-country capital requirements in lieu of SEC and CFTC capital requirements pursuant to applicable substituted compliance rules.
- Morgan Stanley Europe Holdings SE Group ("MSEHSE Group"), including MSESE, a Germany-based broker-dealer, is subject to the capital requirements of the European Central Bank, BaFin and the German Central Bank. MSESE is also conditionally registered with the SEC as a security-based swap dealer and registered with the CFTC as a swap dealer. It currently complies with home-country capital requirements in lieu of SEC and CFTC capital requirements pursuant to applicable substituted compliance rules.
- MSMS, a Tokyo-based broker-dealer subsidiary, is subject to the capital requirements of the Financial Services Agency. MSMS is also registered with the CFTC as a swap dealer but is currently complying with home-country capital requirements in lieu of CFTC capital requirements pursuant to applicable substituted compliance rules.
- MSCS, a U.S. entity and the Firm's primary non-bank security-based swap dealer, is conditionally registered with the SEC as a security-based swap dealer, registered with the SEC as an OTC derivatives dealer and registered with the CFTC as a swap dealer. MSCS is subject to the capital requirements of both regulators.
- MSCG, a U.S. entity, is registered with the CFTC as a swap dealer and is subject to its capital requirements.

Certain other U.S. and non-U.S. subsidiaries of the Firm are subject to various securities, commodities and banking regulations, and capital adequacy requirements promulgated by the regulatory and exchange authorities of the countries in which they operate. These subsidiaries have also consistently operated with capital in excess of their local capital adequacy requirements.

Restrictions on Payments

The regulatory capital requirements referred to above, and certain covenants contained in various agreements governing indebtedness of the Firm, may restrict the Firm's ability to withdraw capital from its subsidiaries. The following table represents net assets of consolidated subsidiaries that may be restricted as to the payment of cash dividends and advances to the Parent Company.

\$ in millions	At December 31, 2024	At December 31, 2023
Restricted net assets	\$ 49,914	\$ 49,008

17. Total Equity

Morgan Stanley Shareholders' Equity

Preferred Stock

\$ in millions, except per share data	Shares Outstanding		Carrying Value	
	At December 31, 2024	Liquidation Preference per Share	At December 31, 2024	At December 31, 2023
Series				
A	44,000	\$ 25,000	\$ 1,100	\$ 1,100
C ¹	519,882	1,000	408	408
E	34,500	25,000	862	862
F	34,000	25,000	850	850
I	40,000	25,000	1,000	1,000
K	40,000	25,000	1,000	1,000
L	20,000	25,000	500	500
M	400,000	1,000	430	430
N	3,000	100,000	300	300
O	52,000	25,000	1,300	1,300
P	40,000	25,000	1,000	1,000
Q	40,000	25,000	1,000	—
Total			\$ 9,750	\$ 8,750
Shares authorized				30,000,000

1. Series C preferred stock is held by MUFJ.

The Firm's preferred stock has a preference over its common stock upon liquidation. The Firm's preferred stock qualifies as and is included in Tier 1 capital in accordance with regulatory capital requirements (see Note 16).

Description of Preferred Stock as of December 31, 2024

Series ^{1,2}	Shares Issued	Depository Shares per Share	Redemption	
			Price per Share ³	Date ⁴
A	44,000	1,000	\$ 25,000	Currently redeemable
C ⁵	1,160,791	N/A	1,100	Currently redeemable
E	34,500	1,000	25,000	Currently redeemable
F	34,000	1,000	25,000	Currently redeemable
I	40,000	1,000	25,000	Currently redeemable
K	40,000	1,000	25,000	April 15, 2027
L	20,000	1,000	25,000	January 15, 2025
M	400,000	N/A	1,000	September 15, 2026
N	3,000	100	100,000	October 2, 2025
O	52,000	1,000	25,000	January 15, 2027
P ⁶	40,000	1,000	25,000	October 15, 2027
Q ⁷	40,000	1,000	25,000	October 15, 2029

- All shares issued are non-cumulative. Each share has a par value of \$0.01.
- Dividends on Series A are based on a floating rate, and dividends on Series C, L, O, P and Q are based on a fixed rate. Dividends on all other Series are based on a fixed-to-floating rate.
- Series A and C are redeemable at the redemption price plus accrued and unpaid dividends, regardless of whether dividends are actually declared, up to but excluding the date of redemption. All other Series are redeemable at the redemption price plus any declared and unpaid dividends, up to but excluding the date fixed for redemption.
- Series A and C are currently redeemable at the Firm's option, in whole or in part, from time to time. Series E, F and I are currently redeemable, and all other Series are redeemable, at the Firm's option (i) in whole or in part, from time to time, on any dividend payment date on or after the redemption date or (ii) in whole but not in part at any time within 90 days following a regulatory capital treatment event (as described in the terms of that series).
- Series C is non-voting perpetual preferred stock. Dividends on the Series C preferred stock are payable, on a non-cumulative basis, as and if declared by the Board of Directors, in cash, at the rate of 10% per annum of the liquidation preference of \$1,000 per share.
- The Firm issued Series P Preferred Stock on August 2, 2022.
- The Firm issued Series Q Preferred Stock on July 30, 2024.

Common Stock

Rollforward of Common Stock Outstanding

in millions	2024	2023
Shares outstanding at beginning of period	1,627	1,675
Treasury stock purchases ¹	(43)	(71)
Other ²	23	23
Shares outstanding at end of period	1,607	1,627

- The Firm's Board of Directors has authorized the repurchase of the Firm's outstanding stock under a share repurchase program ("Share Repurchase Program"). In addition to the Firm's Share Repurchase Program, Treasury stock purchases include repurchases of common stock for employee tax withholding.
- Other includes net shares issued to and forfeited from employee stock trusts and issued for RSU conversions.

Share Repurchases

\$ in millions	2024	2023
Repurchases of common stock under the Firm's Share Repurchase Program	\$ 3,250	\$ 5,300

On June 28, 2024, the Firm announced that its Board of Directors reauthorized a multi-year repurchase program of up to \$20 billion of outstanding common stock (the "Share Repurchase Authorization"), without a set expiration date, beginning in the third quarter of 2024, which will be exercised from time to time as conditions warrant.

Pursuant to the Share Repurchase Program, the Firm considers, among other things, business segment capital needs, as well as stock-based compensation and benefit plan

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requirements. Share repurchases under the program will be exercised from time to time at prices the Firm deems appropriate subject to various factors, including the Firm's capital position and market conditions. The share repurchases may be effected through open market purchases or privately negotiated transactions, including through Rule 10b5-1 plans, and may be suspended at any time.

Common Shares Outstanding for Basic and Diluted EPS

<i>in millions</i>	2024	2023	2022
Weighted average common shares outstanding, basic	1,591	1,628	1,691
Effect of dilutive RSUs and PSUs	20	18	22
Weighted average common shares outstanding and common stock equivalents, diluted	1,611	1,646	1,713
Weighted average antidilutive common stock equivalents (excluded from the computation of diluted EPS)	—	2	3

Dividends

<i>\$ in millions, except per share data</i>	2024		2023		2022	
	Per Share ¹	Total	Per Share ¹	Total	Per Share ¹	Total
Preferred Stock Series						
A	\$1,548	\$ 68	\$1,522	\$ 67	\$1,061	\$ 47
C	100	52	100	52	100	52
E	1,806	62	1,791	62	1,781	60
F	1,747	60	1,719	58	1,719	59
I	1,603	64	1,594	64	1,594	64
K	1,463	59	1,463	59	1,463	59
L	1,219	24	1,219	24	1,219	24
M ²	59	24	59	24	59	24
N ³	8,841	27	9,160	27	5,300	16
O	1,063	55	1,063	55	1,063	55
P	1,625	65	1,625	65	739	29
Q	759	30	—	—	—	—
Total Preferred stock	\$ 590	\$ 590	\$ 557	\$ 557	\$ 489	\$ 489
Common stock	\$ 3.55	\$ 5,745	\$ 3.25	\$ 5,393	\$ 2.95	\$ 5,108

1. Common and Preferred Stock dividends are payable quarterly unless otherwise noted.
2. Series M is payable semiannually until September 15, 2026 and thereafter will be payable quarterly.
3. Series N was payable semiannually until March 15, 2023 and thereafter is payable quarterly.

Accumulated Other Comprehensive Income (Loss)¹

<i>\$ in millions</i>	CTA	AFS Securities	Pension and Other	DVA	Cash Flow Hedges	Total
December 31, 2021	\$(1,002)	\$ 245	\$(551)	\$(1,794)	\$ —	\$(3,102)
OCI during the period	(202)	(4,437)	43	1,449	(4)	(3,151)
December 31, 2022	(1,204)	(4,192)	(508)	(345)	(4)	(6,253)
OCI during the period	51	1,098	(87)	(1,250)	20	(168)
December 31, 2023	(1,153)	(3,094)	(595)	(1,595)	16	(6,421)
OCI during the period	(324)	521	12	(551)	(51)	(393)
December 31, 2024	\$(1,477)	\$ (2,573)	\$(583)	\$(2,146)	\$(35)	\$(6,814)

CTA—Cumulative foreign currency translation adjustments
1. Amounts are net of tax and noncontrolling interests.

Components of Period Changes in OCI

<i>\$ in millions</i>	2024				
	Pre-tax Gain (Loss)	Income Tax Benefit (Provision)	After-tax Gain (Loss)	Non-controlling Interests	Net
CTA					
OCI activity	\$ (117)	\$ (305)	\$ (422)	\$ (98)	\$ (324)
Reclassified to earnings	—	—	—	—	—
Net OCI	\$ (117)	\$ (305)	\$ (422)	\$ (98)	\$ (324)
Change in net unrealized gains (losses) on AFS securities					
OCI activity	\$ 736	\$ (175)	\$ 561	\$ —	\$ 561
Reclassified to earnings	(52)	12	(40)	—	(40)
Net OCI	\$ 684	\$ (163)	\$ 521	\$ —	\$ 521
Pension and other					
OCI activity	\$ (8)	\$ 5	\$ (3)	\$ —	\$ (3)
Reclassified to earnings	20	(5)	15	—	15
Net OCI	\$ 12	\$ —	\$ 12	\$ —	\$ 12
Change in net DVA					
OCI activity	\$ (729)	\$ 174	\$ (555)	\$ 17	\$ (572)
Reclassified to earnings	27	(6)	21	—	21
Net OCI	\$ (702)	\$ 168	\$ (534)	\$ 17	\$ (551)
Change in fair value of cash flow hedge derivatives					
OCI activity	\$ (99)	\$ 24	\$ (75)	\$ —	\$ (75)
Reclassified to earnings	32	(8)	24	—	24
Net OCI	\$ (67)	\$ 16	\$ (51)	\$ —	\$ (51)

<i>\$ in millions</i>	2023				
	Pre-tax Gain (Loss)	Income Tax Benefit (Provision)	After-tax Gain (Loss)	Non-controlling Interests	Net
CTA					
OCI activity	\$ (73)	\$ 53	\$ (20)	\$ (71)	\$ 51
Reclassified to earnings	—	—	—	—	—
Net OCI	\$ (73)	\$ 53	\$ (20)	\$ (71)	\$ 51
Change in net unrealized gains (losses) on AFS securities					
OCI activity	\$ 1,488	\$ (353)	\$ 1,135	\$ —	\$ 1,135
Reclassified to earnings	(49)	12	(37)	—	(37)
Net OCI	\$ 1,439	\$ (341)	\$ 1,098	\$ —	\$ 1,098
Pension and other					
OCI activity	\$ (96)	\$ 24	\$ (72)	\$ —	\$ (72)
Reclassified to earnings	(18)	3	(15)	—	(15)
Net OCI	\$ (114)	\$ 27	\$ (87)	\$ —	\$ (87)
Change in net DVA					
OCI activity	\$(1,728)	\$ 424	\$(1,304)	\$ (40)	\$(1,264)
Reclassified to earnings	19	(5)	14	—	14
Net OCI	\$(1,709)	\$ 419	\$(1,290)	\$ (40)	\$(1,250)
Change in fair value of cash flow hedge derivatives					
OCI activity	\$ 9	\$ (1)	\$ 8	\$ —	\$ 8
Reclassified to earnings	16	(4)	12	—	12
Net OCI	\$ 25	\$ (5)	\$ 20	\$ —	\$ 20

\$ in millions	2022				
	Pre-tax Gain (Loss)	Income Tax Benefit (Provision)	After-tax Gain (Loss)	Non-controlling Interests	Net
CTA					
OCI activity	\$ (179)	\$ (217)	\$ (396)	\$ (135)	\$ (261)
Reclassified to earnings	—	59	59	—	59
Net OCI	\$ (179)	\$ (158)	\$ (337)	\$ (135)	\$ (202)
Change in net unrealized gains (losses) on AFS securities					
OCI activity	\$(5,720)	\$ 1,337	\$(4,383)	—	\$(4,383)
Reclassified to earnings	(70)	16	(54)	—	(54)
Net OCI	\$(5,790)	\$ 1,353	\$(4,437)	—	\$(4,437)
Pension and other					
OCI activity	\$ 38	\$ (13)	\$ 25	—	\$ 25
Reclassified to earnings	22	(4)	18	—	18
Net OCI	\$ 60	\$ (17)	\$ 43	—	\$ 43
Change in net DVA					
OCI activity	\$ 1,982	\$ (480)	\$ 1,502	\$ 53	\$ 1,449
Reclassified to earnings	—	—	—	—	—
Net OCI	\$ 1,982	\$ (480)	\$ 1,502	\$ 53	\$ 1,449
Change in fair value of cash flow hedge derivatives					
OCI activity	\$ (4)	—	\$(4)	—	\$(4)
Reclassified to earnings	—	—	—	—	—
Net OCI	\$ (4)	—	\$(4)	—	\$(4)

Cumulative Foreign Currency Translation Adjustments

\$ in millions	At December 31, 2024	At December 31, 2023
	Associated with net investments in subsidiaries with a non-U.S. dollar functional currency	\$ (4,326)
Hedges, net of tax	2,849	1,764
Total	\$ (1,477)	\$ (1,153)
Carrying value of net investments in non-U.S. dollar functional currency subsidiaries subject to hedges	\$ 18,303	\$ 18,761

Cumulative foreign currency translation adjustments include gains or losses resulting from translating foreign currency financial statements from their respective functional currencies to U.S. dollars, net of hedge gains or losses and related tax effects. The Firm uses foreign currency contracts to manage the currency exposure relating to its net investments in non-U.S. dollar functional currency subsidiaries and determines the amount of exposure to hedge on a pre-tax basis. The Firm may also elect not to hedge its net investments in certain foreign operations due to market conditions or other reasons, including the availability of various currency contracts at acceptable costs. Information relating to the effects on cumulative foreign currency translation adjustments that resulted from the translation of foreign currency financial statements and from gains and losses from hedges of the Firm's net investments in non-U.S. dollar functional currency subsidiaries is summarized in the previous table.

18. Interest Income and Interest Expense

\$ in millions	2024	2023	2022
Interest income			
Cash and cash equivalents ¹	\$ 3,068	\$ 3,408	\$ 914
Investment securities	5,161	3,992	3,066
Loans	13,771	12,424	6,988
Securities purchased under agreements to resell ²	12,416	7,762	2,188
Securities borrowed ³	5,391	5,191	1,020
Trading assets, net of Trading liabilities	5,924	4,488	2,484
Customer receivables and Other ^{1,4}	8,404	8,584	4,935
Total interest income	\$ 54,135	\$ 45,849	\$ 21,595
Interest expense			
Deposits	\$ 10,368	\$ 8,216	\$ 1,825
Borrowings	13,242	11,437	5,054
Securities sold under agreements to repurchase ⁵	10,787	6,737	1,760
Securities loaned ⁶	1,036	784	503
Customer payables and Other ^{4,7}	10,091	10,445	3,126
Total interest expense	\$ 45,524	\$ 37,619	\$ 12,268
Net interest	\$ 8,611	\$ 8,230	\$ 9,327

- In 2023, interest-bearing Cash and cash equivalents and related interest were presented separately for the first time. The prior year amounts for Customer receivables and Other have been disaggregated to exclude Cash and cash equivalents to align with the current presentation.
- Includes interest paid on Securities purchased under agreements to resell.
- Includes fees paid on Securities borrowed.
- Certain prior-period amounts have been adjusted to conform with the current-period presentation. This adjustment resulted in a decrease to both interest income and interest expense of \$4,432 million for the year ended December 31, 2023, and no effect on net interest income, with the entire impact to the Firm recorded within the Institutional Securities segment. See Note 2 for additional information.
- Includes interest received on Securities sold under agreements to repurchase.
- Includes fees received on Securities loaned.
- Includes fees received from Equity Financing customers related to their short transactions, which can be under either margin or securities lending arrangements.

Interest income and Interest expense are classified in the income statement based on the nature of the instrument and related market conventions. When included as a component of the instrument's fair value, interest is included within Trading revenues or Investments revenues. Otherwise, it is included within Interest income or Interest expense.

Accrued Interest

\$ in millions	At December 31, 2024	At December 31, 2023
Customer and other receivables	\$ 3,322	\$ 4,206
Customer and other payables	3,938	4,360

19. Deferred Compensation Plans and Carried Interest Compensation

Stock-Based Compensation Plans

Certain current and former employees of the Firm participate in the Firm's stock-based compensation plans. These plans include RSUs, PSUs and an ESPP.

Notes to Consolidated Financial Statements

Stock-Based Compensation Expense

<i>\$ in millions</i>	2024	2023	2022
RSUs	\$ 1,464	\$ 1,607	\$ 1,827
PSUs	148	91	40
ESPP	10	11	8
Total	\$ 1,622	\$ 1,709	\$ 1,875
Retirement-eligible awards ¹	\$ 202	\$ 178	\$ 176

1. Total expense includes stock-based compensation anticipated to be awarded in January of the following year that does not contain a future service requirement.

Tax Benefit Related to Stock-Based Compensation Expense

<i>\$ in millions</i>	2024	2023	2022
Tax benefit ¹	\$ 343	\$ 382	\$ 427

1. Excludes income tax consequences related to employee share-based award conversions.

Unrecognized Compensation Cost Related to Stock-Based Awards Granted

<i>\$ in millions</i>	At December 31, 2024 ¹	
To be recognized in:		
2025	\$	510
2026		230
Thereafter		38
Total	\$	778

1. Amounts do not include forfeitures or 2024 performance year compensation awarded in January 2025 which will begin to be amortized in 2025.

