

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

No critical accounting judgements have been made in the process of applying the Group and Company's accounting policies that have had a significant effect on the amounts recognised in the financial statements.

The Group and Company evaluates the critical accounting judgements and accounting estimates on an ongoing basis and believes that these are reasonable.

f. Basis of Consolidation

The consolidated financial statements of the Group comprise the financial statements of the Company and its subsidiaries as at 31 December 2022. Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The financial statements for the subsidiaries are prepared for the same reporting year as the Group, using consistent accounting policies. The financial statements for the subsidiaries are translated into US dollars as described in note 3(b). Subsidiaries are consolidated from the date that the Group gains control until the date that control ceases.

In certain cases, the Group may exercise control over another entity on behalf of investors or other parties. In such cases it is necessary, as part of the assessment of whether it should consolidate the entity, for the Group to determine whether it exercises such control primarily as an agent for the other investors or whether it does so primarily as principal on its own behalf. In making such a determination, the management will consider all relevant factors, including in particular:

- the scope of the Group's decision-making authority over the investee;
- the rights, including removal rights, held by other parties;
- the remuneration to which the Group is entitled; and
- the significance of the Group's exposure to variability of returns from its interests in the entity.

Intra-group balances, transactions, income and expenses and profits and losses resulting from intra-group transactions are eliminated in preparing the consolidated financial statements.

Details of the Group's interests in other entities are given in note 14 to these financial statements.

g. The Going Concern Assumption

The Group's and Company's business activities, together with the factors likely to affect its future development, performance and position, and the Group's and Company's objectives, policies and processes for managing its capital; its financial risk management; and its exposures to credit risk and liquidity risk, are reflected in the Strategic Report, and as set out in the Strategic report, retaining sufficient capital and liquidity to withstand market pressures remains central to the Morgan Stanley Group's, the Group's and the Company's strategy.

Taking the above factors into consideration, the Directors believe the Group and 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 annual report and financial statements.

h. Change in Presentation

The Group has updated the income statement presentation for gains and losses arising on financial instruments measured at FVPL, such that these are now presented in the 'Net gains from financial instruments at fair value through profit or loss' income statement line. In prior reporting periods, this information was presented across two income statement lines: 'Net gains/losses from financial instruments measured at fair value' and 'Net trading income', both of which are now included in note 4. This presentation is more closely aligned to the way that the business is managed and therefore provides more relevant information. The comparative period has also been re-presented.

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022****3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES****a. Functional Currency**

Items included in the consolidated financial statements are measured and presented in US dollars, the currency of the primary economic environment in which the Group operates.

All currency amounts in the consolidated financial statements, Strategic Report and Directors' Report are rounded to the nearest million US dollars (unless otherwise stated).

b. Foreign Currencies

All monetary assets and liabilities denominated in currencies other than US dollars are translated into US dollars at the rates ruling at the reporting date. Transactions and non-monetary assets and liabilities denominated in currencies other than US dollars are recorded at the rates prevailing at the dates of the transactions. Assets and liabilities of foreign operations are translated into US dollars using the closing rate method. Translation differences arising from the net investment(s) in the foreign operations are taken to the 'Currency translation reserve'.

The amount of change in the fair value of financial liabilities designated at FVPL that is attributable to changes in the credit risk of these liabilities (Debt Valuation Adjustment ("DVA")) includes foreign exchange differences thereon. All other translation differences are taken through the consolidated income statement. Exchange differences recognised in the consolidated income statement are presented in 'Other income' or 'Operating expense', except where noted in 3(c) below.

c. Financial Instruments**i) Financial Instruments Mandatorily at Fair Value through Profit and Loss***Trading Financial Instruments*

Trading financial instruments include government debt securities, corporate and other debt, traded loans, and corporate equities where the Group acquires the financial asset or financial liability for the purpose of selling or repurchasing in the near term or is part of a portfolio for which there is evidence of short term profit taking, and all derivative contracts.

Purchases and sales of non-derivative financial instruments classified as trading are initially

recognised on settlement date at fair value, including regular way securities transactions. For purchases of non-derivative financial instruments classified as trading, from the date that the terms are agreed (trade date) until the settlement date, the Group and Company recognises any unrealised fair value in the statement of financial position as 'Trading financial instruments' with corresponding profit or loss recognised within the consolidated income statement in 'Net gains/(losses) from financial instruments at fair value through profit or loss'. For sales of non-derivative financial instruments, unrealised fair value changes are no longer recognised in the consolidated income statement from trade date. Upon settlement date the resulting financial instrument is recognised or de-recognised from the consolidated statement of financial position.

Derivatives, are initially recorded on trade date at fair value (see note 3(d) below). All subsequent changes in fair value are reflected in the consolidated income statement in 'Net gains/(losses) from financial instruments at fair value through profit or loss'.

All changes in fair value, foreign exchange differences, interest and dividends are reflected in the consolidated income statement in 'Net gains/(losses) from financial instruments at fair value through profit or loss'. When interest is included as a component of an instrument's fair value, interest is also reflected in the income statement in 'Net gains/(losses) from financial instruments at fair value through profit or loss', otherwise, it is included within 'Interest income' or 'Interest expense'.

Transaction costs are incremental costs that are directly attributable to the acquisition, issue or disposal of a financial instrument. For all trading financial instruments, transaction costs are excluded from the initial fair value measurement of the financial instrument. These costs are recognised in the consolidated income statement in 'Operating expense'.

Non-trading Financial Assets at Fair Value through Profit or Loss

Non-trading financial assets at FVPL include secured financing transactions such as cash collateral on securities borrowed and securities purchased under agreements to resell, prepaid OTC contracts and financial assets arising upon consolidation of certain special purpose entities,

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

and certain investment securities (unlisted equities).

Non-trading financial assets at FVPL are principally financial assets where the Group makes decisions based upon the assets' fair values. These assets are generally recognised on settlement date at fair value (see note 3(d) below), since they are neither regular way nor are they derivatives. From the date the terms are agreed (trade date), until the financial asset is funded (settlement date), the Group and Company recognises any unrealised fair value changes in the financial asset as non-trading financial assets at FVPL. On settlement date, the fair value of consideration given is recognised as a non-trading financial asset at FVPL.

All subsequent changes in fair value and foreign exchange differences are reflected in the consolidated income statement in 'Net gains/(losses) from financial instruments at fair value through profit or loss'. When interest is included as a component of an instrument's fair value, interest is also reflected in the consolidated income statement in 'Net gains/(losses) from financial instruments at fair value through profit or loss', otherwise it is included within 'Interest income' or 'Interest expense'.

Transaction costs are excluded from the initial fair value measurement of the financial assets and are recognised in the consolidated income statement in 'Operating expense'.

ii) Financial Instruments Designated at Fair Value through Profit or Loss

Financial instruments designated at FVPL include corporate loans, unfunded loan commitments, prepaid OTC contracts, cash collateral on securities loaned and securities sold under agreements to repurchase, issued structured notes and other financial assets and liabilities.

The Group and Company have designated certain financial instruments at FVPL when the designation at fair value eliminates or significantly reduces an accounting mismatch which would otherwise arise. The Group has also designated certain financial liabilities at FVPL where:

- the financial liability forms part of a group of financial assets or financial liabilities or both which are managed, evaluated and reported internally on a fair value basis; or

- the financial liability contains an embedded derivative that significantly modifies the cash flows that would otherwise be required under the contract.

From the date the transaction in a financial instrument designated at FVPL is entered into (trade date) until settlement date, the Group recognises any unrealised fair value changes in the contract as financial instruments designated at FVPL in the statement of financial position. On settlement date, the fair value of consideration given or received is recognised as a financial instrument designated at FVPL (see note 3(d) below).

All subsequent changes in fair value, foreign exchange differences, and dividends are reflected in the consolidated income statement in 'Net gains/(losses) from financial instruments at fair value through profit or loss', other than DVA on financial liabilities designated at FVPL which is recognised in the 'Debt valuation adjustment' reserve where those changes do not create or enlarge an accounting mismatch. When interest is included as a component of an instrument's fair value, interest is also reflected in the consolidated income statement in 'Net gains/(losses) from financial instruments at fair value through profit or loss', otherwise it is included within 'Interest income' or 'Interest expense'. DVA presented within other comprehensive income is not subject to reclassification to the consolidated income statement, but is transferred to 'Retained earnings' when realised.

For the Company, the presentation of 'Debt valuation adjustment' within other comprehensive income represents a departure from Schedule 1 paragraph 40 to the Regulations, which requires that changes in the value of financial instruments be included in the profit and loss account. The Directors consider that this departure is necessary in order that the accounts give a true and fair view of the results of the Company. All other subsequent changes in fair value, foreign exchange differences not relating to changes in the credit risk of those liabilities, interest and dividends are reflected in the income statement.

Transaction costs are excluded from the initial fair value measurement of the financial instrument. These costs are recognised as incurred in the consolidated income statement in 'Operating expense'.

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

See note 10 for an analysis of financial assets and financial liabilities designated at FVPL.

iii) Investments in Subsidiaries

Subsidiaries are entities over which the Company has control. The Company controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

Investments in subsidiaries are stated at cost, less provision for any impairment (see note 3(c)(iv) below). Dividends, impairment losses and reversals of impairment losses are recognised in the income statement.

iv) Impairment of Subsidiaries

Impairment losses on investments in subsidiaries are measured as the difference between cost and the current estimated recoverable amount. When the recoverable amount is less than cost, an impairment is recognised within the income statement and is reflected against the carrying amount of the impaired asset in the statement of financial position. Investments in subsidiaries which have suffered an impairment are reviewed for possible reversal of the impairment.

v) Financial Assets and Financial Liabilities at Amortised Cost

Financial assets at amortised cost include cash and short-term deposits, certain trade and other receivables and certain loans and advances.