In connection with awards under its stock-based compensation plans, the Firm is authorized to issue shares of common stock held in treasury or newly issued shares.

The Firm generally uses treasury shares, if available, to deliver shares to employees or employee stock trusts and has an ongoing repurchase authorization that includes repurchases in connection with awards under its stock-based compensation plans.

Common Shares Available for Future Awards under Stock-Based Compensation Plans

<i>in millions</i>	At December 31, 2024
Shares	109

See Note 17 for additional information on the Firm's Share Repurchase Program.

Restricted Stock Units

RSUs are subject to vesting over time, generally one to seven years from the date of award, contingent upon continued employment and subject to restrictions on sale, transfer or assignment until conversion to common stock. All or a portion of an award may be forfeited if employment is terminated before the end of the relevant vesting period or canceled after the relevant vesting period in certain situations. Recipients of RSUs may have voting rights, at the Firm's discretion, and generally receive dividend equivalents if the awards vest.

Vested and Unvested RSU Activity

<i>shares in millions</i>	2024	
	Number of Shares	Weighted Average Award Date Fair Value
RSUs at beginning of period	59	\$ 86.92
Awarded	20	85.46
Conversions to common stock	(23)	77.11
Forfeited	(2)	90.84
RSUs at end of period¹	54	\$ 90.53
Weighted average award date fair value		
RSUs awarded in 2023		93.55
RSUs awarded in 2022		96.61

1. At December 31, 2024, the weighted average remaining term until delivery for the outstanding RSUs was approximately 1.2 years.

Unvested RSU Activity

<i>shares in millions</i>	2024	
	Number of Shares	Weighted Average Award Date Fair Value
Unvested RSUs at beginning of period	28	\$ 89.16
Awarded	20	85.46
Vested	(19)	85.96
Forfeited	(2)	90.51
Unvested RSUs at end of period¹	27	\$ 88.64

1. Unvested RSUs represent awards where recipients have yet to satisfy either the explicit vesting terms or retirement-eligible requirements.

Fair Value of RSU Activity¹

<i>\$ in millions</i>	2024	2023	2022
Conversions to common stock	\$ 2,065	\$ 2,019	\$ 2,301
Vested	1,723	2,260	2,433

1. Fair value of converted stock is based on the share price at conversion. Fair value of vested stock is based on the share price at the date of vesting.

Performance-Based Stock Units

PSUs vest and convert to shares of common stock only if the Firm satisfies, over a three-year performance period, performance goals that are determined on the award date. The number of PSUs that may vest ranges from 0% to 150% of the target award, based on the Firm's level of achievement of the specified performance goals. One-half of a PSU award is earned based on the Firm's average return on tangible common equity ("MS Average ROTCE") over the performance period. The other half of a PSU award is earned based on the Firm's total shareholder return, relative to the total shareholder return of the S&P 500 Financials Sector Index ("MS Relative TSR") for awards granted prior to 2023, or for PSU awards granted from 2023 onwards based on the MS Average ROTCE relative to the Return on Tangible Common Equity of each member of the defined comparison group ("MS Relative ROTCE"). PSUs have vesting, conversion and cancellation provisions that are generally similar to those of RSUs. Dividend equivalents that accrue on these awards are paid in cash when the awards convert. At December 31, 2024, approximately 2.8 million PSUs at target were outstanding.

Notes to Consolidated Financial Statements

PSU Awards - Fair Value on Award Date

	2024	2023	2022
MS Average ROTCE/ Relative ROTCE ¹	\$ 83.86	\$ 85.76	\$ 100.12
MS Relative TSR	—	—	102.17

1. Weighted average price on award date

The MS Relative TSR fair values on the award date were estimated using a Monte Carlo simulation and the following assumptions.

Monte Carlo Simulation Assumptions

Award year	Risk-Free Interest Rate	Expected Stock Price Volatility	Correlation Coefficient
2022	1.3 %	38.9 %	0.91

The risk-free interest rate was determined based on the yields available on U.S. Treasury zero-coupon issues. The expected stock price volatility was determined using historical volatility. The correlation coefficient was developed based on historical price data of the Firm and the S&P 500 Financials Sector Index. The model uses an expected dividend yield equivalent to reinvesting dividends.

Deferred Cash-Based Compensation Plans

DCP generally provide a return to the plan participants based upon the performance of each participant’s referenced investments.

Deferred Cash-Based Compensation Expense

<i>\$ in millions</i>	2024	2023	2022
Deferred cash-based awards	\$ 770	\$ 693	\$ 761
Return on referenced investments	672	668	(716)
Total	\$ 1,442	\$ 1,361	\$ 45
Retirement-eligible awards ¹	\$ 287	\$ 259	\$ 264

1. Total expense includes deferred cash-based compensation anticipated to be awarded in January of the following year that does not contain a future service requirement.

Carried Interest Compensation

The Firm generally recognizes compensation expense for any portion of carried interest (both realized and unrealized) that is allocated to employees.

Carried Interest Compensation Expense

<i>\$ in millions</i>	2024	2023	2022
Expense	\$ 114	\$ 44	\$ 225

20. Employee Benefit Plans

Pension Plans

Net Periodic Benefit Expense (Income)

<i>\$ in millions</i>	Pension Plans		
	2024	2023	2022
Service cost, benefits earned during the period	\$ 20	\$ 20	\$ 19
Interest cost on projected benefit obligation	137	140	111
Expected return on plan assets	(99)	(99)	(56)
Net amortization of prior service cost	1	1	1
Amortization of net (gains) losses	21	(9)	25
Plan settlements	—	2	—
Net periodic benefit expense	\$ 80	\$ 55	\$ 100

Certain current and former U.S. employees of the Firm and its U.S. affiliates who were hired before July 1, 2007 are covered by the U.S. pension plan, a non-contributory defined benefit pension plan that is qualified under Section 401(a) of the Internal Revenue Code (“U.S. Qualified Plan”). The U.S. Qualified Plan has ceased future benefit accruals.

The Morgan Stanley Supplemental Executive Retirement and Excess Plan (“SEREP”), is a non-contributory defined benefit plan that is not qualified under Section 401(a) of the Internal Revenue Code, has ceased future benefit accruals.

Certain of the Firm’s non-U.S. subsidiaries also have defined benefit pension plans covering their eligible current and former employees.

The Firm’s pension plans generally provide pension benefits that are based on each employee’s years of credited service and on compensation levels specified in the plans.

Rollforward of Pre-tax AOCI

<i>\$ in millions</i>	Pension Plans		
	2024	2023	2022
Beginning balance	\$ (821)	\$ (716)	\$ (768)
Net gain (loss)	(12)	(100)	26
Amortization of prior service cost	1	1	1
Amortization of net (gains) losses	21	(9)	25
Plan settlements, curtailments and amendments	(1)	3	—
Changes recognized in OCI	9	(105)	52
Ending balance	\$ (812)	\$ (821)	\$ (716)

The Firm generally amortizes into net periodic benefit expense (income) the unrecognized net gains and losses exceeding 10% of the greater of the projected benefit obligation or the market-related value of plan assets. The U.S. pension plans amortize the unrecognized net gains and losses over the average life expectancy of participants. The remaining plans generally amortize the unrecognized net gains and losses and prior service credit over the average remaining service period of active participants.

Notes to Consolidated Financial Statements

Weighted Average Assumptions Used to Determine Net Periodic Benefit Expense (Income)

	Pension Plans		
	2024	2023	2022
Discount rate	4.75 %	4.93 %	2.80 %
Expected long-term rate of return on plan assets	4.18 %	3.54 %	1.71 %

The accounting for pension plans involves certain assumptions and estimates. The expected long-term rate of return for the U.S. Qualified Plan was estimated by computing a weighted average of the underlying long-term expected returns based on the investment managers' target allocations.

Benefit Obligation and Funded Status

Rollforward of the Projected Benefit Obligation and Fair Value of Plan Assets

\$ in millions	Pension Plans	
	2024	2023
Rollforward of projected benefit obligation		
Benefit obligation at beginning of year	\$ 2,975	\$ 2,907
Service cost	20	20
Interest cost	137	140
Actuarial (gain) loss ¹	(201)	79
Plan amendments	1	—
Plan settlements	(1)	(13)
Benefits paid	(149)	(164)
Other ²	(18)	6
Projected benefit obligation at end of year	\$ 2,764	\$ 2,975
Rollforward of fair value of plan assets		
Fair value of plan assets at beginning of year	\$ 2,422	\$ 2,416
Actual return on plan assets	(114)	78
Employer contributions	38	89
Benefits paid	(149)	(164)
Plan settlements	(1)	(13)
Other ²	(10)	16
Fair value of plan assets at end of year	\$ 2,186	\$ 2,422
Funded (unfunded) status	\$ (578)	\$ (553)
Amounts recognized in the balance sheet		
Assets	\$ 71	\$ 84
Liabilities	(649)	(637)
Net amount recognized	\$ (578)	\$ (553)

1. Primarily reflects the impact of year-over-year discount rate fluctuations.
2. Primarily includes the impact of foreign currency exchange rate changes.

Accumulated Benefit Obligation

\$ in millions	At	At
	December 31, 2024	December 31, 2023
Pension plans	\$ 2,740	\$ 2,956

Pension Plans with Projected Benefit Obligations in Excess of the Fair Value of Plan Assets

\$ in millions	At	At
	December 31, 2024	December 31, 2023
Projected benefit obligation	\$ 2,616	\$ 2,821
Accumulated benefit obligation	2,594	2,803
Fair value of plan assets	1,967	2,184

The pension plans included in the table above may differ based on their funding status as of December 31 of each year.

Weighted Average Assumptions Used to Determine Projected Benefit Obligation

	Pension Plans	
	At December 31, 2024	At December 31, 2023
Discount rate	5.39 %	4.75 %

The discount rates used to determine the benefit obligation were selected by the Firm, in consultation with its independent actuary. The U.S. pension plans use a pension discount yield curve based on the characteristics of the plans, each determined independently. The pension discount yield curve represents spot discount yields based on duration implicit in a representative broad-based Aa-rated corporate bond universe of high-quality fixed income investments. For all non-U.S. pension plans, the assumed discount rates are based on the nature of liabilities, local economic environments and available bond indices.

Plan Assets

Fair Value of Plan Assets

\$ in millions	At December 31, 2024			
	Level 1	Level 2	Level 3	Total
Assets				
Cash and cash equivalents	\$ 7	\$ —	\$ —	\$ 7
U.S. government and agency securities	1,638	213	—	1,851
Derivative contracts	—	1	—	1
Other investments	—	—	70	70
Other receivables ¹	—	10	—	10
Total	\$ 1,645	\$ 224	\$ 70	\$ 1,939
Assets Measured at NAV				
Commingled trust funds:				
Money market				27
Foreign funds:				
Fixed income				25
Liquidity				13
Targeted cash flow				184
Total				\$ 249
Liabilities				
Other payables ¹	—	(2)	—	(2)
Total liabilities	\$ —	\$ (2)	\$ —	\$ (2)
Fair value of plan assets				\$ 2,186

\$ in millions	At December 31, 2023			
	Level 1	Level 2	Level 3	Total
Assets				
Cash and cash equivalents	\$ 6	\$ —	\$ —	\$ 6
U.S. government and agency securities	1,800	230	—	2,030
Derivative contracts	—	3	—	3
Other investments	—	—	71	71
Other receivables ¹	1	15	—	16
Total	\$ 1,807	\$ 248	\$ 71	\$ 2,126
Assets Measured at NAV				
Commingled trust funds:				
Money market				64
Foreign funds:				
Fixed income				62
Liquidity				171
Targeted cash flow				14
Total				\$ 311
Liabilities				
Other payables ¹	(1)	(14)	—	(15)
Total liabilities	\$ (1)	\$ (14)	\$ —	\$ (15)
Fair value of plan assets				\$ 2,422

1. Other receivables and other payables are valued at their carrying value, which approximates fair value.

Rollforward of Level 3 Plan Assets

\$ in millions	2024	2023
Balance at beginning of period	\$ 71	\$ 64
Realized and unrealized gains	2	2
Purchases, sales and settlements, net	(3)	5
Balance at end of period	\$ 70	\$ 71

There were no transfers between levels during 2024 and 2023.

The U.S. Qualified Plan assets represent 86% and 87% of the Firm’s total pension plan assets at December 31, 2024 and December 31, 2023, respectively. The U.S. Qualified Plan uses a combination of active and risk-controlled fixed income investment strategies. The fixed income asset allocation consists primarily of fixed income securities and related derivative instruments designed to approximate the expected cash flows of the plan’s liabilities to help reduce plan exposure to interest rate variation and to better align assets with the obligation. The longer-duration fixed income allocation is expected to help protect the plan’s funded status and maintain the stability of plan contributions over the long run. The investment portfolio performance is assessed by comparing actual investment performance with changes in the estimated present value of the U.S. Qualified Plan’s benefit obligation.

Derivative instruments are permitted in the U.S. Qualified Plan’s investment portfolio only to the extent that they comply with all of the plan’s investment policy guidelines and are consistent with the plan’s risk and return objectives.

As a fundamental operating principle, any restrictions on the underlying assets apply to the respective derivative product. This includes percentage allocations and credit quality. Derivatives are used solely for the purpose of enhancing

investment returns in the underlying assets and not to circumvent portfolio restrictions.

Plan assets are measured at fair value using valuation techniques that are consistent with the valuation techniques applied to the Firm’s major categories of assets and liabilities as described in Notes 2 and 4. OTC derivative contracts consist of investments in interest rate swaps and total return swaps. Other investments consist of insurance contracts held by non-U.S.-based plans. The insurance contracts are valued based on the premium reserve of the insurer for a guarantee that the insurer has given to the employee benefit plan that approximates fair value. The insurance contracts are categorized in Level 3 of the fair value hierarchy.

Commingled trust funds are privately offered funds regulated, supervised and subject to periodic examination by a U.S. federal or state agency and available to institutional clients. The trust must be maintained for the collective investment or reinvestment of assets contributed to it from U.S. tax-qualified employee benefit plans maintained by more than one employer or controlled group of corporations. The sponsor of the commingled trust funds values the funds based on the fair value of the underlying securities. Commingled trust funds are redeemable at NAV at the measurement date or in the near future.

Some non-U.S.-based plans hold foreign funds that consist of investments in fixed income funds and liquidity funds. Fixed income funds and targeted cash flow funds are designed to provide a series of fixed annual cash flows achieved by primarily investing in government bonds. Liquidity funds place a high priority on capital preservation, stable value and a high liquidity of assets. Foreign funds are readily redeemable at NAV.

The Firm generally considers the NAV of commingled trust funds and foreign funds provided by the fund manager to be the best estimate of fair value.

Expected Contributions

The Firm’s policy is to fund at least the amount sufficient to meet minimum funding requirements under applicable employee benefit and tax laws. At December 31, 2024, the Firm expected to contribute approximately \$40 million to its pension plans in 2025 based upon the plans’ current funded status and expected asset return assumptions for 2025.

Expected Future Benefit Payments

\$ in millions	At December 31, 2024	
	Pension Plans	
2025	\$	161
2026		167
2027		174
2028		179
2029		183
2030-2034		968

Notes to Consolidated Financial Statements

401(k) Plan

<i>\$ in millions</i>	2024	2023	2022
Expense	\$ 400	\$ 397	\$ 355

U.S. employees meeting certain eligibility requirements may participate in the Firm's 401(k) plan.

Eligible employees receive discretionary 401(k) matching cash contributions as determined annually by the Firm. The Firm generally matched eligible employee contributions up to the IRS limit at 4%, or 5% up to a certain compensation level, in 2024 and 2023. Eligible employees with eligible pay less than or equal to \$100,001 also received a fixed contribution equal to 2% of eligible pay. Contributions are invested among available funds according to each participant's investment direction and are included in the Firm's 401(k) expense.

Non-U.S. Defined Contribution Pension Plans

<i>\$ in millions</i>	2024	2023	2022
Expense	\$ 181	\$ 173	\$ 163

The Firm maintains separate defined contribution pension plans that cover eligible employees of certain non-U.S. subsidiaries. Under such plans, contributions are generally determined based on a fixed rate of base salary with certain vesting requirements.

21. Income Taxes

Components of Provision for Income Taxes

<i>\$ in millions</i>	2024	2023	2022
Current			
U.S.:			
Federal	\$ 2,011	\$ 1,190	\$ 2,518
State and local	660	542	442
Non-U.S.:			
U.K.	487	267	405
India ¹	243	127	17
Japan	115	139	105
Brazil ²	57	437	24
Other ³	342	344	248
Total	\$ 3,915	\$ 3,046	\$ 3,759

Deferred

<i>\$ in millions</i>	2024	2023	2022
U.S.:			
Federal	\$ 8	\$ (295)	\$ (803)
State and local	(6)	(59)	(142)
Non-U.S.:			
U.K.	42	12	55
India ¹	55	(12)	—
Japan	9	(13)	20
Brazil ²	6	(43)	25
Other ³	38	(53)	(4)
Total	\$ 152	\$ (463)	\$ (849)
Provision for income taxes	\$ 4,067	\$ 2,583	\$ 2,910

1. In 2024, India was presented separately for the first time. The prior period amounts for Other have been disaggregated to exclude India to align with the current presentation.
2. In 2023, Brazil was presented separately for the first time. The prior period amounts for Other have been disaggregated to exclude Brazil to align with the current presentation.
3. Other Non-U.S. tax provisions for 2024, 2023 and 2022 primarily include Germany, Hong Kong and Singapore.

Reconciliation of the U.S. Federal Statutory Income Tax Rate to the Effective Income Tax Rate

	2024	2023	2022
U.S. federal statutory income tax rate	21.0 %	21.0 %	21.0 %
U.S. state and local income taxes, net of U.S. federal income tax benefits	3.0	3.4	1.8
Domestic tax credits and tax exempt income	(0.6)	(1.3)	(0.9)
Non-U.S. earnings	1.8	1.9	0.6
Employee share-based awards	(0.6)	(1.5)	(1.7)
Non-taxable income ¹	(1.9)	(2.3)	(0.8)
Other	0.4	0.7	0.7
Effective income tax rate	23.1 %	21.9 %	20.7 %

1. In 2023, Non-taxable income was presented separately for the first time. The prior period amounts for Non-U.S. earnings and Other have been disaggregated to exclude Non-taxable income to align with the current presentation.

Notes to Consolidated Financial Statements

Deferred Tax Assets and Liabilities

<i>\$ in millions</i>	At Dec 31, 2024	At Dec 31, 2023
Gross deferred tax assets		
Net operating loss and tax credit carryforwards	\$ 236	\$ 255
Employee compensation and benefit plans	2,565	2,636
Allowance for credit losses and other reserves	796	755
Valuation of net trading inventory, investments and receivables	1,808	1,897
Other	223	78
Total deferred tax assets	5,628	5,621
Less: Deferred tax assets valuation allowance	214	211
Deferred tax assets after valuation allowance	\$ 5,414	\$ 5,410
Gross deferred tax liabilities		
Fixed assets	801	772
Intangibles and goodwill	1,931	2,003
Total deferred tax liabilities	\$ 2,732	\$ 2,775
Net deferred tax assets	\$ 2,682	\$ 2,635

Deferred income taxes reflect the net tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when such differences are expected to reverse.

The Firm believes the recognized net deferred tax assets (after valuation allowance) at December 31, 2024 are more likely than not to be realized based on expectations as to future taxable income in the jurisdictions in which it operates.

The earnings of certain foreign subsidiaries and affiliates are indefinitely reinvested due to regulatory and other capital requirements in foreign jurisdictions. As of December 31, 2024 and December 31, 2023, the unrecognized deferred tax liability attributable to indefinitely reinvested earnings is \$405 million and \$302 million, respectively.

Rollforward of Unrecognized Tax Benefits

<i>\$ in millions</i>	2024	2023	2022
Balance at beginning of period	\$ 1,244	\$ 1,129	\$ 971
Increases based on tax positions related to the current period	202	147	256
Increases based on tax positions related to prior periods	132	141	64
Decreases based on tax positions related to prior periods	(52)	(73)	(134)
Decreases related to settlements with taxing authorities	(174)	(79)	(6)
Decreases related to lapse of statute of limitations	(47)	(21)	(22)
Balance at end of period	\$ 1,305	\$ 1,244	\$ 1,129
Net unrecognized tax benefits ¹	\$ 1,159	\$ 1,090	\$ 1,007

1. Represent ending unrecognized tax benefits adjusted for the impact of the federal benefit of state issues, competent authority arrangements and foreign tax credit offsets. If recognized, these net benefits would favorably impact the effective tax rate in future periods.

It is reasonably possible that significant changes in the balance of unrecognized tax benefits may occur within the next 12 months. At this time, however, it is not possible to reasonably estimate the expected change to the total amount of unrecognized tax benefits and the impact on the Firm's effective tax rate over the next 12 months.

Interest Expense (Benefit) and Penalties Associated with Unrecognized Tax Benefits, Net of Federal and State Income Tax Benefits

<i>\$ in millions</i>	2024	2023	2022
Recognized in income statement	\$ 92	\$ 65	\$ 39
Accrued at end of period	255	237	175

Interest and penalties related to unrecognized tax benefits are recognized as a component of the provision for income taxes.

Earliest Tax Year Subject to Examination in Major Tax Jurisdictions

Jurisdiction	Tax Year
U.S.	2017
New York State and New York City	2010
U.K.	2014
Japan	2020
Hong Kong	2018

The Firm is routinely under examination by the IRS and other tax authorities in certain countries, such as Japan and the U.K., and in states and localities in which it has significant business operations, such as New York.

The Firm believes that the resolution of these tax examinations will not have a material effect on the annual financial statements, although a resolution could have a material impact in the income statement and on the effective tax rate for any period in which such resolutions occur.

22. Segment, Geographic and Revenue Information

The Firm structures its segments primarily based upon the nature of the financial products and services provided to customers and its management organization, which is consistent with the approach used by the Firm's chief operating decision maker ("CODM") to assess the Firm's financial performance. The Firm provides a wide range of financial products and services to its customers in each of its business segments: Institutional Securities, Wealth Management and Investment Management. For a further discussion of the business segments, see Note 1.

Revenues and expenses directly associated with each respective business segment are included in determining its operating results. Other revenues and expenses that are not directly attributable to a particular business segment are generally allocated based on each business segment's respective net revenues, non-interest expenses or other relevant measures.

As a result of revenues and expenses from transactions with other operating segments being treated as transactions with external parties for purposes of segment disclosures, the Firm includes an Intersegment Eliminations category to reconcile the business segment results to the consolidated results.

Notes to Consolidated Financial Statements

The Firm's CODM is its Chief Executive Officer, who evaluates segment performance and allocates resources based on numerous business, strategic and financial considerations. The CODM's financial considerations include analysis of multiple segment profit measures, such as Income before provision for income taxes and Pre-tax margin. Furthermore, the CODM evaluates certain additional segment performance metrics including Return on average common equity. The segment profit measures are calculated in accordance with U.S. GAAP and are consistent with the amounts presented in the Firm's consolidated income statement.

The CODM's review of the profit measures includes evaluation of segment profitability and assessment of actual results compared to budget. These measures are regularly provided to the CODM and are a component of a multifaceted decision-making process regarding segment performance as well as resource and capital allocation.

Selected Financial Information by Business Segment

\$ in millions	2024				
	IS	WM	IM	I/E	Total
Investment banking	\$6,170	\$ 653	\$ —	\$ (118)	\$6,705
Trading	15,967	733	9	54	16,763
Investments	406	85	333	—	824
Commissions and fees ¹	2,905	2,478	—	(289)	5,094
Asset management ^{1, 2}	646	16,501	5,627	(275)	22,499
Other	607	657	14	(13)	1,265
Total non-interest revenues	26,701	21,107	5,983	(641)	53,150
Interest income	39,332	16,247	112	(1,556)	54,135
Interest expense	37,953	8,934	234	(1,597)	45,524
Net interest	1,379	7,313	(122)	41	8,611
Net revenues	\$28,080	\$28,420	\$5,861	\$ (600)	\$61,761
Provision for credit losses	\$ 202	\$ 62	\$ —	\$ —	\$ 264
Compensation and benefits ³	8,669	15,207	2,302	—	26,178
Non-compensation expenses ³	10,460	5,411	2,422	(570)	17,723
Total non-interest expenses	\$19,129	\$20,618	\$4,724	\$ (570)	\$43,901
Income before provision for income taxes	\$8,749	\$7,740	\$1,137	\$ (30)	\$17,596
Provision for income taxes	1,947	1,852	275	(7)	4,067
Net income	6,802	5,888	862	(23)	13,529
Net income applicable to noncontrolling interests	136	—	3	—	139
Net income applicable to Morgan Stanley	\$6,666	\$5,888	\$ 859	\$ (23)	\$13,390
Pre-tax margin ⁴	31 %	27 %	19 %	N/M	28 %

\$ in millions	2023				
	IS	WM	IM	I/E	Total
Investment banking	\$4,578	\$ 454	\$ —	\$ (84)	\$4,948
Trading	14,468	823	(59)	31	15,263
Investments	177	62	334	—	573
Commissions and fees ¹	2,540	2,279	—	(282)	4,537
Asset management ^{1, 2}	596	14,019	5,231	(229)	19,617
Other	480	513	(7)	(11)	975
Total non-interest revenues	22,839	18,150	5,499	(575)	45,913
Interest income ⁵	32,383	15,015	135	(1,684)	45,849
Interest expense ⁵	32,162	6,897	264	(1,704)	37,619
Net interest	221	8,118	(129)	20	8,230
Net revenues	\$23,060	\$26,268	\$5,370	\$ (555)	\$54,143
Provision for credit losses	\$ 401	\$ 131	\$ —	\$ —	\$ 532
Compensation and benefits ³	8,369	13,972	2,217	—	24,558
Non-compensation expenses ³	9,814	5,635	2,311	(520)	17,240
Total non-interest expenses	\$18,183	\$19,607	\$4,528	\$ (520)	\$41,798
Income before provision for income taxes	\$4,476	\$6,530	\$ 842	\$ (35)	\$11,813
Provision for income taxes	884	1,508	199	(8)	2,583
Net income	3,592	5,022	643	(27)	9,230
Net income applicable to noncontrolling interests	139	—	4	—	143
Net income applicable to Morgan Stanley	\$3,453	\$5,022	\$ 639	\$ (27)	\$9,087
Pre-tax margin ⁴	19 %	25 %	16 %	N/M	22 %

\$ in millions	2022				
	IS	WM	IM	I/E	Total
Investment banking	\$5,235	\$ 438	\$ —	\$ (74)	\$5,599
Trading	14,318	(432)	(11)	53	13,928
Investments	(156)	51	120	—	15
Commissions and fees ¹	2,756	2,467	—	(285)	4,938
Asset management ^{1, 2}	580	13,872	5,332	(206)	19,578
Other	(295)	592	(2)	(12)	283
Total non-interest revenues	22,438	16,988	5,439	(524)	44,341
Interest income	13,276	9,579	56	(1,316)	21,595
Interest expense	11,321	2,150	120	(1,323)	12,268
Net interest	1,955	7,429	(64)	7	9,327
Net revenues	\$24,393	\$24,417	\$5,375	\$ (517)	\$53,668
Provision for credit losses	\$ 211	\$ 69	\$ —	\$ —	\$ 280
Compensation and benefits ³	8,246	12,534	2,273	—	23,053
Non-compensation expenses ³	9,221	5,231	2,295	(501)	16,246
Total non-interest expenses	\$17,467	\$17,765	\$4,568	\$ (501)	\$39,299
Income before provision for income taxes	\$6,715	\$6,583	\$ 807	\$ (16)	\$14,089
Provision for income taxes	1,308	1,444	162	(4)	2,910
Net income	5,407	5,139	645	(12)	11,179
Net income applicable to noncontrolling interests	165	—	(15)	—	150
Net income applicable to Morgan Stanley	\$5,242	\$5,139	\$ 660	\$ (12)	\$11,029
Pre-tax margin ⁴	28 %	27 %	15 %	N/M	26 %

1. Substantially all revenues are from contracts with customers.
2. Includes certain fees that may relate to services performed in prior periods.
3. The significant expense categories and amounts align with the segment-level information that is regularly provided to the CODM.
4. Pre-tax margin represents income before provision for income taxes as a percentage of net revenues.
5. Certain prior-period amounts have been adjusted to conform with the current-period presentation. This adjustment resulted in a decrease to both interest income and interest expense of \$4,432 million for the year ended December 31, 2023, and no effect on net interest income, with the entire impact to the Firm recorded within the Institutional Securities segment. See Note 2 for additional information.

Notes to Consolidated Financial Statements

Detail of Investment Banking Revenues

<i>\$ in millions</i>	2024	2023	2022
Institutional Securities—Advisory	\$ 2,378	\$ 2,244	\$ 2,946
Institutional Securities—Underwriting	3,792	2,334	2,289
Firm Investment banking revenues from contracts with customers	90 %	91 %	90 %

Trading Revenues by Product Type

<i>\$ in millions</i>	2024	2023	2022
Interest rate	\$ 5,901	\$ 4,646	\$ 2,808
Foreign exchange	1,170	1,054	1,585
Equity ¹	9,005	8,929	7,515
Commodity and other	2,003	1,624	1,466
Credit	(1,316)	(990)	554
Total	\$ 16,763	\$ 15,263	\$ 13,928

1. Dividend income is included within equity contracts.

The previous table summarizes realized and unrealized gains and losses primarily related to the Firm's Trading assets and liabilities, from derivative and non-derivative financial instruments, included in Trading revenues in the income statement. The Firm generally utilizes financial instruments across a variety of product types in connection with its market-making and related risk management strategies. The trading revenues presented in the table are not representative of the manner in which the Firm manages its business activities and are prepared in a manner similar to the presentation of trading revenues for regulatory reporting purposes.

Investment Management Investments Revenues—Net Cumulative Unrealized Carried Interest

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Net cumulative unrealized performance-based fees at risk of reversing	\$ 796	\$ 787

The Firm's portion of net cumulative performance-based fees in the form of unrealized carried interest, for which the Firm is not obligated to pay compensation, is at risk of reversing when the returns in certain funds fall below specified performance targets. See Note 14 for information regarding general partner guarantees, which include potential obligations to return performance fee distributions previously received.

Investment Management Asset Management Revenues—Reduction of Fees Due to Fee Waivers

<i>\$ in millions</i>	2024	2023	2022
Fee waivers	\$ 99	\$ 93	\$ 211

The Firm waives a portion of its fees in the Investment Management business segment from certain registered money market funds that comply with the requirements of Rule 2a-7 of the Investment Company Act of 1940.

Certain Other Fee Waivers

Separately, the Firm's employees, including its senior officers, may participate on the same terms and conditions as other investors in certain funds that the Firm sponsors primarily for client investment, and the Firm may waive or lower applicable fees and charges for its employees.

Other Expenses—Transaction Taxes

<i>\$ in millions</i>	2024	2023	2022
Transaction taxes	\$ 926	\$ 866	\$ 910

Transaction taxes are composed of securities transaction taxes and stamp duties, which are levied on the sale or purchase of securities listed on recognized stock exchanges in certain markets. These taxes are imposed mainly on trades of equity securities in Asia and EMEA. Similar transaction taxes are levied on trades of listed derivative instruments in certain countries.

Net Revenues by Region

<i>\$ in millions</i>	2024	2023	2022
Americas	\$ 46,929	\$ 41,651	\$ 40,117
EMEA	7,197	6,058	6,811
Asia	7,635	6,434	6,740
Total	\$ 61,761	\$ 54,143	\$ 53,668

Income before Provision for Income Taxes

<i>\$ in millions</i>	2024	2023	2022
U.S.	\$ 12,526	\$ 8,334	\$ 9,363
Non-U.S. ¹	5,070	3,479	4,726
Total	\$ 17,596	\$ 11,813	\$ 14,089

1. Non-U.S. income is defined as income generated from operations located outside the U.S.

The Firm operates in both U.S. and non-U.S. markets. The Firm's non-U.S. business activities are principally conducted and managed through EMEA and Asia locations. The net revenues disclosed in the previous table reflect the regional view of the Firm's consolidated net revenues on a managed basis, based on the following methodology:

Institutional Securities: Client location for advisory and equity underwriting, syndicate desk location for debt underwriting, trading desk location for sales and trading.

Wealth Management: Americas, where representatives operate.

Investment Management: Client location, except certain closed-end funds, which are based on asset location.

Revenues Recognized from Prior Services

<i>\$ in millions</i>	2024	2023	2022
Non-interest revenues	\$ 1,870	\$ 1,778	\$ 2,538

The previous table includes revenues from contracts with customers recognized where some or all services were

Notes to Consolidated Financial Statements

performed in prior periods. These revenues primarily include investment banking advisory fees.

Receivables from Contracts with Customers

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Customer and other receivables	\$ 2,628	\$ 2,339

Receivables from contracts with customers, which are included within Customer and other receivables in the balance sheet, arise when the Firm has both recorded revenues and the right per the contract to bill the customer.

Assets by Business Segment

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Institutional Securities	\$ 796,608	\$ 810,506
Wealth Management	400,848	365,168
Investment Management	17,615	18,019
Total¹	\$ 1,215,071	\$ 1,193,693

1. Parent assets have been fully allocated to the business segments.

Total Assets by Region

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Americas	893,170	\$ 832,714
EMEA	179,187	218,923
Asia	142,714	142,056
Total	\$ 1,215,071	\$ 1,193,693

23. Parent Company

Parent Company Only—Condensed Income Statement and Comprehensive Income Statement

<i>\$ in millions</i>	2024	2023	2022
Revenues			
Dividends from bank subsidiaries	\$ 5,571	\$ 5,770	\$ 2,875
Dividends from BHC and non-bank subsidiaries	5,229	6,812	8,661
Total dividends from subsidiaries	10,800	12,582	11,536
Trading	(827)	(775)	(1,143)
Other	36	(31)	170
Total non-interest revenues	10,009	11,776	10,563
Interest income	15,739	13,596	5,805
Interest expense	15,377	13,618	6,162
Net interest	362	(22)	(357)
Net revenues	10,371	11,754	10,206
Non-interest expenses	358	287	252
Income before income taxes	10,013	11,467	9,954
Provision for (benefit from) income taxes	(499)	(520)	(456)
Net income before undistributed gain of subsidiaries	10,512	11,987	10,410
Undistributed (loss) gain of subsidiaries	2,878	(2,900)	619
Net income	13,390	9,087	11,029
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	(324)	51	(202)
Change in net unrealized gains (losses) on available-for-sale securities	521	1,098	(4,437)
Pensions and other	12	(87)	43
Change in net debt valuation adjustment	(551)	(1,250)	1,449
Net change in cash flow hedges	(51)	20	(4)
Comprehensive income	\$ 12,997	\$ 8,919	\$ 7,878
Net income	\$ 13,390	\$ 9,087	\$ 11,029
Preferred stock dividends and other	590	557	489
Earnings applicable to Morgan Stanley common shareholders	\$ 12,800	\$ 8,530	\$ 10,540

Notes to Consolidated Financial Statements

Parent Company Only—Condensed Balance Sheet

<i>\$ in millions, except share data</i>	At December 31, 2024	At December 31, 2023
Assets		
Cash and cash equivalents	\$ 19,343	\$ 16,881
Trading assets at fair value	3,944	4,160
Investment securities:		
Available-for-sale at fair value (amortized cost of \$22,557 and \$22,164; \$11,816 and \$10,179 were pledged to various parties)	22,100	21,515
Held-to-maturity (fair value of \$12,050 and \$14,093; \$1,715 and \$10,010 were pledged to various parties)	13,160	15,284
Securities purchased under agreement to resell to affiliates	26,730	24,693
Advances to subsidiaries:		
Bank and BHC	37,370	38,550
Non-bank	154,100	139,250
Equity investments in subsidiaries:		
Bank and BHC	60,904	58,949
Non-bank	51,100	50,291
Other assets	1,886	2,595
Total assets	\$ 390,637	\$ 372,168
Liabilities		
Trading liabilities at fair value	\$ 100	\$ 44
Securities sold under agreements to repurchase from affiliates	13,764	20,293
Payables to and advances from subsidiaries	87,124	73,370
Other liabilities and accrued expenses	3,011	2,539
Borrowings (includes \$12,814 and \$13,404 at fair value)	182,127	176,884
Total liabilities	286,126	273,130
Commitments and contingent liabilities (see Note 14)		
Equity		
Preferred stock	9,750	8,750
Common stock, \$0.01 par value:		
Shares authorized: 3,500,000,000; Shares issued: 2,038,893,979; Shares outstanding: 1,606,653,706 and 1,626,828,437	20	20
Additional paid-in capital	30,179	29,832
Retained earnings	104,989	97,996
Employee stock trusts	5,103	5,314
Accumulated other comprehensive income (loss)	(6,814)	(6,421)
Common stock held in treasury at cost, \$0.01 par value (432,240,273 and 412,065,542 shares)	(33,613)	(31,139)
Common stock issued to employee stock trusts	(5,103)	(5,314)
Total shareholders' equity	104,511	99,038
Total liabilities and equity	\$ 390,637	\$ 372,168