Financial assets are recognised at amortised cost when the Group and Company's business model objective is to collect the contractual cash flows of the assets and where these cash flows are Solely Payments of Principal and Interest ("SPPI") on the principal amount outstanding until maturity. Such assets are recognised when the Group and Company becomes a party to the contractual provisions of the instrument. The instruments are initially measured at fair value (see note 3(d) below) and subsequently measured at amortised cost less ECL allowance. Interest is recognised in the consolidated income statement in 'Interest income', using the effective interest rate ("EIR") method as described below. Transaction costs that are directly attributable to the acquisition of the financial asset are added to the fair value on initial recognition. ECL, and reversals thereof, are recognised in the consolidated income statement in 'Net impairment loss on financial instruments'.

Financial liabilities classified at amortised cost include bank loans and overdrafts, certain secured borrowings, certain trade and other payables, and certain debt and other borrowings.

Financial liabilities are classified as being subsequently measured at amortised cost, except where they are held for trading or are designated as measured at FVPL. They are recognised when the Group becomes a party to the contractual provisions of the instrument and are initially measured at fair value (see note 3(d) below) and subsequently measured at amortised cost. Interest is recognised in the consolidated income statement in 'Interest expense' using the EIR method as described below. Transaction costs that are directly attributable to the issue of a financial liability are deducted from the fair value on initial recognition.

The EIR method is a method of calculating the amortised cost of a financial instrument (or a group of financial instruments) and of allocating the interest income or interest expense over the expected life of the financial instrument. The EIR is the rate that exactly discounts the estimated future cash payments and receipts through the expected life of the financial instrument (or, where appropriate a shorter period) to the carrying amount of the financial instrument. The EIR is established on initial recognition of the financial instrument. The calculation of the EIR includes all fees and commissions paid or received, transaction costs, and discounts or premiums that are an integral part of the EIR.

vi) Secured Financing and Secured Borrowings

In the course of financing its business and part of its trading activities, the Group and Company enter into arrangements which involve the sale of securities with agreements to repurchase, the purchase of securities with resale agreements, the lending of securities with collateral received and the borrowing of securities with collateral given.

Securities received by the Group and Company under resale arrangements and securities borrowing arrangements are generally not recognised on the consolidated statement of financial position, and securities pledged or sold by the Group under sale and repurchase agreements and securities lending arrangements are generally not derecognised from the consolidated statement of financial position.

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

Securities pledged or sold by the Group and Company under sale and repurchase agreements and securities lending arrangements are generally not derecognised from the statement of financial position. Where cash collateralised, the resulting cash collateral balances repayable and accrued interest are designated at FVPL where the financial liability forms part of a group of financial assets or financial liabilities or both, which is managed, evaluated and reported internally of a fair value basis; or at amortised cost if not so designated.

d. Fair Value**Fair Value Measurement**

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.

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 Group and Company believes market participants would use in pricing the asset or liability at the measurement date.

Where the Group and Company manages a group of financial assets and financial liabilities on the basis of its net exposure to either market risks or credit risk, the Group and Company 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 Group and Company use various valuation approaches and establish a hierarchy for inputs used in measuring fair value that require 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 Group and Company. Unobservable inputs are inputs that reflect assumptions the Group and Company believe 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 - Quoted prices (unadjusted) in an active market for identical assets or liabilities

Valuations based on quoted prices in active markets that the Morgan Stanley Group has the ability to access for identical assets or liabilities. Valuation adjustments and block discounts 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 judgement.

- Level 2 - Valuation techniques using observable inputs

Valuations based on one or more quoted prices in markets that are not active or for which all significant inputs are observable, either directly or indirectly.

- Level 3 - Valuation techniques with significant unobservable inputs

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, for example, 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 judgement. Accordingly, the degree of judgement exercised by the Group and Company in determining fair value is greatest for instruments categorised in Level 3 of the fair value hierarchy.

The Group and Company 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 to a lower Level of the fair value hierarchy.

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

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.

The Group incorporates Funding Valuation Adjustment ("FVA") into the fair value measurements of OTC uncollateralised or partially collateralised derivatives and in collateralised derivatives where the terms of the agreement do not permit the re-use of the collateral received. In general, the FVA reflects a market funding risk premium inherent in the noted derivative instruments. The methodology for measuring FVA leverages the Group and Company's existing credit-related valuation adjustment calculation methodologies, which apply to both assets and liabilities.

For assets and liabilities that are transferred between levels in the fair value hierarchy during the period, fair values are ascribed as if the assets or liabilities had been transferred as of the beginning of the period.

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 Group and Company carry 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 Group and Company, 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 in order to arrive at fair value.

Adjustments for liquidity risk adjust model-derived mid-market levels 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 Group and Company apply credit-related valuation adjustments ("CVA") to their Borrowings (primarily structured notes) which are designated at FVPL and to OTC derivatives. The Group and Company consider the impact of changes in own credit spreads based upon observations of the secondary bond market spreads when measuring the fair value for borrowings. For OTC derivatives, the impact of changes in both the Group's and the counterparty's credit rating is considered when measuring fair value. In determining the expected exposure, the Group and Company simulate the distribution of the future exposure to a counterparty, then apply 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 utilised. The Group 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 Group and Company may apply a concentration adjustment to certain of their 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 judgement is required to estimate the costs of closing out concentrated

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

risk exposures due to the lack of liquidity in the marketplace.

Valuation Process

VC within Finance is responsible for ensuring that the inventory carried at fair value in the Group and Company's financial statements and associated disclosures is presented in accordance with applicable accounting standards. VC is independent of the business units and reports to the Chief Financial Officer of the Morgan Stanley Group ("CFO"), who has final authority over the valuation of the Group's inventory. VC implements valuation control processes designed to validate the fair value of the Group's financial instruments measured at fair value including those derived from pricing models.

Model Control: VC, in conjunction with MRM, which reports to the CRO, independently reviews valuation models. VC is responsible for reviewing that the model valuation methodology is appropriate, model inputs and valuations are consistent with accounting standards and an independent price verification can be performed. The Group and Company generally subject valuations and models to a review process initially and on a periodic basis thereafter.

Independent Price Verification: The business units are responsible for determining the fair value of financial instruments using approved valuation models and valuation methodologies. Generally on a monthly basis, VC performs an independent review of the valuation in the books and records by determining the appropriateness of the inputs used by the business units and by testing compliance with the documented valuation methodologies approved in the model review process described above. External pricing data used to validate the valuation must meet minimum quality standards set by VC.

The results of this independent price verification and any adjustments made to the fair value generated by the business units are presented to management of the MSI Group's business segments (i.e. Institutional Securities and Investment Management), the CFO and the CRO on a regular basis.

VC reviews the models and valuation methodology used to price new material Level 2 and Level 3 transactions and both Finance and MRM must approve the fair value of the trade that is initially recognised.

Gains and Losses on Inception

In the normal course of business, the fair value of a financial instrument on initial recognition is the transaction price (i.e. the fair value of the consideration given or received). In certain circumstances, however, the fair value will be based on other observable current market transactions in the same instrument, without modification or repackaging, or on a valuation technique whose variables include only data from observable markets. When such evidence exists, the Group and Company recognises a gain or loss on inception of the transaction.

When the use of unobservable market data has a significant impact on determining fair value at the inception of the transaction, the entire initial gain or loss indicated by the valuation technique as at the transaction date is not recognised immediately in the consolidated income statement but is deferred and recognised over the life of the instrument or is recognised instead when the market data becomes observable or on maturity or disposal of the instrument.

For further information, see note 30(e).

Assets and Liabilities Measured at Fair Value on a Non-Recurring Basis

Certain of the Group and Company's assets and liabilities may be measured at fair value on a non-recurring basis. The Group and Company incur 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 the observable inputs be used when available, is used in measuring fair value for these items.

e. Impairment of Financial Instruments

The Group recognises ECL for the following financial instruments that are not measured at FVPL:

- financial assets measured at amortised cost;
- loan commitments, except those that can be net settled in cash or with another financial instrument; and
- financial guarantees.

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS**

Year ended 31 December 2022

Measurement of ECL

The Group and Company recognise a loss allowance for expected credit losses on financial assets measured at amortised cost, in-scope loan commitments and financial guarantees and applies a three stage approach to measuring ECLs based on the change in credit risk since initial recognition:

- *Stage 1:* if the credit risk of the financial instrument at the reporting date has not increased significantly since initial recognition, then the loss allowance is calculated as the lifetime cash shortfalls that will result if a default occurs in the next 12 months, weighted by the probability of that default occurring.
- *Stage 2:* if there has been a significant increase in credit risk ("SICR") since initial recognition, the loss allowance is calculated as the ECL over the remaining life of the financial instrument. If it is subsequently determined that there has no longer been a SICR since initial recognition, then the loss allowance reverts to reflecting 12 month expected losses.
- *Stage 3:* if there has been a SICR since initial recognition and the financial instrument is deemed credit-impaired (see below for definition of credit-impaired), the loss allowance is calculated as the ECL over the remaining life of the financial instrument. If it is subsequently determined that there has no longer been a SICR since initial recognition, then the loss allowance reverts to reflecting 12 month expected losses.

Notwithstanding the above, for trade receivables a lifetime ECL is always calculated, without considering whether a SICR has occurred.

Assessment of SICR

When assessing SICR, the Group considers both quantitative and qualitative information and analysis based on the Group and Company's historical experience and expert credit risk assessment, including forward-looking information.

The determination of a SICR is generally based on changes in the probability of default ("PD"), in conjunction with a rebuttable presumption that a SICR has occurred if a financial asset is more than 30 days past due.

Calculation of ECL

ECL is calculated using three main components:

- *PD:* for accounting purposes, the 12 month and lifetime PD represent the expected point-in-time probability of a default over the next 12 months and over the remaining lifetime of the financial instrument respectively, based on conditions existing at the balance sheet date and future economic conditions.
- *Loss given default ("LGD"):* the LGD represents expected loss conditional on default, taking into account the mitigating effect of collateral, including the expected value of the collateral when realised and the time value of money.
- *Exposure at default ("EAD"):* this represents the expected EAD, taking into account the expected repayment of principal and interest from the balance sheet date to the date of default event together with any expected drawdowns of the facility over that period.

These parameters are generally derived from internally developed statistical models, incorporating historical, current and forward-looking macro-economic data and country risk expert judgement. The macro-economic scenarios are reviewed quarterly.