Parent Company Only—Condensed Cash Flow Statement

<i>\$ in millions</i>	2024	2023	2022
Net cash provided by (used for) operating activities	\$ 10,688	\$ 24,914	\$(13,064)
Cash flows from investing activities			
Proceeds from (payments for):			
AFS securities:			
Purchases	(7,806)	(9,362)	(1,855)
Proceeds from sales	—	300	676
Proceeds from paydowns and maturities	7,444	5,479	3,814
HTM securities:			
Purchases	(1,729)	—	(4,228)
Proceeds from paydowns and maturities	4,402	4,003	3,434
Securities purchased under agreements to resell with affiliates	(2,037)	(1,706)	(1,871)
Securities sold under agreements to repurchase with affiliates	(6,529)	(8,389)	11,755
Advances to and investments in subsidiaries	(15,191)	(10,097)	(10,574)
Net cash provided by (used for) investing activities	(21,446)	(19,772)	1,151
Cash flows from financing activities			
Proceeds from:			
Issuance of preferred stock, net of issuance costs	995	—	994
Issuance of Borrowings	33,385	23,783	34,431
Payments for:			
Borrowings	(24,500)	(22,554)	(14,441)
Repurchases of common stock and employee tax withholdings	(4,161)	(6,178)	(10,871)
Cash dividends	(6,138)	(5,763)	(5,401)
Net change in advances from subsidiaries	13,839	(3,029)	16,707
Net cash provided by (used for) financing activities	13,420	(13,741)	21,419
Effect of exchange rate changes on cash and cash equivalents	(200)	147	485
Net increase (decrease) in cash and cash equivalents	2,462	(8,452)	9,991
Cash and cash equivalents, at beginning of period	16,881	25,333	15,342
Cash and cash equivalents, at end of period	\$ 19,343	\$ 16,881	\$ 25,333
Cash and cash equivalents:			
Cash and due from banks	\$ 66	\$ 107	\$ 75
Deposits with bank subsidiaries	19,277	16,774	25,258
Cash and cash equivalents, at end of period	\$ 19,343	\$ 16,881	\$ 25,333
Restricted cash	\$ 1,086	\$ 1,086	\$ 836
Supplemental Disclosure of Cash Flow Information			
Cash payments for:			
Interest	\$ 15,971	\$ 14,437	\$ 5,955
Income taxes, net of refunds ¹	798	599	3,132

1. Represents total payments, net of refunds, made to various tax authorities and includes taxes paid on behalf of certain subsidiaries that are subsequently settled between the Parent Company and these subsidiaries. The settlements received from subsidiaries were \$1.6 billion, \$1.6 billion and \$2.6 billion for 2024, 2023 and 2022, respectively.

For information on the Parent Company's preferred stock, see Note 17.

Notes to Consolidated Financial Statements

Parent Company's Borrowings with Original Maturities Greater than One Year

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Senior	\$ 168,413	\$ 164,514
Subordinated	13,713	12,370
Total	\$ 182,126	\$ 176,884

Transactions with Subsidiaries

The Parent Company has transactions with its consolidated subsidiaries determined on an agreed-upon basis and has guaranteed certain unsecured lines of credit and contractual obligations on certain of its consolidated subsidiaries.

Guarantees

In the normal course of its business, the Parent Company guarantees certain of its subsidiaries' obligations on a transaction-by-transaction basis under various financial arrangements. The Parent Company has issued guarantees on behalf of its subsidiaries to various U.S. and non-U.S. exchanges and clearinghouses that trade and clear securities and/or futures contracts. Under these guarantee arrangements, the Parent Company may be required to pay the financial obligations of its subsidiaries related to business transacted on or with the exchanges and clearinghouses in the event of a subsidiary's default on its obligations to the exchange or the clearinghouse. The Parent Company has not recorded any contingent liability in its condensed financial statements for these arrangements and believes that any potential requirements to make payments under these arrangements are remote.

The Parent Company also, in the normal course of business, provides standard indemnities to counterparties on behalf of its subsidiaries for taxes, including U.S. and foreign withholding taxes, on interest and other payments made on derivatives, securities and stock-lending transactions, and certain annuity products, and may also provide indemnities to or on behalf of affiliates from time to time for other arrangements. These indemnity payments could be required, as applicable, based on a change in the tax laws, change in interpretation of applicable tax rulings or claims arising from contractual relationships between affiliates. Certain contracts contain provisions that enable the Parent Company to terminate the agreement upon the occurrence of such events. The maximum potential amount of future payments that the Parent Company could be required to make under these indemnifications cannot be estimated. The Parent Company has not recorded any contingent liability in its condensed financial statements for these indemnifications and believes that the occurrence of any events that would trigger payments under these contracts is remote.

Guarantees of Debt Instruments and Warrants Issued by Subsidiaries

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Aggregate balance	\$ 70,662	\$ 60,942

Guarantees under Subsidiary Lease Obligations

<i>\$ in millions</i>	At December 31, 2024	At December 31, 2023
Aggregate balance ¹	\$ 628	\$ 632

1. Amounts primarily relate to the U.K.

Finance Subsidiary

The Parent Company fully and unconditionally guarantees the securities issued by Morgan Stanley Finance LLC, a wholly owned finance subsidiary. No other subsidiary of the Parent Company guarantees these securities.

Resolution and Recovery Planning

As indicated in the Firm's 2023 resolution plan submitted to the Federal Reserve and the FDIC, the Parent Company has entered into an amended and restated support agreement with its material entities (including its wholly owned, direct subsidiary Morgan Stanley Holdings LLC (the "Funding IHC")) and certain other subsidiaries. Under the amended and restated secured support agreement, in the event of a resolution scenario, the Parent Company would be obligated to contribute all of its contributable assets to its supported entities and/or the Funding IHC. The Funding IHC would be obligated to provide capital and liquidity, as applicable, to its supported entities. The obligations of the Parent Company and the Funding IHC under the amended and restated support agreement are in most cases secured on a senior basis by the assets of the Parent Company (other than shares in subsidiaries of the Parent Company and certain other assets) and the assets of the Funding IHC.

Financial Data Supplement (Unaudited)

Average Balances and Interest Rates and Net Interest Income

\$ in millions	2024			2023		
	Average Daily Balance	Interest	Average Rate	Average Daily Balance	Interest	Average Rate
Interest earning assets						
Cash and cash equivalents ¹ :						
U.S.	\$ 47,751	\$ 2,004	4.2 %	\$ 56,920	\$ 2,386	4.2 %
Non-U.S.	43,406	1,064	2.5 %	48,373	1,022	2.1 %
Investment securities ²	156,920	5,161	3.3 %	153,307	3,992	2.6 %
Loans ²	226,454	13,771	6.1 %	215,628	12,424	5.8 %
Securities purchased under agreements to resell ³ :						
U.S.	65,222	7,332	11.2 %	47,604	4,714	9.9 %
Non-U.S.	47,735	5,084	10.7 %	61,766	3,048	4.9 %
Securities borrowed ⁴ :						
U.S.	110,024	4,985	4.5 %	115,279	4,794	4.2 %
Non-U.S.	18,224	406	2.2 %	18,514	397	2.1 %
Trading assets, net of Trading liabilities:						
U.S.	106,063	5,016	4.7 %	93,409	3,792	4.1 %
Non-U.S.	14,385	908	6.3 %	12,788	696	5.4 %
Customer receivables and Other ^{1,10} :						
U.S.	52,510	6,223	11.9 %	45,815	6,314	13.8 %
Non-U.S.	15,889	2,181	13.7 %	14,485	2,270	15.7 %
Total	\$904,583	\$54,135	6.0 %	\$883,888	\$45,849	5.2 %
Interest bearing liabilities						
Deposits ²	\$ 350,487	\$ 10,368	3.0 %	\$ 342,583	\$ 8,216	2.4 %
Borrowings ^{2,5}	265,473	13,242	5.0 %	238,164	11,437	4.8 %
Securities sold under agreements to repurchase ^{6,8} :						
U.S.	18,442	5,336	28.9 %	22,718	3,591	15.8 %
Non-U.S.	52,135	5,451	10.5 %	46,392	3,146	6.8 %
Securities loaned ^{7,8} :						
U.S.	9,499	108	1.1 %	4,244	67	1.6 %
Non-U.S.	6,853	928	13.5 %	9,470	717	7.6 %
Customer payables and Other ^{9,10} :						
U.S.	128,853	6,478	5.0 %	133,069	6,954	5.2 %
Non-U.S.	61,237	3,613	5.9 %	63,916	3,491	5.5 %
Total	\$892,979	\$45,524	5.1 %	\$860,556	\$37,619	4.4 %
Net interest income and net interest rate spread	\$ 8,611	0.9 %		\$ 8,230	0.8 %	

Effect of Volume and Rate Changes on Net Interest Income

\$ in millions	2024 versus 2023		
	Increase (Decrease) Due to Change in:		
	Volume	Rate	Net Change
Interest earning assets			
Cash and cash equivalents ¹ :			
U.S.	\$ (384)	\$ 2	\$ (382)
Non-U.S.	(105)	147	42
Investment securities ²	94	1,075	1,169
Loans ²	624	723	1,347
Securities purchased under agreements to resell ³ :			
U.S.	1,745	873	2,618
Non-U.S.	(692)	2,728	2,036
Securities borrowed ⁴ :			
U.S.	(219)	410	191
Non-U.S.	(6)	15	9
Trading assets, net of Trading liabilities:			
U.S.	514	710	1,224
Non-U.S.	87	125	212
Customer receivables and Other ^{1,10} :			
U.S.	923	(1,014)	(91)
Non-U.S.	220	(309)	(89)
Change in interest income	\$ 2,801	\$ 5,485	\$ 8,286
Interest bearing liabilities			
Deposits ²	\$ 190	\$ 1,962	\$ 2,152
Borrowings ^{2,5}	1,311	494	1,805
Securities sold under agreements to repurchase ^{6,8} :			
U.S.	(676)	2,421	1,745
Non-U.S.	389	1,916	2,305
Securities loaned ^{7,8} :			
U.S.	83	(42)	41
Non-U.S.	(198)	409	211
Customer payables and Other ^{9,10} :			
U.S.	(220)	(256)	(476)
Non-U.S.	(146)	268	122
Change in interest expense	\$ 733	\$ 7,172	\$ 7,905
Change in net interest income	\$ 2,068	\$ (1,687)	\$ 381

Financial Data Supplement (Unaudited)

Average Balances and Interest Rates and Net Interest Income

\$ in millions	2022		
	Average Daily Balance	Interest	Average Rate
Interest earning assets			
Cash and cash equivalents ¹ :			
U.S.	\$ 57,889	\$ 692	1.2 %
Non-U.S.	58,052	222	0.4 %
Investment securities ²	167,494	3,066	1.8 %
Loans ²	205,069	6,988	3.4 %
Securities purchased under agreements to resell ³ :			
U.S.	57,565	1,643	2.9 %
Non-U.S.	62,585	545	0.9 %
Securities borrowed ⁴ :			
U.S.	123,288	1,039	0.8 %
Non-U.S.	19,345	(19)	(0.1)%
Trading assets, net of Trading liabilities:			
U.S.	74,932	2,068	2.8 %
Non-U.S.	14,748	416	2.8 %
Customer receivables and Other ¹ :			
U.S.	56,040	3,798	6.8 %
Non-U.S.	15,891	1,137	7.2 %
Total	\$ 912,898	\$ 21,595	2.4 %
Interest bearing liabilities			
Deposits ²	\$ 340,741	\$ 1,825	0.5 %
Borrowings ^{2,5}	229,255	5,054	2.2 %
Securities sold under agreements to repurchase ^{6,8} :			
U.S.	21,481	1,086	5.1 %
Non-U.S.	39,631	674	1.7 %
Securities loaned ^{7,9} :			
U.S.	6,277	37	0.6 %
Non-U.S.	7,669	466	6.1 %
Customer payables and Other ⁹ :			
U.S.	143,448	1,991	1.4 %
Non-U.S.	73,291	1,135	1.5 %
Total	\$ 861,793	\$ 12,268	1.4 %
Net interest income and net interest rate spread	\$ 9,327	\$ 9,327	1.0 %

Effect of Volume and Rate Changes on Net Interest Income

\$ in millions	2023 versus 2022		
	Increase (Decrease) Due to Change in:		Net Change
	Volume	Rate	
Interest earning assets			
Cash and cash equivalents ¹ :			
U.S.	\$ (12)	\$ 1,706	\$ 1,694
Non-U.S.	(37)	837	800
Investment securities ²	(260)	1,186	926
Loans ²	360	5,076	5,436
Securities purchased under agreements to resell ³ :			
U.S.	(284)	3,355	3,071
Non-U.S.	(7)	2,510	2,503
Securities borrowed ⁴ :			
U.S.	(67)	3,822	3,755
Non-U.S.	1	415	416
Trading assets, net of Trading liabilities:			
U.S.	510	1,214	1,724
Non-U.S.	(55)	335	280
Customer receivables and Other ^{1,10} :			
U.S.	(693)	3,209	2,516
Non-U.S.	(101)	1,234	1,133
Change in interest income	\$ (645)	\$ 24,899	\$ 24,254
Interest bearing liabilities			
Deposits ²	\$ 10	\$ 6,381	\$ 6,391
Borrowings ^{2,5}	196	6,187	6,383
Securities sold under agreements to repurchase ^{6,8} :			
U.S.	63	2,442	2,505
Non-U.S.	115	2,357	2,472
Securities loaned ^{7,9} :			
U.S.	(12)	42	30
Non-U.S.	109	142	251
Customer payables and Other ^{9,10} :			
U.S.	(144)	5,107	4,963
Non-U.S.	(145)	2,501	2,356
Change in interest expense	\$ 192	\$ 25,159	\$ 25,351
Change in net interest income	\$ (837)	\$ (260)	\$ (1,097)

1. In 2023, interest-bearing Cash and cash equivalents and related interest were presented separately for the first time. The prior year amounts for Customer receivables and Other have been disaggregated to exclude Cash and cash equivalents to align with the current presentation.
2. Amounts include primarily U.S. balances.
3. Includes interest paid on Securities purchased under agreements to resell.
4. Includes fees paid on Securities borrowed.
5. Average daily balance includes borrowings carried at fair value but, for certain borrowings, interest expense is considered part of fair value and is recorded in Trading revenues.
6. Includes interest received on Securities sold under agreements to repurchase.
7. Includes fees received on Securities loaned.
8. The annualized average rate was calculated using (a) interest expense incurred on all securities sold under agreements to repurchase and securities-loaned transactions, whether or not such transactions were reported in the balance sheet and (b) net average on-balance sheet balances, which exclude certain securities-for-securities transactions.
9. Includes fees received from Equity Financing customers related to their short transactions, which can be under either margin or securities-lending arrangements.
10. Certain prior-period amounts have been adjusted to conform with the current-period presentation. This adjustment resulted in a decrease to both interest income and interest expense of \$4,432 million for the year ended December 31, 2023, and no effect on net interest income, with the entire impact to the Firm recorded within the Institutional Securities segment. See Note 2 for additional information.

Financial Data Supplement (Unaudited)

Deposits

<i>\$ in millions</i>	Average Daily Deposits					
	2024		2023		2022	
	Average Amount	Average Rate	Average Amount	Average Rate	Average Amount	Average Rate
Deposits¹:						
Savings and demand	\$280,926	2.5 %	\$286,513	2.0 %	\$321,316	0.4 %
Time	69,561	4.8 %	56,070	4.3 %	19,425	2.7 %
Total	\$350,487	3.0 %	\$342,583	2.4 %	\$340,741	0.5 %

1. The Firm's deposits were primarily held in U.S. offices.

Glossary of Common Terms and Acronyms

ABS	Asset-backed securities	Income statement	Consolidated income statement
ACL	Allowance for credit losses	IRS	Internal Revenue Service
AFS	Available-for-sale	IS	Institutional Securities
AML	Anti-money laundering	LCR	Liquidity coverage ratio, as adopted by the U.S. banking agencies
AOCI	Accumulated other comprehensive income (loss)	LIBOR	London Interbank Offered Rate
AUM	Assets under management or supervision	LTV	Loan-to-value
Balance sheet	Consolidated balance sheet	M&A	Merger, acquisition and restructuring transaction
BHC	Bank holding company	MSBNA	Morgan Stanley Bank, N.A.
bps	Basis points; one basis point equals 1/100th of 1%	MS&Co.	Morgan Stanley & Co. LLC
Cash flow statement	Consolidated cash flow statement	MSCG	Morgan Stanley Capital Group Inc.
CCAR	Comprehensive Capital Analysis and Review	MSCS	Morgan Stanley Capital Services LLC
CCyB	Countercyclical capital buffer	MSEHSE	Morgan Stanley Europe Holdings SE
CDO	Collateralized debt obligation(s), including Collateralized loan obligation(s)	MSESE	Morgan Stanley Europe SE
CDS	Credit default swaps	MSIP	Morgan Stanley & Co. International plc
CECL	Current Expected Credit Losses, as calculated under the Financial Instruments—Credit Losses accounting update	MSMS	Morgan Stanley MUFG Securities Co., Ltd.
CEO	Chief Executive Officer	MSPBNA	Morgan Stanley Private Bank, National Association
CET1	Common Equity Tier 1	MSSB	Morgan Stanley Smith Barney LLC
CFTC	U.S. Commodity Futures Trading Commission	MUFG	Mitsubishi UFJ Financial Group, Inc.
CLN	Credit-linked note(s)	MUMSS	Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.
CLO	Collateralized loan obligation(s)	MWh	Megawatt hour
CMBS	Commercial mortgage-backed securities	N/A	Not Applicable
CMO	Collateralized mortgage obligation(s)	N/M	Not Meaningful
CRE	Commercial real estate	NAV	Net asset value
CRM	Credit Risk Management Department	Non-GAAP	Non-generally accepted accounting principles in the U.S.
CTA	Cumulative foreign currency translation adjustments	NSFR	Net stable funding ratio, as adopted by the U.S. banking agencies
CVA	Credit valuation adjustment	OCC	Office of the Comptroller of the Currency
DCP	Employee deferred cash-based compensation plans linked to investment performance	OCI	Other comprehensive income (loss)
DCP investments	Investments associated with certain DCP	OIS	Overnight index swap
DVA	Debt valuation adjustment	OTC	Over-the-counter
EBITDA	Earnings before interest, taxes, depreciation and amortization	PRA	Prudential Regulation Authority
ELN	Equity-linked note(s)	PSU	Performance-based stock unit
EMEA	Europe, Middle East and Africa	RMBS	Residential mortgage-backed securities
EPS	Earnings per common share	ROE	Return on average common equity
E.U.	European Union	ROTCE	Return on average tangible common equity
FDIC	Federal Deposit Insurance Corporation	ROU	Right-of-use
FFELP	Federal Family Education Loan Program	RSU	Restricted stock unit
FHC	Financial holding company	RWA	Risk-weighted assets
FICC	Fixed Income Clearing Corporation	SCB	Stress capital buffer
FICO	Fair Isaac Corporation	SEC	U.S. Securities and Exchange Commission
Financial statements	Consolidated financial statements	SLR	Supplementary leverage ratio
FVA	Funding valuation adjustment	SOFR	Secured Overnight Financing Rate
FVO	Fair value option	S&P	Standard & Poor's
G-SIB	Global systemically important bank	SPE	Special purpose entity
HELOC	Home Equity Line of Credit	SPOE	Single point of entry
HFI	Held-for-investment	TLAC	Total loss-absorbing capacity
HFS	Held-for-sale	U.K.	United Kingdom
HQLA	High-quality liquid assets	UPB	Unpaid principal balance
HTM	Held-to-maturity	U.S.	United States of America
I/E	Intersegment eliminations	U.S. Bank Subsidiaries	MSBNA and MSPBNA
IHC	Intermediate holding company	U.S. GAAP	Accounting principles generally accepted in the U.S.
IM	Investment Management	VaR	Value-at-Risk
		VIE	Variable interest entity
		WACC	Implied weighted average cost of capital
		WM	Wealth Management

Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Controls and Procedures

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Under the supervision and with the participation of the Firm's management, including the Chief Executive Officer and Chief Financial Officer, the Firm conducted an evaluation of the effectiveness of the Firm's disclosure controls and procedures (as defined in Rule 13a-15(e) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")). Based on this evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the Firm's disclosure controls and procedures were effective as of the end of the period covered by this annual report.

Management's Report on Internal Control Over Financial Reporting

The Firm's management is responsible for establishing and maintaining adequate internal control over financial reporting. The Firm's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States of America ("U.S. GAAP").

The internal control over financial reporting includes those policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Firm;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. GAAP and that receipts and expenditures are being made only in accordance with authorizations of the Firm's management and directors; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of Firm assets that could have a material effect on the Firm's financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of the Firm's internal control over financial reporting as of December 31, 2024. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control—Integrated Framework (2013). Based on management's assessment and those criteria, management believes that the Firm maintained effective internal control over financial reporting as of December 31, 2024.

The Firm's independent registered public accounting firm has audited and issued a report on the Firm's internal control over financial reporting, which appears below.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Morgan Stanley:

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Morgan Stanley and subsidiaries (the “Firm”) as of December 31, 2024, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2024, based on criteria established in Internal Control — Integrated Framework (2013) issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the financial statements of the Firm as of and for the year ended December 31, 2024 and our report dated February 21, 2025 expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Firm’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Firm’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Firm in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting,

assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Deloitte & Touche LLP

New York, New York

February 21, 2025

Changes in Internal Control Over Financial Reporting

No change in the Firm’s internal control over financial reporting (as such term is defined in Exchange Act Rule 13a-15(f)) occurred during the quarter ended December 31, 2024 that materially affected, or is reasonably likely to materially affect, the Firm’s internal control over financial reporting.

Other Information

None

Disclosure Regarding Foreign Jurisdictions That Prevent Inspections

Not applicable.

Unresolved Staff Comments

The Firm from time to time receives written comments from the staff of the SEC regarding its periodic or current reports under the Exchange Act. There are no comments that remain unresolved that the Firm received not less than 180 days before the end of the year to which this report relates that the Firm believes are material.

Properties

We have offices, operations and data centers located around the world. Our global headquarters and principal executive offices are located at 1585 Broadway, New York, New York. Our other principal offices include locations in Manhattan and the greater New York metropolitan area, London, Frankfurt, Hong Kong and Tokyo. Our current facilities are adequate for our present and future operations for each of our business segments, although we may add offices, depending upon our future operations.

Legal Proceedings

See “Contingencies—Legal” in Note 14 to the Financial Statements for information about our material legal proceedings.

Mine Safety Disclosures

Not applicable.

Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Morgan Stanley’s common stock trades under the symbol “MS” on the New York Stock Exchange. As of January 31, 2025, the Firm had 44,836 holders of record; however, the Firm believes the number of beneficial owners of the Firm’s common stock exceeds this number.

The table below sets forth the information with respect to purchases made by or on behalf of the Firm of its common stock during the fourth quarter of the year ended December 31, 2024.

Issuer Purchases of Equity Securities

<i>\$ in millions, except per share data</i>	Total Number of Shares Purchased ¹	Average Price Paid per Share ²	Total Shares Purchased as Part of Share Repurchase Program ^{3,4}	Dollar Value of Remaining Authorized Repurchase
October	1,584,771	\$ 118.58	1,372,300	\$ 19,087
November	2,662,760	\$ 129.24	2,525,000	\$ 18,761
December	2,194,830	\$ 128.23	2,034,498	\$ 18,500
Three Months Ended December 31, 2024	6,442,361	\$ 126.27	5,931,798	

- Includes 510,563 shares acquired by the Firm in satisfaction of the tax withholding obligations on stock-based awards granted under the Firm’s stock-based compensation plans during the three months ended December 31, 2024.
- Excludes excise tax of \$7 million levied on share repurchases, net of issuances, payable in April 2025.
- Share purchases under publicly announced authorizations are made pursuant to open-market purchases, Rule 10b5-1 plans or privately negotiated transactions (including with employee benefit plans) as market conditions warrant and at prices the Firm deems appropriate and may be suspended at any time.
- The Firm announced that its Board of Directors reauthorized a multi-year repurchase authorization of up to \$20 billion of outstanding common stock (the “Share Repurchase Authorization”) from time to time as conditions warrant and subject to limitations on distributions from the Federal Reserve. The Share Repurchase Authorization is for capital management purposes and considers, among other things, business segment capital needs, as well as equity-based compensation and benefit plan requirements. The Share Repurchase Authorization has no set expiration or termination date.

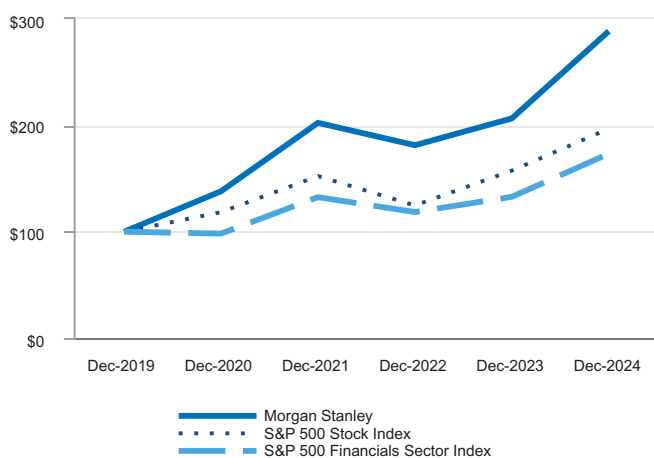
On June 28, 2024, the Firm announced that its Board of Directors reauthorized a multi-year repurchase authorization of up to \$20 billion of outstanding common stock, without a set expiration date, beginning in the third quarter of 2024, which will be exercised from time to time as conditions warrant. For further information, see “Liquidity and Capital Resources—Regulatory Requirements—Capital Plans, Stress Tests and the Stress Capital Buffer.”

Stock Performance Graph

The following graph compares the cumulative total shareholder return (rounded to the nearest whole dollar) of the Firm’s common stock, the S&P 500 Stock Index and the S&P 500 Financials Sector Index for the last five years. The graph assumes a \$100 investment at the closing price on December 31, 2019 and reinvestment of dividends on the respective dividend payment dates without commissions. This graph does not forecast future performance of the Firm’s common stock.

Cumulative Total Return

December 31, 2019 – December 31, 2024



	At December 31,					
	2019	2020	2021	2022	2023	2024
Morgan Stanley	\$100.00	\$138.06	\$202.40	\$181.35	\$206.57	\$288.62
S&P 500 Stock Index	100.00	118.39	152.34	124.73	157.48	196.84
S&P 500 Financials Sector Index	100.00	98.24	132.50	118.49	132.83	173.35

Directors, Executive Officers and Corporate Governance

Information relating to the Firm’s directors and nominees in the Firm’s definitive proxy statement for its 2025 annual meeting of shareholders (“Morgan Stanley’s proxy statement”) is incorporated by reference herein.

Information relating to the Firm’s executive officers is contained in the “Business” section of this report under “Information about Our Executive Officers.”

Morgan Stanley’s Code of Ethics and Business Conduct applies to all directors, officers and employees, including its Chief Executive Officer, Chief Financial Officer and Deputy Chief Financial Officer. You can find the Code of Ethics and Business Conduct on the webpage, www.morganstanley.com/content/dam/msdotcom/en/about-us-governance/pdf/MS_Code_of_Ethics_and_Business_Conduct_2024.pdf. The Firm will post any amendments to the Code of Ethics and Business Conduct, and any waivers that are required to be disclosed by the rules of either the U.S. Securities and

Exchange Commission or the New York Stock Exchange LLC, on the webpage.

Information regarding Morgan Stanley’s Global Policy for Transactions in Morgan Stanley Securities in Morgan Stanley’s proxy statement is incorporated by reference herein. The full text of Morgan Stanley’s Global Policy for Transactions in Morgan Stanley Securities is filed hereto as Exhibit 19.

Executive Compensation

Information relating to director and executive officer compensation in Morgan Stanley’s proxy statement is incorporated by reference herein.

Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information relating to equity compensation plans and security ownership of certain beneficial owners and management in Morgan Stanley’s proxy statement is incorporated by reference herein.

Certain Relationships and Related Transactions and Director Independence

Information regarding certain relationships and related transactions in Morgan Stanley’s proxy statement is incorporated by reference herein.

Information regarding director independence in Morgan Stanley’s proxy statement is incorporated by reference herein.

Principal Accountant Fees and Services

Information regarding principal accountant fees and services in Morgan Stanley’s proxy statement is incorporated by reference herein.

Exhibits and Financial Statement Schedules

Documents filed as part of this report

- The financial statements required to be filed in this annual report on Form 10-K are included in the section titled “Financial Statements and Supplementary Data.”

Exhibit Index¹

Certain of the following exhibits, as indicated parenthetically, were previously filed as exhibits to registration statements filed by Morgan Stanley or its predecessor companies under the Securities Act or to reports or registration statements filed by Morgan Stanley or its predecessor companies under the Exchange Act and are hereby incorporated by reference to such statements or reports. Morgan Stanley’s Exchange Act file number is 1-11758. The Exchange Act file number of

Morgan Stanley Group Inc., a predecessor company (“MSG”), was 1-9085.

Exhibit No.	Description	Exhibit No.	Description
3.1	Amended and Restated Certificate of Incorporation of Morgan Stanley, as amended to date (Exhibit 3.1 to Morgan Stanley’s quarterly report on Form 10-Q for the quarter ended June 30, 2024).	4.4	The Unit Agreement Without Holders’ Obligations, dated as of August 29, 2008, between Morgan Stanley and The Bank of New York Mellon, as Unit Agent, as Trustee and Paying Agent under the Senior Indenture referred to therein and as Warrant Agent under the Warrant Agreement referred to therein (Exhibit 4.1 to Morgan Stanley’s current report on Form 8-K dated August 29, 2008).
3.2	Amended and Restated Bylaws of Morgan Stanley, as amended to date (Exhibit 3.1 to Morgan Stanley’s current report on Form 8-K dated December 8, 2023).	4.5	Subordinated Indenture dated as of October 1, 2004 between Morgan Stanley and The Bank of New York, as trustee (Exhibit 4-g to Morgan Stanley’s Registration Statement on Form S-3/A (No. 333-117752)).
4.1*	Description of Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934.	4.6	Junior Subordinated Indenture dated as of October 12, 2006 between Morgan Stanley and The Bank of New York, as trustee (Exhibit 4.1 to Morgan Stanley’s current report on Form 8-K dated October 12, 2006).
4.2	Amended and Restated Senior Indenture dated as of May 1, 1999 between Morgan Stanley and The Bank of New York, as trustee (Exhibit 4e to Morgan Stanley’s Registration Statement on Form S-3/A (No. 333-75289) as amended by Fourth Supplemental Senior Indenture dated as of October 8, 2007 (Exhibit 4.3 to Morgan Stanley’s annual report on Form 10-K for the fiscal year ended November 30, 2007).	4.7	Deposit Agreement dated as of July 6, 2006 among Morgan Stanley, JPMorgan Chase Bank, N.A. and the holders from time to time of the depositary receipts described therein (Exhibit 4.3 to Morgan Stanley’s quarterly report on Form 10-Q for the quarter ended May 31, 2006).
4.3	Senior Indenture dated as of November 1, 2004 between Morgan Stanley and The Bank of New York, as trustee (Exhibit 4-f to Morgan Stanley’s Registration Statement on Form S-3/A (No. 333-117752), as amended by First Supplemental Senior Indenture dated as of September 4, 2007 (Exhibit 4.5 to Morgan Stanley’s annual report on Form 10-K for the fiscal year ended November 30, 2007), Second Supplemental Senior Indenture dated as of January 4, 2008 (Exhibit 4.1 to Morgan Stanley’s current report on Form 8-K dated January 4, 2008), Third Supplemental Senior Indenture dated as of September 10, 2008 (Exhibit 4 to Morgan Stanley’s quarterly report on Form 10-Q for the quarter ended August 31, 2008), Fourth Supplemental Senior Indenture dated as of December 1, 2008 (Exhibit 4.1 to Morgan Stanley’s current report on Form 8-K dated December 1, 2008), Fifth Supplemental Senior Indenture dated as of April 1, 2009 (Exhibit 4 to Morgan Stanley’s quarterly report on Form 10-Q for the quarter ended March 31, 2009), Sixth Supplemental Senior Indenture dated as of September 16, 2011 (Exhibit 4.1 to Morgan Stanley’s quarterly report on Form 10-Q for the quarter ended September 30, 2011), Seventh Supplemental Senior Indenture dated as of November 21, 2011 (Exhibit 4.4 to Morgan Stanley’s annual report on Form 10-K for the year ended December 31, 2011), Eighth Supplemental Senior Indenture dated as of May 4, 2012 (Exhibit 4.1 to Morgan Stanley’s quarterly report on Form 10-Q for the quarter ended June 30, 2012), Ninth Supplemental Senior Indenture dated as of March 10, 2014 (Exhibit 4.1 to Morgan Stanley’s quarterly report on Form 10-Q for the quarter ended March 31, 2014), Tenth Supplemental Senior Indenture dated as of January 11, 2017 (Exhibit 4.1 to Morgan Stanley’s current report on Form 8-K dated January 11, 2017) and Eleventh Supplemental Senior Indenture dated as of March 24, 2021 (Exhibit 4.4 to Morgan Stanley’s annual report on Form 10-K for the year ended December 31, 2021).	4.8	Form of Deposit Agreement among Morgan Stanley, JPMorgan Chase Bank, N.A. and the holders from time to time of the depositary receipts representing interests in the Series A Preferred Stock described therein (Exhibit 2.4 to Morgan Stanley’s Registration Statement on Form 8-A dated July 5, 2006).
		4.9	Depositary Receipt for Depositary Shares, representing Floating Rate Non-Cumulative Preferred Stock, Series A (included in Exhibit 4.8 hereto).
		4.10	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series E Preferred Stock described therein (Exhibit 2.6 to Morgan Stanley’s Registration Statement on Form 8-A dated September 27, 2013).
		4.11	Depositary Receipt for Depositary Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series E (included in Exhibit 4.10 hereto).
		4.12	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series F Preferred stock described therein (Exhibit 2.4 to Morgan Stanley’s Registration Statement on Form 8-A dated December 9, 2013).
		4.13	Depositary Receipt for Depositary Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series F (included in Exhibit 4.12 hereto).