The 12 month ECL is equal to the sum over the next 12 months of quarterly PD multiplied by LGD and EAD, with such expected losses being discounted at the effective interest rate. Lifetime ECL is calculated using the discounted present value of total quarterly PDs multiplied by LGD and EAD, over the full remaining life of the facility.

When measuring ECLs, the Group and Company consider multiple scenarios, except where practical expedients are used to determine ECL. Practical expedients are used where they are consistent with the principles described above.

ECL on certain trade receivables are calculated using a 'matrix' approach which reflects the previous history of credit losses on these financial assets, applying different provision levels based on the age of the receivable. The simplified ECL approach is applied to Trade receivables where a lifetime ECL is always calculated. Alternatively where there is a history of no credit losses, and where this is expected to persist into the future for structural or other reasons, such as collateral or other credit

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

enhancement, it may be determined that the ECL for a financial instrument is *de minimis* (highly immaterial) and it may not be necessary to recognise the ECL.

The Group and Company measure ECL on an individual asset basis and has no purchased or originated credit-impaired financial assets.

Presentation of ECL

ECL is recognised in the consolidated income statement within 'Net impairment loss/(reversal) on financial instruments'.

Credit-impaired Financial Instruments

In assessing the impairment of financial instruments under the ECL model, the Group and Company define credit-impaired financial instruments in accordance with Credit Risk Management Department's policies and procedures. A financial instrument is credit-impaired when, based on current information and events, it is probable that the Group or Company will be unable to collect all scheduled payments of principal or interest when due according to the contractual terms of the agreement.

Definition of Default

In assessing the impairment of financial instruments under the ECL model, the Group and Company defines default in accordance with the Credit Risk Management Department's policies and procedures. This considers whether the borrower is unlikely to pay its credit obligations to the Group or Company in full and takes into account qualitative indicators, such as breaches of covenants. The definition of default also includes a presumption that a financial asset which is more than 90 days past due has defaulted.

Write-offs

Loans and debt securities are written off (either partially or in full) when they are deemed uncollectible. Financial assets that are written off could still be subject to enforcement activities for recoveries of amounts due.

f. Revenue Recognition

Revenues are recognised when the promised goods or services are delivered to the Group's customers, in an amount that is based on the consideration the Group expects to receive in exchange for those goods or services when such amounts are not probable of significant reversal.

Investment Banking

Revenue from investment banking activities consists of revenues earned from underwriting primarily equity and fixed income securities and advisory fees for mergers, acquisitions, restructuring and advisory assignments.

Underwriting revenues are generally recognised on trade date, if there is no uncertainty or contingency related to the amount to be paid. Underwriting costs are deferred and recognised when the related underwriting revenues are recorded.

Advisory fees are recognised over time based on estimated progress of work as advice is provided to the client and is not probable of a significant reversal. Advisory expenses are recognised as incurred, including when reimbursed.

Fee and Commission Income

Fee and commission income results 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; futures, insurance products and options. Fee and commission income is recognised on trade date when the performance obligation is satisfied.

Fee and commission income in the consolidated income statement includes investment management fees, sales commissions, placement fees, advisory fees and syndication fees.

g. Fees and Commission Expense

Fees and commission expense in the consolidated income statement include transaction and service fees. Amounts are recognised as the related services are received.

h. Disposal of Subsidiaries

When subsidiaries are sold or the Company ceases to control an entity, the difference between the proceeds (plus the fair value of any investment retained), and the total assets less total liabilities disposed of, cumulative translation differences and unamortised goodwill, is recognised in the consolidated income statement within 'Net gain on investments in subsidiaries'. Where the disposal or loss of control over an entity includes a foreign operation, all foreign exchange differences accumulated in the 'Currency translation reserve' attributable to the

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

equity holders of the Company are reclassified to the consolidated income statement within 'Net gain on investments in subsidiaries'.

i. Cash and Cash Equivalents

For the purposes of the consolidated statement of cash flows, cash and cash equivalents comprise cash and demand deposits with banks, net of outstanding bank overdrafts, along with highly liquid investments, with original maturities of three months or less, that are readily convertible to known amounts of cash and subject to insignificant risk of change in value. This may include segregated client money, held in accordance with the FCA's Client Money Rules or is not available for use by the Group.

j. Income Tax

The tax expense represents the sum of the tax currently payable and deferred tax.

The tax currently payable is calculated based on taxable profit for the year. Taxable profit may differ from profit/(loss) before taxation as reported in the consolidated income statement because it excludes items of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. Taxable profit is also adjusted if it is considered that it is not probable that a taxation authority will accept an uncertain tax treatment. The Group and Company's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the reporting date. Current tax is charged or credited in the consolidated income statement, except when it relates to items charged or credited directly to other comprehensive income or equity, in which case the current tax is also recorded within other comprehensive income or equity respectively.

Deferred tax is the tax expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit, and is accounted for using the balance sheet liability method. Deferred tax liabilities are generally recognised for all taxable temporary differences and deferred tax assets are recognised to the extent that it is probably that taxable profits will be available against which deductible temporary differences can be utilised.

Deferred tax liabilities are recognised for taxable temporary differences arising on investments in

subsidiaries and associates, except where the Group and Company is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at each reporting date and limited to the extent that it is probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax is calculated at the tax rates that are expected to apply in the period when the liability is settled or the asset is realised. Deferred tax is charged or credited in the consolidated income statement, except when it relates to items charged or credited directly to other comprehensive income or equity, in which case the deferred tax is reflected within other comprehensive income or equity, respectively.

Current tax assets are offset against current tax liabilities when there is a legally enforceable right to set off current tax assets against current tax liabilities and the Group or Company intends to settle its current tax assets and current tax liabilities on a net basis or to realise the asset and settle the liability simultaneously. Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied by the same taxation authority and the Group intends to settle its current tax assets and current tax liabilities on a net basis.

The income tax effect of distributions are recognised in the consolidated income statement, other comprehensive income or equity dependant on where those past transactions that generated the distributable profits were recognised. The income tax effect of coupons of AT1 instruments accounted for as distributions are recognised in the consolidated income statement.

k. Provisions and Commitments

Provisions are recognised when the Group or Company has an identified present obligation as a result of a past event, when it is probable that an outflow of resources embodying economic benefits will be required to settle that obligation and when a reliable estimate can be made of the amount of the obligation.

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the year-end date, taking into account the risks and uncertainties surrounding the obligation. A provision is measured using the cash flows estimated to settle the present obligation, with its carrying amount reflecting the present value of those cash flows, where the effect of discounting is material.

The expected credit loss allowance on loan commitments and financial guarantees is presented in the statement of financial position within 'Provisions'.

A commitment is any legal obligation to potentially make or receive cash payments or transfer cash.

I. Offsetting of Financial Assets and Financial Liabilities

Where there is currently legally enforceable right to set off the recognised amounts and an intention to either settle on a net basis or to realise the asset and the liability simultaneously, financial assets and financial liabilities are offset and the net amount is presented on the consolidated statement of financial position. In the absence of such conditions, financial assets and financial liabilities are presented on a gross basis.

m. Employee Compensation Plans

i) Equity-settled Share-based Compensation Plans

Morgan Stanley issues awards in the form of restricted stock units ("RSUs") to employees of the Morgan Stanley Group for services rendered to the Group and Company. Awards are equity-settled and the cost of the equity-based transactions with employees is measured based on the fair value of the equity instruments at grant date. The fair value of RSUs is based on the market price of Morgan Stanley 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 the scheduled conversion date.

Awards generally contain clawback and cancellation provisions. Certain awards provide Morgan Stanley the discretion to clawback or cancel all or a portion of the award under

specified circumstances. Compensation expense for these awards is adjusted for changes in the fair value of the Morgan Stanley's common stock until conversion.

The Group and Company recognise compensation costs over the relevant vesting period for each separately vesting portion of the award. An estimation of awards that will be forfeited prior to vesting due to the failure to satisfy service conditions is considered in calculating the total compensation cost to be amortised over the relevant vesting period.

Under Morgan Stanley Group chargeback agreements, the Group and Company pay Morgan Stanley for the procurement of shares. Prior to November 2022, the Group and Company paid Morgan Stanley the grant date fair value and any subsequent movement in fair value up to the time of conversion of the award and delivery of shares to the employees. In November 2022, the Company chargeback agreement was amended such that the Company no longer pays Morgan Stanley any subsequent movement in fair value up to the time of conversion. This change applied to all outstanding awards granted to current and former employees of the Company.

Share based compensation expense is recorded within 'Operating expense' in the consolidated income statement.

ii) Deferred Cash-based Compensation Plans

Morgan Stanley awards deferred cash-based compensation on behalf of the Group and Company for the benefit of employees, providing a return to the participating employees based upon the performance of various referenced investments. Compensation expense for deferred cash-based compensation 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.

The Group and Company recognise compensation cost over the relevant vesting period for each separately vesting portion of the award. Forfeitures due to failure to satisfy service conditions are accounted for as they occur.

Deferred cash-based compensation expense is recorded within 'Operating expense' in the consolidated income statement. The liability for

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

the awards is measured at fair value and is included within 'Accruals and deferred income' in the consolidated statement of financial position.

The Group and Company enter into derivative contracts with other Morgan Stanley Group undertakings to economically hedge the exposure created by these deferred compensation plans. The derivatives are recognised within 'Trading financial instruments' in the consolidated statement of financial position and the related gains and losses are recorded within 'Net gains/(losses) from financial instruments at fair value through profit or loss' in the consolidated income statement.

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 derivative transactions entered into by the Group and Company, there is typically a timing difference between the immediate recognition of gains and losses on the derivatives and the deferred recognition of the related compensation expense over the vesting period.

n. Post-employment Benefits

The Group and Company operates defined contribution and defined benefit post-employment plans.

Contributions due in relation to defined contribution post-employment plans are recognised in 'Direct staff costs' within 'Operating expense' in the consolidated income statement when payable.

For the Group's and Company's defined benefit post-employment plans, the plan obligations are measured on an actuarial basis in accordance with the advice of an independent qualified actuary using the projected unit credit method and discounted at a rate that reflects the estimated settlement of the post-employment benefit obligations. Plan assets are measured at their fair value at the reporting date. For each defined benefit plan, a surplus or deficit of plan assets over liabilities is recognised in the consolidated statement of financial position as an asset or a liability respectively. If the fair value of the plan assets is higher than the present value of the defined benefit obligation, the measurement of the resulting defined benefit asset is limited to the present value of economic benefits available in the form of refunds from the

plan or reductions in future contributions to the plan.

The current service costs and any past service costs together with the net interest on the net defined benefit obligation/asset is charged to 'Direct Staff costs' within 'Operating expense' in the consolidated income statement. Remeasurements that arise in calculating the Group and Company's obligation in respect of a plan are recognised in other comprehensive income, in the period in which they occur.

The Group and Company participate in a defined benefit plan operated by another Morgan Stanley affiliate. The Group and Company recognise recharges for the net defined benefit cost of the plan as a whole under inter-affiliate contractual agreements.

Details of the plans are given in note 33 to the financial statements.

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022****4. NET GAINS FROM FINANCIAL INSTRUMENTS AT FAIR VALUE THROUGH PROFIT OR LOSS**

in \$ millions	2022	2021
Assets and liabilities held for trading	4,265	4,996
Non-trading financial assets at FVPL		
Secured financing	23	(28)
Loans and advances - corporate loans	—	(5)
Investment securities	5	30
Trade and other receivables - prepaid OTC contracts	19	(508)
Total non-trading financial assets at FVPL	47	(511)
Financial liabilities designated at FVPL		
Secured borrowing	(101)	156
Trade and other payables - prepaid OTC contracts	(74)	(66)
Debt and other borrowings - issued structured notes	1,864	272
Total financial liabilities designated at FVPL	1,689	362
Net gains from financial instruments at fair value through profit or loss	6,001	4,847

Non-trading financial assets at FVPL and financial liabilities designated at FVPL are frequently economically hedged with trading financial instruments. Accordingly, gains or losses that are reported in net income from other financial instruments held at fair value can be partially offset by gains or losses reported in 'Assets and liabilities held for trading'.

5. FEE AND COMMISSION INCOME

in \$ millions	2022	2021
Investment banking ⁽¹⁾	738	1,801
Commission income	777	890
Trust and other fiduciary activities	161	200
Other fee and commission income	370	332
Total fee and commission income	2,046	3,223
<i>Of which, revenue from contracts with customers</i>	<i>2,262</i>	<i>3,010</i>

(1) Includes advisory and underwriting revenues

Total fee and commission income is stated after the transfer of revenues totalling \$216 million to other Morgan Stanley Group undertakings (2021: \$213 million from other Morgan Stanley Group undertakings). These transfers are in accordance with the Morgan Stanley Group Global Transfer Pricing Policy, refer to note 34, and do not relate to revenue from contracts with customers.

6. INTEREST INCOME AND INTEREST EXPENSE

The table below presents interest income and expense by accounting classification. Interest income and expense is calculated using the effective interest rate method for financial assets and financial liabilities measured at amortised cost.

in \$ millions	2022	2021
Financial assets measured at amortised cost	1,608	24
Trading financial assets	223	199
Non-trading financial assets at FVPL	1,095	(621)
Financial assets measured at FVPL	1,318	(422)
Total interest income	2,926	(398)
<i>Of which, negative interest income</i>	<i>(464)</i>	<i>(983)</i>
Financial liabilities measured at amortised cost	2,998	172
Financial liabilities designated at FVPL	876	(38)
Total interest expense	3,874	134
<i>Of which, positive interest expense</i>	<i>(404)</i>	<i>(880)</i>

The recognition of negative interest income and positive interest expense may result from transactions in certain currencies which may at times have negative interest rates. In addition, 'Interest income' includes fees paid on securities borrowed transactions. 'Interest expense' includes fees received on securities loaned and fees from prime brokerage customers for stock loan transactions incurred to cover customers' short positions.

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022****7. OPERATING EXPENSE**

in \$ millions	2022	2021
Direct staff costs	1,274	1,530
Management charges from other Morgan Stanley Group undertakings relating to staff costs	531	624
Staff-related expenses	1,805	2,154
Management charges from other Morgan Stanley Group undertakings relating to other services	1,279	1,191
Brokerage fees	842	765
Administration and corporate services	99	88
Professional services	240	188
UK Bank Levy	33	74
Other taxes	673	850
Commission and other similar arrangements	245	205
Auditor's remuneration:		
Fees payable to the Company's auditor and its associates for the audit of the Company's annual financial statements	3	3
Fees payable to the Company's auditor and its associates for other services to the Group ⁽¹⁾	1	1
Other	41	108
Non-staff related expenses	3,456	3,473
Total operating expense	5,261	5,627

(1) Fees payable to the Company's auditor for other services in 2022 comprise \$74 thousand for the audit of the Company's subsidiaries (2021: \$110 thousand) and \$467 thousand for other assurance services (2021: \$953 thousand).

The Group employs staff directly and also uses the services of staff who are employed by other Morgan Stanley Group undertakings.

Further information regarding employee compensation plans is provided in note 32.

Staff-related expenses decreased by 16% mainly driven by lower mark-to-market on deferred equity compensation.

The average number of direct employees of the Group is analysed below:

	Number	
	2022	2021
Institutional Securities and Investment Management	2,195	2,079
Support services	86	82
	2,281	2,161

The cost of the direct employees of the Group, including the Directors, is analysed below:

in \$ millions	2022	2021
Wages and salaries	1,098	1,314
Social security costs	147	186
Pension costs	29	30
	1,274	1,530

The Group incurs management charges in respect of Directors' qualifying services provided by employees of other Morgan Stanley Group undertakings, included within 'Management charges from other Morgan Stanley Group undertakings relating to staff costs'.

The amount of remuneration received by Directors in respect of their qualifying services to the Group is disclosed in note 34.

8. NET IMPAIRMENT LOSS/(REVERSAL) ON FINANCIAL INSTRUMENTS

in \$ millions	2022	2021
Cash and short term deposits	101	—
Trade and other receivables	47	—
Loan commitments	—	(2)
Net Impairment Loss/(Reversal) on Financial Instruments	148	(2)

All impairment losses were calculated on an individual basis. No collective impairment assessments were made during the current or prior year.

The increase in net impairment loss is driven by ECL related to Russian exposures.

9. INCOME TAX

in \$ millions	2022	2021
Current tax		
UK corporation tax charge		
-current year	310	455
-prior year	(38)	(25)
Double taxation relief		
-current year	(101)	(117)
Overseas tax		
-current year	148	163
-prior year	5	161
Total Current tax	324	637
Deferred tax (benefit)/ expense		
Current year	(11)	(45)
Prior year	—	11
Effect of changes in tax rates	8	(14)
Total Deferred tax	(3)	(48)
Income tax expense	321	589

Reconciliation of Effective Tax Rate

The Group's effective tax rate is sensitive to the geographic mix of profits and tax rates in non UK jurisdictions (including the net effect of foreign withholding taxes suffered by the Group), the additional 8% UK banking surcharge, as well as

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

the non-deductibility of certain expenses for tax purposes.

The UK statutory rate, excluding the banking surcharge, is 19% for the year (2021: 19%). Finance Act 2021 raised the UK main rate of corporation tax from 19% to 25% with effect from 1 April 2023. While this change does not affect the current tax charge for the year, it will affect future years.

Finance Act 2022 reduced the corporation tax surcharge rate from 8% to 3% with effect from 1 April 2023 and increased the surcharge allowance to £100 million. While this change does not affect the current tax charge for the year, it will affect future years.

The current year income tax expense is lower (2021: higher) than that resulting from applying the standard rate of corporation tax for banking companies in the UK for the year. The main differences are:

in \$ millions	2022	2021
Profit before income tax	1,717	1,940
Income tax expense using the average standard rate of corporation tax for banking companies in the UK of 27% (2021: 27%)	463	524
Impact on tax of:		
Tax-deductible coupons on Additional Tier 1 capital instruments	(64)	(64)
Non-deductible UK Bank Levy	8	20
Other expenses:		
Other permanent differences	34	16
Movement in tax reserve	49	2
Group relief received for no cash consideration	(66)	—
Effect of tax rates different to the consolidation rate	(1)	(12)
Net effect of foreign withholding taxes	(15)	174
Over provided in prior years	(34)	(13)
Tax exempt income	(49)	(44)
Impact of deferred tax rate change and other deferred tax adjustments	(4)	(14)
Total income tax expense in the consolidated income statement	321	589

The Group has a policy of surrendering tax-deductible losses ('group relief') for no cash consideration to other members of the Morgan Stanley UK tax group, which consists of entities within the Group and the wider Morgan Stanley Group. Within the Group, a number of subsidiary companies generated tax-deductible losses that were surrendered both inside and outside the Group in the current and prior years.

In addition to the amount charged to the consolidated income statement, the aggregate amount of current and deferred tax relating to each component of other comprehensive income was as follows:

	2022		
in \$ millions	Before tax	Tax charge ⁽¹⁾	Net of tax
Pension reserve:			
Remeasurement of net defined benefit liability	4	—	4
Foreign currency translation reserve:			
Foreign currency translation differences on foreign operations	(43)	—	(43)
Net amount reclassified to consolidated income statement upon transfer of subsidiary	(4)	—	(4)
Debt valuation reserve:			
Changes in fair value attributable to own credit risk on financial liabilities designated at fair value	206	(69)	137
Other comprehensive income	163	(69)	94

(1) The tax charge includes a \$14 million charge in relation to the impact of change in deferred tax rate

	2021		
in \$ millions	Before tax	Tax charge ⁽¹⁾	Net of tax
Pension reserve:			
Remeasurement of net defined benefit liability	(2)	—	(2)
Foreign currency translation reserve:			
Foreign currency translation differences on foreign operations	(33)	—	(33)
Net amount reclassified to consolidated income statement upon transfer of subsidiary	—	—	—
Debt valuation reserve:			
Changes in fair value attributable to own credit risk on financial liabilities designated at fair value	77	(4)	73
Other comprehensive income	42	(4)	38

(1) The tax charge includes a \$14 million credit in relation to the impact of change in deferred tax rate

In addition to the amount charged to the consolidated income statement and the consolidated statement of comprehensive income, a \$3 million expense (2021: \$nil) in relation to deferred tax on share based payments is recognised directly in the consolidated statement of changes in equity.