Exhibit No.	Description	Exhibit No.	Description
4.14	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series I Preferred stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated September 17, 2014).	4.25	Depository Receipt for Depository Shares, representing 6.500% Non-Cumulative Preferred Stock, Series P (included in Exhibit 4.24 hereto).
4.15	Depository Receipt for Depository Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series I (included in Exhibit 4.14 hereto).	4.26	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series Q Preferred Stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated July 29, 2024).
4.16	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series K Preferred Stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated January 30, 2017).	4.27	Depository Receipt for Depository Shares, representing 6.625% Non-Cumulative Preferred Stock, Series Q (included in Exhibit 4.26 hereto).
4.17	Depository Receipt for Depository Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series K (included in Exhibit 4.16 hereto).	10.1	Amended and Restated Trust Agreement dated as of January 1, 2018 by and between Morgan Stanley and State Street Bank and Trust Company (Exhibit 10.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended March 31, 2018).
4.18	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series L Preferred Stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated November 22, 2019).	10.2	Amended and Restated Investor Agreement dated as of June 30, 2011 by and between Morgan Stanley and Mitsubishi UFJ Financial Group, Inc. (Exhibit 10.1 to Morgan Stanley's current report on Form 8-K dated June 30, 2011), as amended by Third Amendment, dated October 3, 2013 (Exhibit 10.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended September 30, 2013), Fourth Amendment, dated April 6, 2016 (Exhibit 10.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended March 31, 2016), Fifth Amendment, dated October 4, 2018 (Exhibit 10.3 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2020), Sixth Amendment, dated April 13, 2021 (Exhibit 10.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended June 30, 2021) and Seventh Amendment, dated October 13, 2023 (Exhibit 10.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended September 30, 2023).
4.19	Depository Receipt for Depository Shares, representing 4.875% Non-Cumulative Preferred Stock, Series L (included in Exhibit 4.18 hereto).	10.3†	Morgan Stanley 401(k) Plan, amended and restated as of January 1, 2018 (Exhibit 10.4 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2018), as amended by Amendment (Exhibit 10.4 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2019), Amendment (Exhibit 10.6 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2020), Amendment (Exhibit 10.4 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2021), Amendment (Exhibit 10.4 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2022) and Amendment (Exhibit 10.4 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2023).
4.20	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series N Preferred Stock described therein (Exhibit 4.5 to Morgan Stanley's current report on Form 8-K dated October 2, 2020).	10.4†*	Amendment to Morgan Stanley 401(k) Plan, dated December 16, 2024.
4.21	Depository Receipt for Depository Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series N (included in Exhibit 4.20 hereto).	10.5†	Tax Deferred Equity Participation Plan as amended and restated as of November 26, 2007 (Exhibit 10.9 to Morgan Stanley's annual report on Form 10-K for the fiscal year ended November 30, 2007).
4.22	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series O Preferred Stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated October 22, 2021).	10.6†*	Directors' Equity Capital Accumulation Plan as amended and restated as of November 1, 2024.
4.23	Depository Receipt for Depository Shares, representing 4.250% Non-Cumulative Preferred Stock, Series O (included in Exhibit 4.22 hereto).		
4.24	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series P Preferred Stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated August 1, 2022).		

Exhibit No.	Description	Exhibit No.	Description
10.7†	Employees' Equity Accumulation Plan as amended and restated as of November 26, 2007 (Exhibit 10.12 to Morgan Stanley's annual report on Form 10-K for the fiscal year ended November 30, 2007).	10.20†	Form of Award Certificate for Discretionary Retention Awards of Stock Units (Exhibit 10.20 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2023).
10.8†	Employee Stock Purchase Plan as amended and restated as of August 1, 2022 (Exhibit 10.8 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2022).	10.21†	Form of Award Certificate for Discretionary Retention Awards under the Morgan Stanley Compensation Incentive Plan (Exhibit 10.21 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2023).
10.9†	Morgan Stanley Supplemental Executive Retirement and Excess Plan, amended and restated effective December 31, 2008 (Exhibit 10.2 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended March 31, 2009) as amended by Amendment (Exhibit 10.5 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended June 30, 2009), Amendment (Exhibit 10.19 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2010), Amendment (Exhibit 10.3 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended June 30, 2011) and Amendment (Exhibit 10.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended September 30, 2014).	10.22†*	Form of Award Certificate for Performance Stock Unit Awards.
10.10†	Form of Deferred Compensation Agreement under the Pre-Tax Incentive Program 2 (Exhibit 10.12 to MSG's annual report for the fiscal year ended November 30, 1996).	10.23†	Form of Aircraft Time-Sharing Agreement (Exhibit 10.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended September 30, 2020).
10.11†	Morgan Stanley UK Share Ownership Plan (Exhibit 4.1 to Morgan Stanley's Registration Statement on Form S-8 (No. 333-146954)).	19*	Global Policy for Transactions in Morgan Stanley Securities.
10.12†	Supplementary Deed of Participation for the Morgan Stanley UK Share Ownership Plan, dated as of November 5, 2009 (Exhibit 10.36 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2009).	21*	Subsidiaries of Morgan Stanley.
10.13†	Aircraft Time-Sharing Agreement, dated as of January 1, 2010, by and between Corporate Services Support Corp. and James P. Gorman (Exhibit 10.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended March 31, 2010).	22*	Guarantor and Subsidiary Issuer of Registered Guaranteed Securities.
10.14†	Agreement between Morgan Stanley and James P. Gorman, dated August 16, 2005, and amendment dated December 17, 2008 (Exhibit 10.2 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended March 31, 2010), as amended by Amendment (Exhibit 10.25 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2013).	23.1*	Consent of Deloitte & Touche LLP.
10.15†	Form of Restrictive Covenant Agreement (Exhibit 10 to Morgan Stanley's current report on Form 8-K dated November 22, 2005).	24	Powers of Attorney (included on signature page).
10.16†	Equity Incentive Compensation Plan, as amended and restated as of December 14, 2020 (Exhibit 10.19 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2020).	31.1*	Rule 13a-14(a) Certification of Chief Executive Officer.
10.17†*	Morgan Stanley Compensation Incentive Plan, as amended and restated as of December 16, 2024.	31.2*	Rule 13a-14(a) Certification of Chief Financial Officer.
10.18†*	Morgan Stanley Schedule of Non-Employee Directors Annual Compensation, effective as of November 1, 2024.	32.1**	Section 1350 Certification of Chief Executive Officer.
10.19†*	Description of Executive Health Coverage.	32.2**	Section 1350 Certification of Chief Financial Officer.
		97	Morgan Stanley Compensation Recoupment Policy (Exhibit 97 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2023).
		101	Interactive Data Files pursuant to Rule 405 of Regulation S-T formatted in Inline eXtensible Business Reporting Language ("Inline XBRL").
		104	Cover Page Interactive Data File (formatted in Inline XBRL and contained in Exhibit 101).
		1.	For purposes of this Exhibit Index, references to "The Bank of New York" mean in some instances the entity successor to JPMorgan Chase Bank, N.A. or J.P. Morgan Trust Company, National Association; references to "JPMorgan Chase Bank, N.A." mean the entity formerly known as The Chase Manhattan Bank, in some instances as the successor to Chemical Bank; references to "J.P. Morgan Trust Company, N.A." mean the entity formerly known as Bank One Trust Company, N.A., as successor to The First National Bank of Chicago.
		*	Filed herewith.
		**	Furnished herewith.
		†	Management contract or compensatory plan or arrangement required to be filed as an exhibit to this Form 10-K pursuant to Item 15(b).
		Note:	Other instruments defining the rights of holders of long-term debt securities of Morgan Stanley and its subsidiaries are omitted pursuant to Section (b)(4)(iii) of Item 601 of Regulation S-K. Morgan Stanley hereby agrees to furnish copies of these instruments to the U.S. Securities and Exchange Commission upon request.

MORGAN STANLEY ASIA PRODUCTS LIMITED

CONDENSED STATEMENT OF CHANGES IN EQUITY

Six months ended 30 June 2024

	Share capital US\$'000	Retained earnings US\$'000	Total equity US\$'000
Balance at 1 January 2024	50	—	50
Result and total comprehensive income for the period	—	—	—
Balance at 30 June 2024 (unaudited)	<u>50</u>	<u>—</u>	<u>50</u>
Balance at 1 January 2023	50	—	50
Result and total comprehensive income for the period	—	—	—
Balance at 30 June 2023 (unaudited)	<u>50</u>	<u>—</u>	<u>50</u>

The notes on pages 14 to 40 form an integral part of the condensed financial statements.

MORGAN STANLEY ASIA PRODUCTS LIMITED

CONDENSED STATEMENT OF FINANCIAL POSITION


As at 30 June 2024

		30 June 2024	31 December 2023
		US\$'000	US\$'000
	Notes	(unaudited)	(audited)
ASSETS			
Cash		823	692
Trading financial assets	8	449	278
Trade and other receivables	9	20,978	13,052
TOTAL ASSETS		22,250	14,022
LIABILITIES AND EQUITY			
LIABILITIES			
Trading financial liabilities	8	22,152	13,325
Trade and other payables	10	48	647
TOTAL LIABILITIES		22,200	13,972
EQUITY			
Share capital	11	50	50
Retained earnings		—	—
Equity attributable to owner of the Company		50	50
TOTAL EQUITY		50	50
TOTAL LIABILITIES AND EQUITY		22,250	14,022

These condensed financial statements were approved by the Board and authorised for issue on

20 SEP 2024

Signed on behalf of the Board



Director: Young Lee

The notes on pages 14 to 40 form an integral part of the condensed financial statements.

MORGAN STANLEY ASIA PRODUCTS LIMITED

CONDENSED STATEMENT OF CASH FLOWS Six months ended 30 June 2024

		30 June 2024	30 June 2023
		US\$'000	US\$'000
	Notes	(unaudited)	(unaudited)
NET CASH FLOWS FROM / (USED IN) OPERATING ACTIVITIES	12b	3,687	(8,875)
INVESTING ACTIVITIES			
Proceeds from loan repayment by other Morgan Stanley Group undertakings		—	9,147
Issuance of loan to other Morgan Stanley Group undertakings		(4,045)	—
Interest received		489	584
NET CASH FLOWS (USED IN) / FROM INVESTING ACTIVITIES		<u>(3,556)</u>	<u>9,731</u>
NET INCREASE IN CASH AND CASH EQUIVALENTS		<u>131</u>	<u>856</u>
CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE PERIOD		<u>692</u>	<u>769</u>
CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD	12a	<u><u>823</u></u>	<u><u>1,625</u></u>

The notes on pages 14 to 40 form an integral part of the condensed financial statements.

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

1. BASIS OF PREPARATION

Accounting policies

The Company prepares its annual financial statements in accordance with IFRSs issued by the IASB and Interpretations issued by the IFR Interpretations Committee (“IFRIC”). The condensed financial statements have been prepared in accordance with International Accounting Standard (“IAS”) 34 ‘*Interim Financial Reporting*’.

In preparing these condensed financial statements, the Company has applied consistently the accounting policies and methods of computation used in the Company’s annual financial statements for the year ended 31 December 2023.

New standards and interpretations adopted during the period

The following amendments to standards relevant to the Company’s operations were adopted during the period. These amendments to standards did not have a material impact on the Company’s financial statements.

Amendments to IAS 1 ‘*Presentation of Financial Statements*’: Classification of Liabilities as Current or Non-current were issued by the IASB in January 2020 and revised in July 2020 and October 2022, for retrospective application in accounting periods beginning on or after 1 January 2024. Earlier application is permitted.

Amendments to IAS 1 ‘*Presentation of Financial Statements*’: Non-current liabilities with Covenants were issued by the IASB in October 2022 for application in accounting periods beginning on or after 1 January 2024. Earlier application is permitted.

There were no other standards, amendments to standards or interpretations relevant to the Company’s operations which were adopted during the period.

New standards and interpretations not yet adopted

At the date of authorisation of these financial statements, the following amendments to standards relevant to the Company’s operations were issued by the IASB but not mandatory for accounting periods beginning 1 January 2024. The Company does not expect that the adoption of the following amendments to standards will have a material impact on the Company’s financial statements.

The IASB issued a new standard – IFRS 18, ‘*Presentation and Disclosure in Financial Statements*’, in April 2024, with effective date of Annual periods beginning on or after 1 January 2027.

Amendments to IFRS 9 ‘*Financial Instruments*’ (“IFRS 9”) and IFRS 7 ‘*Financial Instruments: Disclosures*’ (“IFRS 7”) was issued by the IASB in May 2024 for retrospective application in annual periods beginning on or after 1 January 2026. Earlier application is permitted.

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

1. BASIS OF PREPARATION (CONTINUED)

Basis of measurement

The condensed financial statements of the Company are prepared under the historical cost basis, except for certain financial instruments that have been measured at fair value as given in note 7.

Critical accounting judgements and key sources of estimation uncertainty

In preparing the condensed financial statements, the Company makes judgements and estimates that affect the application of accounting policies and reported amounts.

Critical accounting judgements are key decisions made by management in the application of the Company's accounting policies, other than those involving estimations, which have the most significant effects on the amounts recognised in the condensed financial statements.

Key sources of estimation uncertainty represent assumptions and estimations made by management that have a significant risk of resulting in a material adjustment to the carrying amount of assets and liabilities within the next financial year.

No critical accounting judgements have been made in the process of applying the Company's accounting policies that have had a significant effect on the amounts recognised in the condensed financial statements.

The key sources of estimation uncertainty are the valuation of certain financial instruments. For further details on the assumptions and estimation uncertainties in determining the fair value of certain assets and liabilities, see note 16.

The Company evaluates the critical accounting judgements and key sources of estimation uncertainty on an ongoing basis and believes that these are reasonable.

The going concern assumption

The Company's business activities, together with the factors likely to affect its future development, performance and position, are reflected in the interim management report on pages 1 to 7. In addition, the notes to the condensed financial statements include the Company's objectives, policies and processes for managing its capital; its financial risk management objectives; details of its financial instruments; and its exposures to credit risk and liquidity risk.

As set out in the interim management report retaining sufficient liquidity and capital to withstand market pressures remains central to the Morgan Stanley Group's and the Company's strategy.

Taking the above factors into consideration, the Directors believe that the Company will have access to adequate resources to continue in operational existence for the foreseeable future. Accordingly, they continue to adopt the going concern basis in preparing the interim report and condensed financial statements.

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

2. NET TRADING EXPENSE

	30 June 2024	30 June 2023
	US\$'000	US\$'000
Net trading expense on bilateral OTC derivative contracts	(5,156)	(39,549)
Net trading income on issued listed derivative contracts	3,827	39,032
Net trading income / (expense) on other listed derivative contracts	789	(150)
	<u>(540)</u>	<u>(667)</u>

3. OTHER REVENUE

Other revenue predominantly represents management charges to the Company's direct parent undertaking for recovery of 'Other expense', see note 5 below.

4. INTEREST INCOME

All interest income relates to financial assets at amortised cost and is calculated using the effective interest rate method.

5. OTHER EXPENSE

	30 June 2024	30 June 2023
	US\$'000	US\$'000
Fees paid	<u>2,677</u>	<u>2,888</u>

The Company issues derivative contracts listed on the Stock Exchange. Fees paid in the above table represents amounts paid to the Stock Exchange and other Morgan Stanley Group undertakings for listing and issuance of derivatives on the Stock Exchange.

6. INCOME TAX

The Government of the Cayman Islands, has not, under existing legislation, imposed any income, corporate or capital gains tax, estate duty, inheritance tax, gift tax or withholding tax upon the Company.

Hong Kong Profits Tax is calculated at 16.5% (2023: 16.5%) of the estimated assessable profit arising in Hong Kong.

No provision for taxation has been made as the Company does not have any taxable income during the period ended 30 June 2024 and 30 June 2023.

The Company has no current tax exposure in relation to the OECD Pillar Two Model Rules because the Pillar Two legislation is not effective at the reporting date. The Company has applied the exception to deferred tax disclosure as provided in the amendments to IAS 12 'Income Taxes': International Tax Reform – Pillar Two Model Rules. Based on preliminary assessments of potential future exposure, the financial impact is expected to be immaterial.

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

7. FINANCIAL ASSETS AND LIABILITIES BY MEASUREMENT CATEGORY

The following table analyses financial assets and financial liabilities presented in the Company's condensed statement of financial position by the IFRS 9 classifications as at 30 June 2024 and at 31 December 2023 .

30 June 2024	FVPL (mandatorily) US\$'000	Amortised cost US\$'000	Total US\$'000
Cash	—	823	823
Trading financial assets	449	—	449
Trade and other receivables	—	20,978	20,978
Total financial assets	449	21,801	22,250
Trading financial liabilities	22,152	—	22,152
Trade and other payables	—	48	48
Total financial liabilities	22,152	48	22,200
31 December 2023	FVPL (mandatorily) US\$'000	Amortised cost US\$'000	Total US\$'000
Cash	—	692	692
Trading financial assets	278	—	278
Trade and other receivables	—	13,052	13,052
Total financial assets	278	13,744	14,022
Trading financial liabilities	13,325	—	13,325
Trade and other payables	—	647	647
Total financial liabilities	13,325	647	13,972

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

8. TRADING FINANCIAL ASSETS AND LIABILITIES

Trading assets and trading liabilities are summarised as follows:

	30 June 2024		31 December 2023	
	Assets US\$'000	Liabilities US\$'000	Assets US\$'000	Liabilities US\$'000
Derivatives- Equity contracts				
Bilateral OTC derivative contracts	93	6,437	228	2,758
Issued listed derivative contracts	—	15,715	—	10,567
Other listed derivative contracts	356	—	50	—
	<u>449</u>	<u>22,152</u>	<u>278</u>	<u>13,325</u>

9. TRADE AND OTHER RECEIVABLES

	30 June 2024	31 December 2023
	US\$'000	US\$'000
Trade and other receivables (amortised cost)		
Trade receivables	7,000	2,790
Other receivables		
Amounts due from the Company's direct parent undertaking	13,978	10,262
	<u>20,978</u>	<u>13,052</u>

10. TRADE AND OTHER PAYABLES

	30 June 2024	31 December 2023
	US\$'000	US\$'000
Trade and other payables (amortised cost)		
Trade payables	2	537
Other payables		
Amounts due to other Morgan Stanley Group undertakings	43	44
Other amounts payables	3	66
	<u>48</u>	<u>647</u>

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

11. EQUITY

	Ordinary shares of US\$1 each	
	Number	
Authorised		
At 1 January 2023, 31 December 2023 and 30 June 2024		<u>50,000</u>
	Ordinary shares of US\$1 each	
	Number	US\$'000
Issued and fully paid		
At 1 January 2023, 31 December 2023 and 30 June 2024	<u>50,000</u>	<u>50</u>

The holder of ordinary shares is entitled to receive dividends as declared from time to time and are entitled, on a show of hands, to one vote and, on a poll, one vote per share at meetings of shareholders of the Company. All shares rank equally with regard to the Company's residual assets.

12. ADDITIONAL CASH FLOW INFORMATION

a. Cash and cash equivalents

For the purposes of the condensed statement of cash flows, cash and cash equivalents comprise cash, which have less than three months maturity from the date of acquisition.