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022****10. FINANCIAL ASSETS AND FINANCIAL LIABILITIES BY MEASUREMENT CATEGORY**

The following table analyses financial assets and financial liabilities presented in the Group's consolidated statement of financial position and the Company's statement of financial position by the IFRS 9 classifications as at 31 December 2022 and 31 December 2021.

2022 in \$ millions	Group				Company			
	FVPL	FVPL designated	Amortised cost	Total	FVPL	FVPL designated	Amortised cost	Total
Cash and short term deposits	—	—	18,754	18,754	—	—	18,449	18,449
Trading financial assets	329,382	—	—	329,382	329,068	—	—	329,068
Secured financing:								
Cash collateral on securities borrowed	15,569	—	—	15,569	15,569	—	—	15,569
Securities purchased under agreements to resell	104,167	—	—	104,167	103,967	—	—	103,967
Other secured financing	10,043	—	—	10,043	10,043	—	—	10,043
Loans and advances	—	—	63	63	—	—	29	29
Investment securities	142	—	—	142	141	—	—	141
Trade and other receivables	1,298	—	80,172	81,470	1,298	—	80,261	81,559
Total financial assets	460,601	—	98,989	559,590	460,086	—	98,739	558,825
Bank loans and overdrafts	—	—	59	59	—	—	59	59
Trading financial liabilities	298,690	—	—	298,690	298,690	—	—	298,690
Secured borrowings:								
Cash collateral on securities loaned	—	19,766	6,046	25,812	—	19,766	6,046	25,812
Securities sold under agreements to repurchase	—	26,042	25,854	51,896	—	26,042	25,854	51,896
Other financial liabilities	—	12,984	3,274	16,258	—	12,984	2,750	15,734
Trade and other payables	—	718	95,703	96,421	—	718	95,717	96,435
Debt and other borrowings	—	12,113	33,569	45,682	—	12,113	33,534	45,647
Total financial liabilities	298,690	71,623	164,505	534,818	298,690	71,623	163,960	534,273

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

2021 in \$ millions	Group				Company			
	FVPL	FVPL designated	Amortised cost	Total	FVPL	FVPL designated	Amortised cost	Total
Cash and short term deposits	—	—	28,532	28,532	—	—	28,218	28,218
Trading financial assets	332,635	—	—	332,635	332,449	—	—	332,449
Secured financing:								
Cash collateral on securities borrowed	19,360	—	—	19,360	19,360	—	—	19,360
Securities purchased under agreements to resell	90,296	—	—	90,296	90,096	—	—	90,096
Other secured financing	16,239	—	—	16,239	16,239	—	—	16,239
Loans and advances	—	—	67	67	—	—	26	26
Investment securities	165	—	—	165	165	—	—	165
Trade and other receivables	993	—	78,069	79,062	993	—	78,144	79,137
Total financial assets	459,688	—	106,668	566,356	459,302	—	106,388	565,690
Bank loans and overdrafts	—	—	48	48	—	—	48	48
Trading financial liabilities	300,325	—	—	300,325	300,325	—	—	300,325
Secured borrowings:								
Cash collateral on securities loaned	—	25,141	4,362	29,503	—	25,141	4,362	29,503
Securities sold under agreements to repurchase	—	19,609	24,939	44,548	—	19,609	24,939	44,548
Other financial liabilities	—	20,053	3,158	23,211	—	20,053	2,750	22,803
Trade and other payables	—	748	92,569	93,317	—	748	92,582	93,330
Debt and other borrowings	—	9,602	43,077	52,679	—	9,602	42,861	52,463
Total financial liabilities	300,325	75,153	168,153	543,631	300,325	75,153	167,542	543,020

Financial Liabilities Designated at FVPL

Cash collateral on securities loaned and securities sold under agreements to repurchase: These balances are classified as 'Designated at FVPL' where the financial liability forms part of a group of financial assets or financial liabilities or both, which are managed, evaluated and reported internally on a fair value basis; otherwise, they are classified as 'Financial liabilities at amortised cost'.

Other financial liabilities: Liabilities arising as a result of continuing recognition of certain financial assets and the simultaneous recognition of an associated financial liability.

Prepaid OTC contracts: The risk on these financial instruments, is primarily hedged using trading financial instruments including equity securities and interest rate swaps. Prepaid contract liabilities are designated at FVPL as they form part of a group of financial assets and liabilities which are managed, evaluated and reported internally on a fair value basis.

Issued structured notes: These relate to financial liabilities which arise from selling structured products, generally in the form of notes or

certificates. The structured notes are designated at FVPL as the risks to which the Group is a contractual party are risk-managed on a fair value basis as part of the Group's trading portfolio and the risk is reported to key management personnel on this basis. Refer to note 17 for more information.

The cumulative change in fair value recognised through other comprehensive income attributable to own credit risk for financial liabilities designated at FVPL at 31 December 2022 is a loss of \$183 million (2021: loss of \$389 million). During the year, \$nil (2021: loss of \$7 million) was realised as a result of the derecognition of such financial liabilities and was transferred from the 'Debt valuation adjustment reserve' to 'Retained earnings'.

The Group determines the amount of changes in fair value attributable to changes in counterparty credit risk or own credit risk, as relating to financial liabilities designated at FVPL, by first determining the fair value including the impact of counterparty credit or own credit risk, and then deducting those changes in fair value representing managed market risk. In determining fair value, the Group considers the

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

impact of changes in own credit spreads based upon observations of the secondary bond market spreads when measuring the fair value for issued structured notes. The Group considers that this approach most faithfully represents the amount of change in fair value due to both counterparty credit risk and the Group's own credit risk.

The carrying amount of financial liabilities designated at FVPL for which the effect of changes in those liabilities' credit risk is presented within other comprehensive income was \$920 million lower than the contractual amount due at maturity (2021: \$114 million lower).

11. TRADING FINANCIAL ASSETS AND LIABILITIES

Group in \$ millions	2022		2021	
	Assets	Liabilities	Assets	Liabilities
Government debt securities	13,782	17,025	14,097	20,475
Corporate and other debt	11,364	4,739	10,807	3,724
Corporate equities	53,160	24,971	65,299	28,608
Derivatives (see note 12)	251,076	251,955	242,432	247,518
	329,382	298,690	332,635	300,325

Company in \$ millions	2022		2021	
	Assets	Liabilities	Assets	Liabilities
Government debt securities	13,780	17,025	14,097	20,475
Corporate and other debt	11,046	4,739	10,608	3,724
Corporate equities	53,160	24,971	65,299	28,608
Derivatives (see note 12)	251,082	251,955	242,445	247,518
	329,068	298,690	332,449	300,325

12. DERIVATIVES

Group in \$ millions	2022			Total
	Bilateral OTC	Cleared OTC	Listed derivative contracts	
Derivative assets:				
Interest rate contracts	66,949	9,000	5	75,954
Credit contracts	7,116	266	—	7,382
Foreign exchange and gold contracts	120,458	2,382	1	122,841
Equity contracts	29,774	—	5,754	35,528
Commodity contracts	8,505	—	866	9,371
	232,802	11,648	6,626	251,076

Derivative liabilities:				
Interest rate contracts	73,308	7,809	12	81,129
Credit contracts	6,572	280	—	6,852
Foreign exchange and gold contracts	114,830	2,614	9	117,453
Equity contracts	31,295	—	5,807	37,102
Commodity contracts	8,527	—	892	9,419
	234,532	10,703	6,720	251,955

Group in \$ millions	2021			Total
	Bilateral OTC	Cleared OTC	Listed derivative contracts	
Derivative assets:				
Interest rate contracts	56,787	3,731	10	60,528
Credit contracts	9,745	405	—	10,150
Foreign exchange and gold contracts	84,810	1,224	—	86,034
Equity contracts	61,052	—	9,853	70,905
Commodity contracts	13,983	—	832	14,815
	226,377	5,360	10,695	242,432

Derivative liabilities:				
Interest rate contracts	58,118	2,619	13	60,750
Credit contracts	8,935	392	—	9,327
Foreign exchange and gold contracts	84,080	1,244	5	85,329
Equity contracts	68,914	—	8,411	77,325
Commodity contracts	14,243	—	544	14,787
	234,290	4,255	8,973	247,518

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

Company	2022			
in \$ millions	Bilateral OTC	Cleared OTC	Listed derivative contracts	Total
Derivative assets:				
Interest rate contracts	66,949	9,000	5	75,954
Credit contracts	7,116	266	—	7,382
Foreign exchange and gold contracts	120,464	2,382	1	122,847
Equity contracts	29,774	—	5,754	35,528
Commodity contracts	8,505	—	866	9,371
	232,808	11,648	6,626	251,082
Derivative liabilities:				
Interest rate contracts	73,308	7,809	12	81,129
Credit contracts	6,572	280	—	6,852
Foreign exchange and gold contracts	114,830	2,614	9	117,453
Equity contracts	31,295	—	5,807	37,102
Commodity contracts	8,527	—	892	9,419
	234,532	10,703	6,720	251,955

Company	2021			
in \$ millions	Bilateral OTC	Cleared OTC	Listed derivative contracts	Total
Derivative assets:				
Interest rate contracts	56,787	3,731	10	60,528
Credit contracts	9,745	405	—	10,150
Foreign exchange and gold contracts	84,823	1,224	—	86,047
Equity contracts	61,052	—	9,853	70,905
Commodity contracts	13,983	—	832	14,815
	226,390	5,360	10,695	242,445
Derivative liabilities:				
Interest rate contracts	58,118	2,619	13	60,750
Credit contracts	8,935	392	—	9,327
Foreign exchange and gold contracts	84,080	1,244	5	85,329
Equity contracts	68,914	—	8,411	77,325
Commodity contracts	14,243	—	544	14,787
	234,290	4,255	8,973	247,518

13. TRADE AND OTHER RECEIVABLES

in \$ millions	Group		Company	
	2022	2021	2022	2021
Trade and other receivables (amortised cost)				
Trade receivables				
Contracts with customers	245	262	245	262
Due from other Morgan Stanley Group undertakings	35,100	38,420	35,353	38,630
Trading receivables	36,462	36,196	36,412	36,144
Less: ECL	(49)	(5)	(49)	(5)
	71,758	74,873	71,961	75,031
Other receivables ⁽¹⁾				
Held at exchanges	8,274	2,886	8,118	2,768
Due from other Morgan Stanley Group undertakings	141	310	182	343
Other amounts receivable	309	272	309	272
	8,724	3,468	8,609	3,383
	80,482	78,341	80,570	78,414
Trade and other receivables (FVPL)				
Prepaid OTC contracts	562	990	562	990
Held at exchanges	3	3	3	3
Other	733	—	733	—
	1,298	993	1,298	993
Total	81,780	79,334	81,868	79,407

(1) There was immaterial ECL on these amounts as at 31 December 2022 or 31 December 2021.

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022****14. INVESTMENT IN SUBSIDIARIES****Composition of the Group**

Details of all subsidiary undertakings are provided in the Appendix, including changes in holdings of subsidiaries.

Company

in \$ millions	Subsidiary undertakings
Cost	
At 1 January 2022	1,257
Capital Infusion	218
Disposals	(207)
At 31 December 2022	1,268
Impairment Provisions	
At 1 January 2022	(1,127)
Provisions made in the year	(215)
Disposals	206
At 31 December 2022	(1,136)
Carrying Amounts	
At 31 December 2021	130
At 31 December 2022	132

On 9 June 2022, the Directors approved a \$207 million capital infusion into Morgan Stanley Turnberry Limited, and a \$11 million capital infusion into Morgan Stanley Humboldt Investments Limited, both direct subsidiaries of the Company. The Company impaired its investment in each subsidiary by \$206 million and \$8 million respectively. These changes had no impact to the group.

On 1 December 2022, the Company received \$579 thousand from Morgan Stanley International Holdings Inc. in consideration of the purchase of the equity interest in Morgan Stanley Turnberry Limited and of its subsidiaries. The Company recognised a gain/loss of \$nil on this disposal.

All subsidiaries are included in the Group's consolidated financial statements.

15. INTERESTS IN STRUCTURED ENTITIES

The Group is involved with various special purpose entities in the normal course of business. In most cases, these entities are deemed to be structured entities. The Group's interests in structured entities include certain debt and equity interests, commitments, guarantees, and derivative instruments.

The Group's involvement with structured entities arises primarily from:

- Loans made to, and investments in, structured entities that hold debt, equity, real estate or other assets;
- Interests purchased in connection with market-making activities and retained interests held as a result of securitisation activities, including re-securitisation transactions;
- Structuring of asset-repackaged notes designed to meet the investment objectives of clients; and
- Certain derivatives entered into with structured entities.

The risks associated with derivatives entered into with structured entities are essentially the same as similar derivatives with non-structured entity counterparties and are managed as part of the Company's overall derivative exposure.

The Group determines whether it controls, and therefore should consolidate, a structured entity upon its initial involvement with the structured entity and reassesses whether it should continue to consolidate on an ongoing basis, as long as it has any continuing involvement with the structured entity. Control is the ability to direct the activities of the entity which most significantly affect the returns of the entity and to determine the parties which benefit from these returns. Control can be exercised by a number of mechanisms, including the ability to direct the activities of the entity at the time of establishment, to manage the assets of the entity and to determine the time and method of its termination. The identification of control is based upon an analysis of the design of the structured entity, including the structured entity's structure and activities; assessment of the significance of the powers to make economic decisions which are held by the Group and its related parties and whether such powers may be used to affect its investor returns; and consideration of the significance of direct and indirect interests in the structured entity which are held by the Group and its related parties.

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022****Consolidated Structured Entities**

The table below shows information about the structured entities which the Group consolidated. Consolidated structured entity assets and liabilities are presented after intercompany eliminations and include assets financed on a non-recourse basis.

2022 in \$ millions	Client intermedia- tion	Mortgage and asset-backed securitisations	Total
Assets of structured entities	200	606	806
Liabilities of structured entities	195	330	525
2021			
Assets of structured entities	200	419	619
Liabilities of structured entities	188	221	409

Unconsolidated Structured Entities

The Group has interests in structured entities that the Group does not control and which are therefore not consolidated.

The table below shows certain non-consolidated structured entities in which the Group has an interest at 31 December 2022 and at 31 December 2021. The table includes all structured entities in which the Group has determined that its maximum exposure to loss is greater than specific thresholds or meets certain other criteria. In addition the table includes structured entities sponsored by unrelated parties, as well as structured entities sponsored by the Group; an example of the Group's involvement with these structured entities is its secondary market-making activities.

The Group's maximum exposure to loss is dependent on the nature of the Group's interest in the structured entity and is limited to notional amounts of certain liquidity facilities, total return swaps, as well as the fair value of certain other derivatives and investments the Group has made in the structured entity. The reported exposure does not include the offsetting benefit of hedges, including total return swaps in relation to fund investments and other entities, or any reductions associated with the collateral held as part of a transaction with the structured entity or with any party to the structured entity. Where notional amounts are used to quantify the maximum exposure related to derivatives, such amounts do not reflect changes in fair value already recorded

by the Group. Liabilities issued by structured entities generally are non-recourse to the Group.

in \$ millions	Client intermed- iation	Mortgage and asset- backed securitis- ations	Collateral- ised debt obligations	Total
31 December 2022				
Assets of the structured entity	17,096	6,989	327	24,412
Maximum exposure to loss:				
Debt and equity interests	837	242	160	1,239
Derivative and other contracts	4,836	—	—	4,836
Total maximum exposure to loss	5,673	242	160	6,075
Carrying value of interests - assets ⁽¹⁾ :				
Debt and equity interests	837	242	160	1,239
Derivative and other contracts	1,319	—	—	1,319
Total carrying value of exposure to loss - assets	2,156	242	160	2,558
Carrying value of interests - liabilities ⁽¹⁾ :				
Derivative and other contracts	1,216	—	—	1,216
Commitments, guarantees and other	223	—	—	223
Total carrying value of exposure to loss - liabilities	1,439	—	—	1,439
Additional interests in structured entities⁽²⁾	62	216	303	581

(1) The carrying value of the interests in structured entities are recognised in the consolidated statement of financial position in Trading financial assets or Trading financial liabilities - derivatives or Trading financial liabilities - Corporate and other debt

(2) Primarily as a result of its secondary market-making activities, the Group owned additional securities issued by securitisation structured entities for which the maximum exposure to loss is less than the specific thresholds noted earlier.

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

in \$ millions	Client intermed- iation	Mortgage and asset- backed securitis- ations	Collateral- ised debt obligations	Total
31 December 2021				
Assets of the structured entity	17,150	5,255	193	22,598
Maximum exposure to loss:				
Debt and equity interests	846	197	118	1,161
Derivative and other contracts	5,201	—	—	5,201
Total maximum exposure to loss	6,047	197	118	6,362
Carrying value of interests - assets ⁽¹⁾ :				
Debt and equity interests	846	197	118	1,161
Derivative and other contracts	1,969	—	—	1,969
Total carrying value of exposure to loss - assets	2,815	197	118	3,130
Carrying value of interests - liabilities ⁽¹⁾ :				
Derivative and other contracts	1,067	—	—	1,067
Commitments, guarantees and other	354	—	—	354
Total carrying value of exposure to loss - liabilities	1,421	—	—	1,421
Additional structured entities owned⁽²⁾	2	203	129	334

(1) The carrying value of the interests in structured entities are recognised in the consolidated statement of financial position in Trading financial assets or Trading financial liabilities - derivatives or Trading financial liabilities - Corporate and other debt

(2) Primarily as a result of its secondary market-making activities, the Group owned additional securities issued by securitisation structured entities for which the maximum exposure to loss is less than the specific thresholds noted earlier.

Client intermediation transactions represent a range of transactions designed to provide investors with returns based on the returns of underlying securities, referenced assets or indexes. The Group's involvement in these transactions is to act as the intermediary between the Structured Entity and the client, generally either through a derivative or by intermediating financing.

Securitisation transactions generally involve structured entities. Primarily as a result of its secondary market-making activities, the Group owned additional securities issued by securitisation structured entities for which the maximum exposure to loss is less than the specific threshold noted earlier.

Collateralised Debt Obligations ("CDOs") are structured entities that purchase a pool of assets consisting of corporate loans ("collateralised loan obligations"), corporate bonds, ABS or synthetic exposures on similar assets through derivatives, and issue multiple tranches of debt and equity securities to investors. Although not obligated, the Group generally makes a market in the securities issued by structured entities in these transactions and may retain unsold securities. These beneficial interests are included in 'Trading financial assets' and are measured at fair value.

The Group's primary risk exposure is to the securities issued by the structured entity owned by the Group, with the risk highest on the most subordinate class of beneficial interests. These securities generally are included in Trading financial assets – corporate and other debt. The Group does not provide additional support in these transactions through contractual facilities, such as liquidity facilities, guarantees or similar derivatives. The Group's maximum exposure to loss generally equals the fair value of the securities owned.

The Group has not provided financial support to, or otherwise agreed to be responsible for supporting financially, any unconsolidated structured entity.

Sponsored Unconsolidated Structured Entities

The Group considers itself the sponsor of certain non-consolidated structured entities where it was primarily involved in the establishment of a structured entity and where, additionally, the Group has been involved in the transfer of assets; servicer of the assets; ability to access the assets; marketing; managing activities; purchasing protection or providing explicit guarantees; when Morgan Stanley's name is associated with the structured entity or where market participants may generally expect Morgan Stanley to be associated with the structured entity.

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

In some sponsored entities, the Group has been involved with the structured entity through establishing the structured entity, marketing of products associated with the structured entity in its own name, and/ or through involvement in the design of the structured entity. The Group has no interest in or exposure to loss from these entities as at 31 December 2022 (2021: \$nil).