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

12. ADDITIONAL CASH FLOW INFORMATION (CONTINUED)

b. Reconciliation of cash flows from/ (used in) operating activities

	30 June 2024	30 June 2023
	US\$'000	US\$'000
Result for the period	—	—
<i>Adjustments for:</i>		
Interest income	(489)	(584)
Operating cash flows before changes in operating assets and liabilities	<u>(489)</u>	<u>(584)</u>
Changes in operating assets		
(Increase) / decrease in trading financial assets	(171)	999
Increase in trade and other receivables	<u>(3,881)</u>	<u>(1,074)</u>
	<u>(4,052)</u>	<u>(75)</u>
Changes in operating liabilities		
Increase / (decrease) in trading financial liabilities	8,827	(7,285)
Decrease in trade and other payables	<u>(599)</u>	<u>(931)</u>
	<u>8,228</u>	<u>(8,216)</u>
Net cash flows from / (used in) operating activities	<u><u>3,687</u></u>	<u><u>(8,875)</u></u>

13. SEGMENT REPORTING

Segment information is presented in respect of the Company's business and geographical segments. The business and geographical segments are based on the Company's management and internal reporting structure. Transactions between business segments are on normal commercial terms and conditions.

Business segment

Morgan Stanley structures its business segments primarily based upon the nature of the financial products and services provided to customers and Morgan Stanley's internal management structure. The Company's own business segments are consistent with those of Morgan Stanley.

The Company has one reportable business segment, Institutional Securities which includes the issuance of derivative contracts and the hedging of the obligations arising pursuant to such issuance.

Of the Company's total revenue, 41% (30 June 2023: 8%) arises from transactions with other Morgan Stanley Group undertakings. Further details of such transactions are disclosed in the Related Party Disclosures note 19.

Geographical segment

The Company operates in one geographic region, Asia. The basis for attributing external revenue and total assets to one geographic region is determined by trading desk location.

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

14. FINANCIAL RISK MANAGEMENT

Risk management procedures

Risk is an inherent part of both the Morgan Stanley Group's and the Company's business activity and is managed by the Company within the context of the broader Morgan Stanley Group. The Morgan Stanley Group seeks to identify, assess, monitor and manage each of the various types of risk involved in its business activities in accordance with defined policies and procedures. The Company has developed its own risk management policy framework, which is consistent with and leverages the risk management policies and procedures of the Morgan Stanley Group and which include escalation to the Company's Board of Directors and to appropriate senior management personnel of the Company.

The principal activity of the Company continues to be the issuance of financial instruments under an Issuance Programme and the economic hedging of the obligations arising pursuant to such issuances. It is the policy and objective of the Company not to be exposed to market risk as a result of its issuance activities. On the issuance of each financial instrument, the Company enters into economic hedges of its obligations by purchasing financial instruments from another Morgan Stanley Group entity and from the market.

Significant risks faced by the Company resulting from its issuance activities and hedging strategies are set out below.

Credit risk

Credit risk refers to the risk of loss arising when a borrower, counterparty or issuer does not meet its financial obligations to the Company.

Credit risk management

Credit risk exposure is managed on a global basis and in consideration of each significant legal entity within the Morgan Stanley Group. The credit risk management policies and procedures establish the framework for identifying, measuring, monitoring and controlling credit risk whilst ensuring transparency of material credit risks, compliance with established limits and escalating risk concentrations to appropriate senior management.

The Company may incur credit risk in its derivatives business through a variety of activities, including, but not limited to, the following:

- entering into derivative contracts under which counterparties may have obligations to make payments to the Company;
- providing short or long-term funding to Morgan Stanley Group undertakings;

The Company hedges all of its financial liabilities by entering into bilateral OTC derivative contracts with other Morgan Stanley Group undertakings and other derivative contracts. Except for cash and other derivative contracts, the Company enters into all of its financial asset transactions with other Morgan Stanley Group undertakings, and both the Company and the other Morgan Stanley Group undertakings are wholly owned subsidiaries of the same ultimate parent entity, Morgan Stanley. As a result of the implicit support that would be provided by Morgan Stanley, the Company is considered exposed to the credit risk of Morgan Stanley, except where the Company transacts with other Morgan Stanley Group undertakings that have a higher credit rating to that of Morgan Stanley.

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

14. FINANCIAL RISK MANAGEMENT (CONTINUED)

Exposure to credit risk

The maximum exposure to credit risk (“gross credit exposure”) of the Company as at 30 June 2024 is disclosed below, based on the carrying amounts of the financial assets which the Company believes are subject to credit risk. The table includes financial instruments subject to Expected Credit Loss (“ECL”) and not subject to ECL. Those financial instruments that bear credit risk but are not subject to ECLs are subsequently measured at fair value. The table below does not include trade receivables arising from pending securities transactions with market counterparties as credit risk is considered to be insignificant. Where the Company enters into credit enhancements, including receiving cash and security as collateral and master netting agreements, to manage the credit exposure on these financial instruments the financial effect of the credit enhancements is also disclosed in note 15 ‘Financial Assets and Financial Liabilities Subject to Offsetting’.

The Company does not have any exposure arising from items not recognised on the balance sheet.

The Company does not hold financial assets considered to be credit-impaired.

Credit quality

Exposure to credit risk by internal rating grades

Internal credit ratings, as below, are derived using methodologies generally consistent with those used by external agencies:

Investment grade: AAA - BBB
Non-investment grade: BB - CCC
Default: D

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

14. FINANCIAL RISK MANAGEMENT (CONTINUED)

Credit quality (Continued)

Exposure to credit risk by internal rating grades (Continued)

The table below shows gross carrying amount by internal rating grade. All exposures subject to ECL are Stage 1, unless otherwise shown:

30 June 2024

	Gross credit exposure ⁽¹⁾⁽²⁾ US\$'000	Counterparty	Rating	Credit Grade
Subject to ECL⁽³⁾:				
Cash	11	Standard Chartered Bank	A	Investment Grade
	71	Standard Chartered Bank (Hong Kong) Limited	BBB	Investment Grade
	51	ANZ Bank New Zealand Limited	A	Investment Grade
	79	HSBC Bank Australia Limited	A	Investment Grade
	548	HSBC Bank (Mauritius) Limited	BBB-	Investment Grade
	63	Sumitomo Mitsui Banking Corporation	A	Investment Grade
Total Cash	823			
Trade and other receivables	13,978	Morgan Stanley Asia Securities Products LLC	BBB	Investment Grade
	6,570	Morgan Stanley & Co. International plc	A	Investment Grade
Total trade and other receivables⁽⁴⁾	20,548			
Not subject to ECL⁽⁵⁾:				
Trading financial assets	94	Morgan Stanley & Co. International plc	A	Investment Grade
	329	Korea Investment & Securities Asia Ltd.	NR	
	17	Guotai Junan Securities (Hong Kong) Limited	BB	Non-investment Grade
	7	UBS AG	A	Investment Grade
	2	B.V.	NR	
Total trading financial assets	449			

1. The carrying amount recognised in the condensed statement of financial position best represents the Company's maximum exposure to credit risk.
2. Of the gross credit exposure, intercompany cross product netting arrangements are in place which would allow for an additional US\$6,438,000 to be offset in the ordinary course of business and/ or in the event of default as given in note 15.
3. There is a minimal ECL of US\$1,000 on trade and other receivables.

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

14. FINANCIAL RISK MANAGEMENT (CONTINUED)

Credit quality (Continued)

Exposure to credit risk by internal rating grades (Continued)

4. Trade and other receivables include cash collateral pledged against the payable on OTC derivative positions. These derivative liabilities are included within trading financial liabilities in the statement of financial position. This table does not include receivables arising from pending securities transactions with market counterparties as credit risk is considered to be insignificant.
5. Financial assets measured at FVPL are not subject to ECL.

31 December 2023

	Gross credit exposure ⁽¹⁾⁽²⁾ US\$'000	Counterparty	Rating	Credit Grade
Subject to ECL⁽³⁾:				
Cash	11	Standard Chartered Bank	A	Investment Grade
	48	Standard Chartered Bank (Hong Kong) Limited	BBB	Investment Grade
	51	ANZ Bank Limited	A	Investment Grade
	509	The Hong Kong and Shanghai Banking Corporation Limited	A	Investment Grade
	73	Sumitomo Mitsui Banking Corporation	A	Investment Grade
Total Cash	692			
Trade and other receivables	10,262	Morgan Stanley Asia Securities Products LLC	BBB	Investment Grade
	2,326	Morgan Stanley & Co. International plc	A	Investment Grade
Total trade and other receivables⁽⁵⁾	12,588			
Not subject to ECL⁽⁴⁾:				
Trading financial assets	229	Morgan Stanley & Co. International plc	A	Investment Grade
	42	The Hong Kong and Shanghai Banking Corporation Limited	A	Investment Grade
	7	J.P. Morgan Structured Products B.V.	UR	
Total Trading financial assets	278			

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

14. FINANCIAL RISK MANAGEMENT (CONTINUED)

Credit quality (Continued)

Exposure to credit risk by internal rating grades (Continued)

1. The carrying amount recognised in the condensed statement of financial position best represents the Company's maximum exposure to credit risk.
2. Of the gross credit exposure, intercompany cross product netting arrangements are in place which would allow for an additional US\$3,018,000 to be offset in the ordinary course of business and/ or in the event of default as given in note 15.
3. There is a minimal ECL of US\$1,000 on trade and other receivables.
4. Financial assets measured at FVPL are not subject to ECL.
5. This table does not include receivables arising from pending securities transactions with market counterparties as credit risk is considered to be insignificant.

Liquidity risk

Liquidity risk refers to the risk that the Company will be unable to finance its operations due to a loss of access to the capital markets or difficulty in liquidating its assets. Liquidity risk encompasses the Company's ability (or perceived ability) to meet its financial obligations without experiencing significant business disruption or reputational damage that may threaten the Company's viability as a going concern. Liquidity risk also encompasses the associated funding risks triggered by the market or idiosyncratic stress events that may cause unexpected changes in funding needs or an inability to raise new funding. Generally, the Company incurs liquidity risk as a result of its trading, lending and investing activities.

The Company's liquidity risk management policies and procedures are consistent with those of the Morgan Stanley Group. The primary goal of Morgan Stanley Group's liquidity risk and funding management framework is to ensure that the Company has access to adequate funding across a wide range of market conditions and time horizons. The framework is designed to enable the Company to fulfil its financial obligations and support the execution of its business strategies.

The following principles guide the Morgan Stanley Group's liquidity risk management framework:

- Sufficient liquid assets should be maintained to cover maturing liabilities and other planned and contingent outflows;
- Maturity profile of assets and liabilities should be aligned, with limited reliance on short-term funding;
- Source, counterparty, currency, region, and term of funding should be diversified; and
- Liquidity Stress Tests should account for stressed liquidity requirements and the amount of liquidity held should be greater than those stressed requirements.

The Company hedges all of its financial liabilities by entering into OTC derivative contracts with other Morgan Stanley Group undertakings. In general, the maturity profile of the financial assets matches the maturity profile of the financial liabilities.

The core components of the Morgan Stanley Group's liquidity management framework, which includes consideration of the liquidity risk for each individual legal entity, are the Required Liquidity Framework, Liquidity Stress Tests and the Liquidity Resources (as defined below).

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

14. FINANCIAL RISK MANAGEMENT (CONTINUED)

Liquidity risk (Continued)

Required Liquidity Framework

The Required Liquidity Framework establishes the amount of liquidity the Morgan Stanley Group must hold in both normal and stressed environments to ensure that its financial condition and overall soundness is not adversely affected by an inability (or perceived inability) to meet its financial obligations in a timely manner. The Required Liquidity Framework considers the most constraining liquidity requirement to satisfy all regulatory and internal limits at a consolidated and legal entity level.

Liquidity Stress Tests

The Morgan Stanley Group uses Liquidity Stress Tests to model external and intercompany flows across multiple scenarios and a range of time horizons. These scenarios contain various combinations of idiosyncratic and market stress events of different severity and duration. The methodology, implementation, production and analysis of the Liquidity Stress Tests are important components of the Required Liquidity Framework.

The Liquidity Stress Tests are produced for Morgan Stanley and its major operating subsidiaries, as well as at major currency levels, to capture specific cash requirements and cash availability at various legal entities. The Liquidity Stress Tests assume that subsidiaries will use their own liquidity first to fund their obligations before drawing liquidity from Morgan Stanley. It is also assumed that Morgan Stanley will support its subsidiaries and will not have access to cash that may be held at certain subsidiaries. In addition to the assumptions underpinning the Liquidity Stress Tests, the Morgan Stanley Group takes into consideration the settlement risk related to intra-day settlement and clearing of securities and financial activities.

Since the Company hedges the risk of its financial liabilities with financial assets that match the maturity profile of the financial liabilities, the Company is not considered a major operating subsidiary for the purposes of liquidity risk. However, the Company would have access to the cash or liquidity reserves held by Morgan Stanley in the unlikely event that it was unable to access adequate financing to service its financial liabilities when they become payable.

The Required Liquidity Framework and Liquidity Stress Tests are evaluated on an ongoing basis and reported to the Firm Risk Committee, Asset/Liability Management Committee, and other appropriate risk committees.

Liquidity Resources

The Morgan Stanley Group maintains sufficient liquidity resources, which consist of unencumbered highly liquid securities and cash deposits with banks (including central banks) ("Liquidity Resources") to cover daily funding needs and to meet strategic liquidity targets sized by the Required Liquidity Framework and Liquidity Stress Tests. The Company actively manages the amount of Liquidity Resources considering the following components: unsecured debt maturity profile; balance sheet size and composition; funding needs in a stressed environment inclusive of contingent cash outflows; and collateral requirements. The amount of Liquidity Resources within the Morgan Stanley Group is based on the Morgan Stanley Group's risk tolerance and is subject to change depending on market and firm-specific events. Unencumbered highly liquid securities consist of netted trading assets, investment securities and securities received as collateral.

The Morgan Stanley Group's Liquidity Resources, to which the Company has access, is held within Morgan Stanley and its major operating subsidiaries and is composed of diversified cash and cash equivalents and unencumbered highly liquid securities.

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

14. FINANCIAL RISK MANAGEMENT (CONTINUED)

Liquidity risk (Continued)

Liquidity Resources (Continued)

Eligible unencumbered highly liquid securities include US government securities, US agency securities, US agency mortgage-backed securities, non-US government securities and other highly liquid investment grade securities.

Liquidity Resources may fluctuate from period to period based on the overall size and composition of the balance sheet, the maturity profile of our unsecured debt and estimates of funding needs in a stressed environment, among other factors.

The ability to monetise assets during a liquidity crisis is critical. The Morgan Stanley Group believes that the assets held in its Liquidity Resources can be monetised within five business days in a stressed environment given the highly liquid and diversified nature of the resources.

Funding management

The Morgan Stanley Group manages its funding in a manner that reduces the risk of disruption to the Morgan Stanley Group's and the Company's operations. The Morgan Stanley Group pursues a strategy of diversification of secured and unsecured funding sources (by product, investor and region) and attempts to ensure that the tenor of the Morgan Stanley Group's, and the Company's, liabilities equals or exceeds the expected holding period of the assets being financed.

The Morgan Stanley Group funds its balance sheet on a global basis through diverse sources, which includes consideration of the funding risk of each legal entity. These sources include the Morgan Stanley Group's equity capital, long-term borrowing, securities sold under agreements to repurchase, securities lending, deposits, letters of credit and lines of credit. The Morgan Stanley Group has active financing programmes for both standard and structured products targeting global investors and currencies.

Balance sheet management

In managing both the Morgan Stanley Group's and the Company's funding risk the composition and size of the entire balance sheet, not just financial liabilities, is monitored and evaluated. The liquid nature of the marketable securities and short-term receivables arising principally from sales and trading activities in Institutional Securities business provides the Morgan Stanley Group and the Company with flexibility in managing the size of its balance sheet.

Maturity analysis

In the following maturity analysis, trading financial assets and liabilities are disclosed according to their earliest contractual maturity; all such amounts are presented at their fair value, consistent with how these financial assets and financial liabilities are managed. All other amounts represent undiscounted cash flows receivable and payable by the Company arising from its financial assets and financial liabilities to earliest contractual maturities as at 30 June 2024 and 31 December 2023. Receipts of financial assets and repayments of financial liabilities that are subject to immediate notice are treated as if notice were given immediately and are classified as on demand. This presentation is considered by the Company to appropriately reflect the liquidity risk arising from these financial assets and financial liabilities, presented in a way that is consistent with how the liquidity risk on these financial assets and financial liabilities is managed by the Company.

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

14. FINANCIAL RISK MANAGEMENT (CONTINUED)

Liquidity risk (Continued)

Maturity analysis (Continued)

30 June 2024	On demand US\$'000	Less than 1 month US\$'000	1 month - 3 months US\$'000	3 months - 1 year US\$'000	1 year - 5 years US\$'000	Total US\$'000
Financial assets						
Cash	823	—	—	—	—	823
Trading financial assets	—	—	351	19	79	449
Trade and other receivables ⁽¹⁾	7,173	—	—	—	13,805	20,978
Total financial assets	7,996	—	351	19	13,884	22,250
Financial liabilities						
Trading financial liabilities	—	2,102	4,670	8,927	6,453	22,152
Trade and other payables	48	—	—	—	—	48
Total financial liabilities	48	2,102	4,670	8,927	6,453	22,200

(1) Trade and other receivables include certain receivables due from the Company's direct parent undertaking which is dated on a rolling 395 day terms and includes a voluntary bilateral early settlement provision. Although these receivables are disclosed based on the required contractual maturity excluding the effect of voluntary bilateral early settlement provision, it is expected early repayment can be agreed with the Company's direct parent undertaking if required.

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

14. FINANCIAL RISK MANAGEMENT (CONTINUED)

Liquidity risk (Continued)

Maturity analysis (Continued)

31 December 2023	On demand	Less than 1 month	1 month - 3 months	3 months - 1 year	1 year - 5 years	Total
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
Financial assets						
Cash	692	—	—	—	—	692
Trading financial assets	—	—	43	25	210	278
Trade and other receivables ⁽¹⁾	3,293	—	—	—	9,759	13,052
Total financial assets	3,985	—	43	25	9,969	14,022
Financial liabilities						
Trading financial liabilities	—	614	2,970	7,148	2,593	13,325
Trade and other payables	647	—	—	—	—	647
Total financial liabilities	647	614	2,970	7,148	2,593	13,972

(1) Trade and other receivables include certain receivables due from the Company's direct parent undertaking which is dated on a rolling 395 day terms and includes a voluntary bilateral early settlement provision. Although these receivables are disclosed based on the required contractual maturity excluding the effect of voluntary bilateral early settlement provision, it is expected early repayment can be agreed with the Company's direct parent undertaking if required.