During 2022 \$391 million (2021: \$1,398 million) of assets were transferred to sponsored structured entities. It is the investors in the structured entity, rather than the Group, that are exposed to the carrying value of assets transferred. The Group's exposure to the sponsored entities is limited to net amounts receivable from swap transactions with the entity and is not directly linked to the transferred assets themselves. The profit that the Group received in relation to transactions with sponsored entities during 2022 was \$313 million (2021: loss of \$370 million). Gains or losses are reported within 'Net gains from financial instruments at FVPL' in the consolidated income statement. The Group may hedge its exposure to these transactions and the gains or losses of this hedging activity are also presented within 'Net gains from financial instruments at FVPL', offsetting the gains or losses incurred.

16. TRADE AND OTHER PAYABLES

in \$ millions	Group		Company	
	2022	2021	2022	2021
Trade and other payables (amortised cost)				
Trade payables	95,047	91,950	95,043	91,948
Other payables				
Due to other Morgan Stanley Group undertakings	985	977	1,013	1,004
Other amounts payable	400	377	389	363
	96,432	93,304	96,445	93,315
Trade and other payables (designated at FVPL)				
Prepaid OTC contracts	718	748	718	748
	718	748	718	748
Total	97,150	94,052	97,163	94,063

17. DEBT AND OTHER BORROWINGS

in \$ millions	Group	
	2022	2021
Debt and other borrowings (amortised cost)		
Subordinated loan liabilities	8,898	6,400
Senior subordinated loan liabilities	3,900	5,600
Other borrowings ⁽¹⁾	20,771	31,077
	33,569	43,077
Debt and other borrowings (designated FVPL)		
Issued structured notes	12,113	9,602
	45,682	52,679

in \$ millions	Company	
	2022	2021
Debt and other borrowings (amortised cost)		
Subordinated loan liabilities	8,898	6,400
Senior subordinated loan liabilities	3,900	5,600
Other borrowings ⁽¹⁾	20,736	30,861
	33,534	42,861
Debt and other borrowings (designated FVPL)		
Issued structured notes	12,113	9,602
	45,647	52,463

(1) There is a floating charge over a pool of assets in favour of MSIUK to secure certain intercompany loans which MSIUK has provided to the Company and which are presented within 'Other borrowings'. The value of assets subject to this charge at 31 December 2022 was \$21,665 million (2021: \$28,518 million). The floating charge is limited to the amount of the funding received from MSIUK of \$20,384 million.

The amounts subject to subordinated loan agreements are wholly repayable as shown below:

in \$ millions			2022	
Counterparty	Repayment Date	Interest Rate	Accrued Interest	Balance
MSIUK	21 December 2025	OBFR ⁽¹⁾ plus 2.3%	54	5,000
MSIUK	11 August 2032	SOFR ⁽²⁾ plus 1.44%	24	1,400
MSIUK	13 June 2033	SOFR ⁽²⁾ plus 2.34%	70	2,500

in \$ millions			2021	
Counterparty	Repayment Date	Interest Rate	Accrued Interest	Balance
MSIUK	21 December 2025	OBFR ⁽¹⁾ plus 2.3%	21	5,000
MSIUK	11 August 2032	SOFR ⁽²⁾ plus 1.44%	8	1,400

(1) Overnight Bank Funding Rate ("OBFR")

(2) Secured Overnight Financing Rate ("SOFR")

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

The amounts subject to senior subordinated loan agreements are wholly repayable as shown below:

in \$ millions		2022		
Counterparty	Repayment Date	Interest Rate	Accrued Interest	Balance
MSIUK	30 January 2023 ⁽¹⁾	MS Proxy ⁽²⁾	—	3,900

in \$ millions		2021		
Counterparty	Repayment Date	Interest Rate	Accrued Interest	Balance
MSIUK	30 January 2023 ⁽¹⁾	MS Proxy ⁽²⁾	—	5,600

(1) The repayment date can be extended for 395 days on each business day but no later than 49 years from utilisation date.

(2) Interest rate at which Morgan Stanley is offering loans, in the relevant currency, to members of the Morgan Stanley Group on such day, which counterparties have acknowledged and agreed to apply to any loan, acting on an arm's length basis.

The senior subordinated loan, including accrued interest, may be bailed in by the Bank of England in certain circumstances.

The Group has not defaulted on principal, interest or breached any terms of its subordinated loans or senior subordinated loans during the year.

All amounts outstanding under subordinated loan agreements are repayable on the repayment date. Any repayment of the \$5,000 million instrument prior to contractual maturity of 21 December 2025 would require mutual agreement between the Company and the Lender. Prepayment of the \$2,500 million instrument and the \$1,400 million instrument is at the Company's discretion from the contractual call option date. PRA consent is required prior to any repayment.

18. PROVISIONS

As at 31 December 2022 and 31 December 2021 amounts reported in the following table were the same for both the Company and the Group.

in \$ millions	Property	Litigation	Total
At 1 January 2022	2	41	43
Additional provisions	—	91	91
Foreign exchange revaluation	—	(3)	(3)
At 31 December 2022	2	129	131

Litigation Matters

In addition to the matters described below, in the normal course of business, the Group 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 entities that would otherwise be the primary defendants in such cases are bankrupt or are in financial distress.

The Group is also involved, from time to time, in other reviews, investigations and proceedings (both formal and informal) by governmental and self-regulatory agencies regarding the Group's business, and involving, among other matters, sales and trading activities, financial products or offerings sponsored, underwritten or sold by the Group, and accounting and operational matters, certain of which may result in adverse judgments, settlements, fines, penalties, injunctions or other relief.

The Group 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 Group can reasonably estimate the amount of that loss, the Group accrues the estimated loss by a charge to income. The Group's future legal expenses may fluctuate from period to period, given the current environment regarding government investigations and private litigation affecting global financial services firms, including the Group.

In many proceedings and investigations, however, it is inherently difficult to determine whether any loss is probable or even possible or to estimate the amount of any loss. The Group cannot predict with certainty if, how or when such proceedings or investigations will be resolved or what the eventual settlement, fine, penalty or other relief, if any, may be, particularly for proceedings and investigations where the factual record is being developed or contested or where plaintiffs or government entities seek substantial or indeterminate damages, restitution, disgorgement or penalties. Numerous issues may need to be resolved before a loss or additional loss or range of loss or additional range of loss can be reasonably estimated for a proceeding or investigation, including through potentially lengthy discovery and determination of important factual matters, determination of issues related to class certification and the

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

calculation of damages or other relief, and consideration of novel or unsettled legal questions relevant to the proceedings or investigations in question. Subject to the foregoing, the Group believes, based on current knowledge and after consultation with counsel, that the outcome of such proceedings and investigations will not have a material adverse effect on the financial condition of the Group, although the outcome of such proceedings or investigations could be material to the Group's operating results and cash flows for a particular period depending on, among other things, the level of the Group's revenues or income for such period.

The litigation provisions recognised in the financial statements primarily relate to the matters outlined below. Significant judgement is required in deciding when and if to recognise these provisions, and the actual cost of a legal claim or regulatory fine/penalty may ultimately be materially different from the recognised provisions.

While the Group has identified below certain proceedings that the Group believes may be material, individually or collectively, there can be no assurance that additional material losses will not be incurred from claims that have not yet been asserted or are not yet determined to be material.

On 5 October 2017, various institutional investors filed a claim against the Group and another bank in a matter now styled *Case number B-803-18* (previously BS 99-6998/2017), in the City Court of Copenhagen, Denmark concerning their roles as underwriters of the initial public offering ("IPO") in March 2014 of the Danish company OW Bunker A/S. The claim seeks damages of approximately DKK 529 million (approximately \$76 million) plus interest in respect of alleged losses arising from investing in shares in OW Bunker, which entered into bankruptcy in November 2014. Separately, on 29 November 2017, another group of institutional investors joined the Group and another bank as defendants to pending proceedings in the High Court of Eastern Denmark against various other parties involved in the IPO in a matter styled *Case number B-2073-16*. The claim brought against the Group and the other bank has been given its own *Case number B-2564-17*. The investors claim damages of approximately DKK 767 million (approximately \$111 million) plus

interest from the Group and the other bank on a joint and several basis with the Defendants to these proceedings. Both claims are based on alleged prospectus liability; the second claim also alleges professional liability of banks acting as financial intermediaries. On 8 June 2018, the City Court of Copenhagen, Denmark ordered that the matters now styled *Case number B-803-18*, *Case number B-2073-16*, and *Case number B-2564-17* be heard together before the High Court of Eastern Denmark. On 29 June 2018, the Group filed its defense to the matter now styled *Case number B-2564-17*. On 4 February 2019, the Group filed its defense to the matter now styled *Case number B-803-18*.

The Group 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 Group and certain Morgan Stanley Group affiliates were 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 Group and certain Morgan Stanley Group affiliates, 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 their 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 two swap execution facilities that allegedly were thwarted by the defendants in their efforts to develop such platforms. The consolidated complaints seek, among other relief, 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. A decision on plaintiffs' motion for class certification is pending.

The Group is engaging with the UK Competition and Markets Authority in connection with its investigation of suspected anti-competitive arrangements in the financial services sector,

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

specifically regarding the Group's activities concerning certain liquid fixed income products between 2009 and 2012.

Tax Matters

The preparation of the Group's consolidated financial statements requires management to make judgements, estimates and assumptions regarding the outcome of matters that are uncertain, including those relating to tax. The Group has provisions arising on a number of uncertain tax matters, for which management has made judgements and interpretations about the application of inherently complex tax laws when determining these provisions. Whilst a range of outcomes is foreseeable, management considers the amount provided to be a reasonable estimate of expected future liabilities after consideration of all pertinent facts. Judgement is required in deciding when and if to recognise these provisions, and the actual tax expense may ultimately be materially different from the recognised provisions.

Refer to accounting policy note 3(k) for more details on the Group's accounting policy on provisions.

The Group and other financial institutions are responding to inquiries from authorities in relation to tax matters in various jurisdictions, including Italy, including requests for information and documents.

The Group is responding to requests for information and documents from authorities in Germany related to the period 2006 to 2022, including from the Federal Tax Office and the Cologne Public Prosecutor, in relation to certain equities transactions over dividend record dates and related tax matters. The Group is cooperating with the relevant authorities.