Market risk

Market risk is identified by IFRS 7 *Financial instruments: Disclosures* ("IFRS 7") as the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices.

The issued listed derivative contracts expose the Company to the risk of changes in market prices of the underlying securities, interest rate risk and, where denominated in currencies other than US dollars, the risk of changes in rates of exchange between the US dollar and the other relevant currencies. The Company uses the risk mirroring contracts that it purchases from other Morgan Stanley Group undertakings to match the price risk, foreign currency and other market risks associated with the issuance of listed derivative contracts, consistent with the Company's risk management strategy. As such, the Company is not exposed to any net market risk on these financial instruments. Different components of market risks from the issued listed derivative contracts resulting into price movements in underlying securities, exchange rates and others will be offset by the same but opposite price movements in the risk-mirroring contracts. Due to Company's hedging strategy, the gain in the equity price sensitivity analysis as shown in table below will be hedged and offset by fair value movements into risk mirroring contracts.

Sound market risk management is an integral part of the Company's culture. The Company is responsible for ensuring that market risk exposures are well-managed and monitored. The Company also ensures transparency of material market risks, monitors compliance with established limits, and escalates risk concentrations to appropriate senior management.

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

14. FINANCIAL RISK MANAGEMENT (CONTINUED)

Market risk (Continued)

The market price risk exposure from the financial assets is mainly equity price risk and interest rate risk, although all such risks are offset by equal and offsetting exposure to risk on the issued securities. Equity price risk refers to the risk of changes in the equity price of the assets underlying these financial assets.

Equity price sensitivity analysis

The sensitivity analysis below is determined based on the exposure to equity price risk at 30 June 2024 and 31 December 2023 respectively.

The market risk related to such equity price risk is measured by estimating the potential reduction in total comprehensive income associated with a 10% decline in the underlying asset values as shown in the table below.

	Impact on Total Comprehensive Income	
	Gains/(losses)	
	30 June 2024	31 December 2023
	US\$'000	US\$'000
Bilateral OTC derivative contracts	(7,229)	(4,430)
Issued listed derivative contracts	7,229	4,430
	<u>—</u>	<u>—</u>

The Company's equity price risk is mainly concentrated on equity securities in Asia.

Interest rate risk

Interest rate risk is defined by IFRS 7 "Financial Instruments: Disclosures" as the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Company is primarily exposed to interest rate risk under this definition as a result of changes in the future cash flows of floating rate intercompany borrowing and loans held at amortised cost.

The application of a parallel shift in market interest rates of 50 basis point increase or decrease, calculated until the next reset date, to these positions, would result in a net gain or loss of approximately US\$203 (31 December 2023: US\$145) in the condensed statement of comprehensive income.

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

15. FINANCIAL ASSETS AND FINANCIAL LIABILITIES SUBJECT TO OFFSETTING

In order to manage credit exposure arising from its business activities, the Company applies various credit risk management policies and procedures, see note 14 for further details. Primarily in connection with the issuance and hedging activities, the Company enters into master netting arrangements and collateral arrangements with certain counterparties. These agreements provide the Company with the right, in the ordinary course of business and/ or in the event of a counterparty default (such as bankruptcy or a counterparty's failure to pay or perform), to net a counterparty's rights and obligations under such agreement and, in the event of counterparty default, set off collateral held by the Company against the net amount owed by the counterparty.

In the condensed statement of financial position, financial assets and financial liabilities are only offset and presented on a net basis where there is a current legally enforceable right to set off the recognised amounts and an intention to either settle on a net basis or to realise the assets and the liabilities simultaneously. In the absence of such conditions, financial assets and financial liabilities are presented on a gross basis.

The following tables present information about offsetting of financial instruments.

Financial assets and financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements:

	Gross amounts	Amounts offset in the condensed statement of financial position	Net amounts presented in the condensed statement of financial position
30 June 2024	US\$'000	US\$'000	US\$'000
Assets			
Trading financial assets	449	—	449
Trade and other receivables	29,654	(8,676)	20,978
TOTAL	30,103	(8,676)	21,427
Liabilities			
Trading financial liabilities	22,152	—	22,152
Trade and other payables	8,724	(8,676)	48
TOTAL	30,876	(8,676)	22,200

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

15. FINANCIAL ASSETS AND FINANCIAL LIABILITIES SUBJECT TO OFFSETTING (CONTINUED)

30 June 2024	Net amounts presented in the condensed statement of financial position US\$'000	Amounts not offset in the condensed statement of financial position ⁽¹⁾		Net exposure US\$'000
		Financial instruments US\$'000	Cash collateral ⁽²⁾ US\$'000	
Assets				
Morgan Stanley & Co. International plc	6,664	(94)	(6,343)	227
Morgan Stanley Asia Securities Products LLC	13,978	—	—	13,978
Morgan Stanley Hong Kong Securities Limited	428	(1)	—	427
Others	357	—	—	357
TOTAL	21,427	(95)	(6,343)	14,989
Liabilities				
Morgan Stanley & Co. International plc	6,437	(6,437)	—	—
Morgan Stanley Hong Kong Securities Limited	1	(1)	—	—
Morgan Stanley & Co. LLC	43	—	—	43
Others	15,719	—	—	15,719
TOTAL	22,200	(6,438)	—	15,762

1. These are amounts that would be offset in the ordinary course of business and/ or in the event of default according to the intercompany cross-product legally enforceable netting arrangements with the respective Morgan Stanley Group undertakings.
2. The cash collateral not offset is recognised in the condensed statement of financial position within Trade and other receivables.

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

**15. FINANCIAL ASSETS AND FINANCIAL LIABILITIES SUBJECT TO OFFSETTING
(CONTINUED)**

31 December 2023	Gross amounts	Amounts offset in the condensed statement of financial position	Net amounts presented in the condensed statement of financial position
	US\$'000	US\$'000	US\$'000
Assets			
Trading financial assets	278	—	278
Trade and other receivables	42,248	(29,196)	13,052
TOTAL	42,526	(29,196)	13,330
Liabilities			
Trading financial liabilities	13,325	—	13,325
Trade and other payables	29,843	(29,196)	647
TOTAL	43,168	(29,196)	13,972

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

15. FINANCIAL ASSETS AND FINANCIAL LIABILITIES SUBJECT TO OFFSETTING (CONTINUED)

31 December 2023	Net amounts presented in the condensed statement of financial position US\$'000	Amounts not offset in the condensed statement of financial position ⁽¹⁾		
		Financial instruments US\$'000	Cash collateral ⁽²⁾ US\$'000	Net exposure US\$'000
Assets				
Morgan Stanley & Co. International plc	2,554	(228)	(2,326)	—
Morgan Stanley Asia Securities Products LLC	10,262	—	—	10,262
Morgan Stanley Hong Kong Securities Limited	464	(464)	—	—
Others	50	—	—	50
TOTAL	13,330	(692)	(2,326)	10,312
Liabilities				
Morgan Stanley & Co. International plc	2,758	(2,554)	—	204
Morgan Stanley Hong Kong Securities Limited	537	(464)	—	73
Morgan Stanley & Co. LLC	44	—	—	44
Others	10,633	—	—	10,633
TOTAL	13,972	(3,018)	—	10,954

1. These are amounts that would be offset in the ordinary course of business and /or in the event of default according to the intercompany cross-product legally enforceable netting arrangements with the respective Morgan Stanley Group undertakings.
2. The cash collateral not offset is recognised in the condensed statement of financial position within Trade and other receivables.

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

16. ASSETS AND LIABILITIES MEASURED AT FAIR VALUE

a. Financial assets and liabilities recognised at fair value on a recurring basis

The following tables present the carrying value of the Company's financial assets and financial liabilities recognised at fair value on a recurring basis, classified according to the fair value hierarchy.

	Quoted prices in active market (Level 1)	Valuation techniques using observable inputs (Level 2)	Valuation techniques with significant unobservable inputs (Level 3)	Total
	US\$'000	US\$'000	US\$'000	US\$'000
30 June 2024				
Trading financial assets: Derivatives- Equity contracts	—	449	—	449
Trading financial liabilities: Derivatives- Equity contracts	—	22,152	—	22,152
31 December 2023				
Trading financial assets: Derivatives- Equity contracts	—	278	—	278
Trading financial liabilities: Derivatives- Equity contracts	—	13,325	—	13,325

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

16. ASSETS AND LIABILITIES MEASURED AT FAIR VALUE (CONTINUED)

a. Financial assets and liabilities recognised at fair value on a recurring basis (Continued)

The Company's valuation approach and fair value hierarchy categorisation for all classes of financial instruments recognised at fair value on a recurring basis is as follows:

Asset and Liability / Valuation Technique	Valuation Hierarchy Classification
<i>Derivatives</i>	
Listed Derivative Contracts <ul style="list-style-type: none"> • Listed derivatives that are actively traded are valued based on quoted prices from the exchange. • Listed derivatives that are not actively traded are valued using the same techniques as those applied to derivative contracts. 	<ul style="list-style-type: none"> • Level 1 - listed derivatives that are actively traded • Level 2 - listed derivatives that are not actively traded
OTC Derivative Contracts <ul style="list-style-type: none"> • OTC derivative contracts include swap and option contracts related to equity prices. • Depending on the product and the terms of the transaction, the fair value of OTC derivative products can be modelled using a series of techniques, including closed-form analytic formulas, such as the Black-Scholes option-pricing model, simulation models or a combination thereof. Many pricing models do not entail material subjectivity as the methodologies employed do not necessitate significant judgement, since model inputs may be observed from actively quoted markets, as is the case for equity option contracts. In the case of more established derivative products, the pricing models used by the Company are widely accepted by the financial services industry. 	<ul style="list-style-type: none"> • Generally Level 2 - OTC derivative products valued using observable inputs, or where the unobservable inputs are not deemed significant. • Level 3 - OTC derivative products for which the unobservable inputs are deemed significant.

b. Transfers between Level 1 and Level 2 of the fair value hierarchy for financial assets and liabilities recognised at fair value on a recurring basis.

There were no transfers between Level 1 and Level 2 of the fair value hierarchy during the current and prior period.

c. Changes in Level 3 financial assets and liabilities recognised at fair value on a recurring basis

There were no transfers between Level 2 and Level 3 of the fair value hierarchy during current and prior period.

d. Assets and liabilities measured at fair value on a non-recurring basis

Non-recurring fair value measurements of assets or liabilities are those which are required or permitted in the condensed statement of financial position in particular circumstances. There were no assets or liabilities measured at fair value on a non-recurring basis during the current or prior period.

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

17. ASSETS AND LIABILITIES NOT MEASURED AT FAIR VALUE

For all financial instruments not measured at fair value, the carrying amount is considered to be a reasonable approximation of fair value.

18. CAPITAL MANAGEMENT

The Morgan Stanley Group manages its capital on a global basis with consideration for its legal entities. The capital managed by the Morgan Stanley Group broadly includes ordinary share capital, preference share capital, subordinated loans and reserves.

The Morgan Stanley Group manages its consolidated capital position based upon, among other things, business opportunities, risks, capital availability and rates of return together with internal capital policies, regulatory requirements and rating agency guidelines. In the future the Morgan Stanley Group may expand or contract its capital base to address the changing needs of its businesses.

The Morgan Stanley Group also aims to adequately capitalise at a legal entity level whilst safeguarding that entity's ability to continue as a going concern and ensuring that it meets all regulatory capital requirements, so that it can continue to provide returns for the Morgan Stanley Group.

In order to maintain or adjust the capital structure as described above, the Company may issue new shares or sell assets to reduce debt. The Company manages its ordinary share capital of US\$50,000 (31 December 2023: US\$50,000) as capital.

The issuance of securities is part of the Company's operating activities. The Company has contractual obligations to deliver cash or underlying financial instruments to holders of the issued securities. Also, these obligations will not be settled in the Company's own equity instruments. These liabilities are not subordinated and the security holders rank equally with other creditors of the Company. The issued securities are also not contracts that evidence any residual interest in the assets of the Company. The Company therefore does not regard the financial liabilities derived from its issuance activity as part of its capital.

The Company has also entered into financial support agreement with its immediate parent, MSASP and with MSHK 1238, whereby MSASP and MSHK 1238 agree to provide financial support by way of funds injection in the form of equity capital or shareholder's loan in the event the Company needs funding to fulfil its obligations and liabilities under its issuance program.

19. RELATED PARTY DISCLOSURES

Parent and subsidiary relationships

Parent and ultimate controlling entity

The Company's immediate parent undertaking is MSASP, which is registered in Cayman Islands.

The ultimate parent undertaking and controlling entity and the largest group of which the Company is a member and for which group financial statements are prepared is Morgan Stanley. Morgan Stanley is incorporated in the State of Delaware, the United States of America. Copies of its financial statements can be obtained from www.morganstanley.com/investorrelations.

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

19. RELATED PARTY DISCLOSURES (CONTINUED)

Key management compensation

Key management personnel are defined as those persons having authority and responsibility for planning, directing and controlling the activities of the Company. Key management personnel include the Board of Directors of the Company.

Due to the nature of the Company's activities, key management personnel provide minimal services specific to the Company and as a result, no compensation is paid to key management personnel in respect of their services to the Company.

Transactions with related parties

The Morgan Stanley Group conducts business for clients globally through a combination of both functional and legal entity organisational structures. Accordingly, the Company is closely integrated with the operations of the Morgan Stanley Group and enters into transactions with other Morgan Stanley Group undertakings on an arm's length basis for the purposes of utilising financing, trading and risk management, and infrastructure services. The nature of these relationships along with information about the transactions and outstanding balances is given below. All the amounts outstanding as disclosed below are unsecured and will be settled in cash or via intercompany mechanism.

Audit fees has been borne by another Morgan Stanley Group undertaking in both the current and prior period.

Funding

The Company receives general funding from and provides general funding to other Morgan Stanley Group undertakings in the following forms:

General Funding

General funding is undated, unsecured, floating rate lending, other than certain funding which is dated on a rolling 395 day term. Funding may be received or provided for specific transaction related funding requirements, or for general operational purposes. The interest rates are established by the Morgan Stanley Group Treasury function for all entities within the Morgan Stanley Group and approximate the market rate of interest that the Morgan Stanley Group incurs in funding its business.

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

19. RELATED PARTY DISCLOSURES (CONTINUED)

Transactions with related parties (Continued)

General Funding (Continued)

Details of the outstanding balances on these funding arrangements and the related interest income recognised in the condensed statement of comprehensive income during the period are shown in the table below:

	30 June 2024		31 December 2023	
	Interest US\$'000	Balance US\$'000	Interest US\$'000	Balance US\$'000
<i>Rolling 395 day term</i>				
Amounts due from the Company's direct parent undertaking	420	13,805	890	9,759
<i>Undated</i>				
Amounts due from the Company's direct parent undertaking	—	173	—	503
Amounts due to other Morgan Stanley Group undertakings	—	43	—	44

During the period, the Company has recognised ECL expense of US\$Nil (2023: US\$Nil) on the above outstanding balance from related parties.

Trading and risk management

The Company issues listed derivative contracts and hedges the obligations arising from the issuance by entering into derivative contracts with other Morgan Stanley Group undertakings. All such transactions are entered into on an arm's length basis. These transactions may give rise to credit risk either for the Company, or to a related party towards the Company.

The total amounts receivable and payable on trading financial assets, trading financial liabilities, trade and other receivables and trade and other payables outstanding at the period-end were as follows:

	30 June 2024	31 December 2023
	US\$'000	US\$'000
Amounts due from other Morgan Stanley Group undertakings ⁽¹⁾	7,092	3,018
Amounts due to other Morgan Stanley Group undertakings	6,437	3,296

MORGAN STANLEY ASIA PRODUCTS LIMITED

NOTES TO THE CONDENSED FINANCIAL STATEMENTS

Six months ended 30 June 2024

19. RELATED PARTY DISCLOSURES (CONTINUED)

Transactions with related parties (Continued)

Trading and risk management (Continued)

(1) Amounts due from other Morgan Stanley Group undertakings include cash collateral of US\$6,570,000 (31 December 2023: US\$2,326,000) pledged by the Company to Morgan Stanley & Co. International plc (“MSIP”) to mitigate risk on exposures arising under derivatives contracts between the Company and MSIP. The Company has received interest of US\$67,000 (31 December 2023: US\$169,000) on the cash collateral pledged to MSIP.

Fees and commissions

The Company incurs fee in respect of services performed by other Morgan Stanley Group undertaking. Fees incurred during the period are as follows:

	30 June 2024	30 June 2023
	US\$'000	US\$'000
Fees paid to other Morgan Stanley Group undertaking	<u>200</u>	<u>211</u>

Other related party transactions

The Morgan Stanley Group operates a number of intra-group policies to ensure that, where possible, revenues and related costs are matched. The Company receives management charges by recharging certain expenses, including fees paid to the Stock Exchange and to the Company’s direct parent undertaking. For the period ended 30 June 2024, a management charge of US\$2,728,000 (30 June 2023: US\$2,971,000) is recognised in the condensed statements of comprehensive income arising from such policies. An outstanding receivable relating to the management charge at reporting date is included within the general funding balances disclosed above.

ANNEX 6

GUARANTOR'S CONSOLIDATED FINANCIAL STATEMENTS FOR EACH OF THE THREE YEARS IN THE PERIOD ENDED 31 DECEMBER 2024

This information in this Annex 6 is the guarantor's consolidated financial statements as of 31 December 2024 and 2023 and for each of the three years in the period ended 31 December 2024. References to page numbers in this Annex 6 are to the pages in the guarantor's consolidated financial statement and not to the pages in this document.

Please refer to the 2024 BLD for the guarantor's consolidated financial statements as of 31 December 2023 and 2022 and for each of the three years in the period ended 31 December 2023 and the audit report on such consolidated financial statements.

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