In matters styled *Case number 15/3637* and *Case number 15/4353*, the Dutch Tax Authority ("Dutch Authority") is challenging in the Dutch courts the prior set-off by a subsidiary undertaking of the Group of approximately €124 million (approximately \$133 million) plus accrued interest of withholding tax credits against the subsidiary undertaking of the Group's corporation tax liabilities for the tax years 2007 to 2012. The Dutch Authority alleges that the subsidiary undertaking of the Group was not entitled to receive the withholding tax credits on the basis, inter alia, that the subsidiary undertaking of the Group did not hold legal title to certain securities

subject to withholding tax on the relevant dates. The Dutch Authority has also alleged that the subsidiary undertaking of the Group failed to provide certain information to the Dutch Authority and keep adequate books and records. On 26 April 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 12 May 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 22 June 2020, the subsidiary undertaking of the Group filed an appeal against the decision of the Court of Appeal in Amsterdam before the Dutch High Court. On 29 January 2021, the Advocate General of the Dutch High Court issued an advisory opinion on the subsidiary of the Group's appeal, which rejected the subsidiary of the Group's principal grounds of appeal. On 11 February 2021, the subsidiary of the Group and the Dutch Authority each responded to this opinion. On 22 June 2021, Dutch criminal authorities sought various documents in connection with an investigation of the subsidiary undertaking of the Group related to the civil claims asserted by the Dutch Authority, concerning the accuracy of the subsidiary of the Group's tax returns and the maintenance of its books and records for 2007 to 2012. The Dutch criminal authorities have requested additional information, and the Group is continuing to respond to the Dutch criminal authorities in connection with their ongoing investigation.

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022****19. DEFERRED TAX ASSETS AND LIABILITIES**

Deferred taxes are calculated on all temporary differences under the liability method. The movement in the deferred tax account is as follows:

	Group		Company	
	2022	2021	2022	2021
in \$ millions	Deferred tax asset/(liability)	Deferred tax asset/(liability)	Deferred tax asset/(liability)	Deferred tax asset/(liability)
At 1 January	213	171	212	170
Adjustment in respect of prior years	—	(12)	—	(12)
Amount recognised in the consolidated income statement	11	45	11	45
Amount recognised in consolidated statement of other comprehensive income	(55)	(22)	(55)	(22)
Amount recognised directly in equity	4	—	4	—
Impact of changes in tax rates recognised in the consolidated income statement	(8)	14	(8)	14
Impact of changes in tax rates recognised in consolidated statement of other comprehensive income	(14)	17	(14)	17
At 31 December	151	213	150	212

For the purposes of presentation in the consolidated statement of financial position, certain deferred tax assets and liabilities have been offset in accordance with IAS 12.

The deferred tax included in the consolidated statement of financial position and changes recorded in 'Income tax expense' are detailed below:

in \$ millions	Group		
2022	Deferred tax asset/(liability)	Consolidated income statement	Other comprehensive income / Equity
Accelerated capital allowances	1	—	—
Deferred compensation	111	18	(4)
Transitional adjustment	(7)	—	(2)
Temporary differences arising in respect of changes in Group's and Company's own credit risk	49	—	71
Unrealised gains/(losses)	(3)	(21)	—
Other temporary differences	—	—	—
	151	(3)	65

in \$ millions	Group		
2021	Deferred tax asset/(liability)	Consolidated income statement	Other comprehensive income / Equity
Accelerated capital allowances	1	—	—
Deferred compensation	125	55	—
Transitional adjustment	(9)	—	—
Temporary differences arising in respect of changes in Group's and Company's own credit risk	120	—	5
Unrealised gains/(losses)	(24)	(7)	—
	213	48	5

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

in \$ millions	Company		
	Deferred tax asset/ (liability)	Consolidated income statement	Other comprehensive income / Equity
2022			
Accelerated capital allowances	1	—	—
Deferred compensation	110	18	(4)
Transitional adjustment	(7)	—	(2)
Temporary differences arising in respect of changes in Group's and Company's own credit risk	49	—	71
Unrealised gains/(losses)	(3)	(21)	—
Other temporary differences	—	—	—
	150	(3)	65

in \$ millions	Company		
	Deferred tax asset/ (liability)	Consolidated income statement	Other comprehensive income / Equity
2021			
Accelerated capital allowances	2	—	—
Deferred compensation	124	54	—
Transitional adjustment	(9)	—	—
Temporary differences arising in respect of changes in Group's and Company's own credit risk	120	—	5
Unrealised gains/(losses)	(25)	(7)	—
	212	47	5

The UK statutory rate is 27% for the year, including an 8% corporation tax surcharge on the profits of banking companies. The Finance Act 2021 raised the UK main rate of corporation tax from 19% to 25% with effect from 1 April 2023. In addition, the Finance Act 2022 reduced the corporation tax surcharge rate from 8% to 3% with effect from 1 April 2023. These changes affect the deferred tax charge for both the current and future years.

The net deferred tax asset shown above has been recognised based on management's assessment that it is probable that the Group will have taxable profits against which the temporary differences can be utilised.

20. COMMITMENTS

At 31 December 2022 and 2021, the Group and Company had the following outstanding commitments and contingent liabilities arising from off-balance sheet financial instruments:

in \$ millions	2022	2021
Commitments⁽¹⁾		
Loan commitments	15	121
Guarantees	373	348
Unsettled securities purchased under agreements to resell ⁽²⁾	54,628	34,493
Unsettled securities sold under agreements to repurchase ⁽²⁾	22,894	13,619
Other commitments	26	37

(1) Certain loan commitments, unsettled securities sold under agreements to repurchase and guarantees are on balance sheet and designated at fair value. (see note 10).

(2) Unsettled securities purchased under agreements to resell and sold under agreements to repurchase have a trade date at or prior to 31 December and settle subsequent to year end.

21. EQUITY INSTRUMENTS

in \$ millions	2022	2021
Issued and fully paid:		
Ordinary shares of \$1 each⁽¹⁾	10,935	10,935
Ordinary shares of £1 each⁽¹⁾	30	30
Class A ordinary shares of \$1 each⁽²⁾	1,500	1,500
AT1 capital⁽²⁾	4,300	3,500
Total equity instruments at 31 December	16,765	15,965

(1) Ordinary shares of \$1 each carry 99.9% of the voting rights (2021: 99.9%). Ordinary shares of £1 each carry 0.1% of the voting rights (2021: 0.1%). Ordinary shares are pari passu with each other regardless of currency.

(2) Class A ordinary shares and AT1 capital do not carry any voting rights (2021: Non-voting)

The Company issued \$800 million of AT1 capital in the year.

Equity Instruments

At 31 December 2022, the total equity instruments which the Company had in issue amounted to \$16,765 million (31 December 2021: \$15,965 million) comprising 10,935,105,148 ordinary shares of \$1 each, 17,615,107 ordinary shares of £1 each, 1,500,000,000 Class A Non-voting ordinary shares of \$1 each and Additional Tier 1 capital instruments of \$4,300 million (31 December 2021: \$3,500 million). All equity instruments are fully paid. There have been no changes to equity instruments for the Company from 1 January 2021.

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022****Ordinary Shares**

The holders of the ordinary shares, excluding Class A ordinary shares, are 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 the shareholders of the Company. All shares rank equally with regard to the Company's residual net assets. All ordinary shares are recorded at the rates of exchange ruling at the date the shares were paid up.

AT1 Capital

AT1 capital issued by the Company comprises three separate Instruments, with balances of \$2,200 million, \$1,300 million and \$800 million, respectively. The Instruments include a trigger mechanism whereby, if the Common Equity Tier 1 capital ratio of the Company or MSI Group falls below 7%, the BOE as the UK Resolution Authority also has the authority to trigger the write down of the instruments upon the exercise of statutory powers in a resolution scenario. In this situation, Morgan Stanley International Limited, the holder of the AT1, would have no further rights against the Group in respect of the AT1.

The Instruments have no defined maturity and are subordinated to senior creditors and subordinated loan creditors of the Company. The Instruments are not entitled to any participation in the residual net assets of the Company. The Instruments are callable at the Company's discretion, from 30 November 2023 for the \$2,200 million instrument, from 30 November 2025 for the \$1,300 million instrument and from 30 November 2027 for the \$800 million instrument.

Coupons on the Instruments are non-cumulative. Coupons are payable at a fixed rate of 7.5% per annum for the \$2,200 million instrument, 5.45% per annum for the \$1,300 million instrument and 7.42% per annum for the \$800 million instrument. Payment of the coupon is wholly at the discretion of the Company.

Coupon interest on the \$2,200 million and \$1,300 million instruments was paid on 30 November 2022 (see note 22).

Reserves**Share Premium**

The 'Share premium account' comprises the capital raised in an issue of shares that exceeds the nominal value of the shares.

Currency Translation Reserve

The 'Currency translation reserve' comprises all foreign exchange differences arising from the translation of the total assets less total liabilities of foreign operations. The tax effect of these movements is also included in the 'Currency translation reserve'.

Capital Contribution Reserve

The 'Capital contribution reserve' comprises contributions of capital from the Group's parent company to subsidiaries of the Group.

Capital Redemption Reserve

The 'Capital redemption reserve' represents transfers in prior years from retained earnings in accordance with relevant legislation.

Pension Reserve

The 'Pension reserve' comprises cumulative actuarial gains or losses on scheme assets and obligations net of current tax and the impact of the asset surplus ceiling (see note 33).

Debt Valuation Reserve

The 'Debt valuation reserve' includes the cumulative change in fair value of certain financial liabilities designated at fair value through profit or loss that is attributable to changes in the credit risk of those liabilities at the reporting date, together with the tax effect of these movements.

22. DIVIDENDS

On 30 November 2022, a coupon payment on the \$1,300 million AT1 capital instrument of \$70,850,000 (31 December 2021: \$71,838,000) was paid out of reserves available for distribution.

On 30 November 2022, a coupon payment on the \$2,200 million AT1 capital instrument of \$165,000,000 (31 December 2021: \$165,000,000) was paid out of reserves available for distribution.

The Directors have not proposed the payment of a final dividend out of reserves available at 31 December 2022 (2021: \$nil).

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022****23. ADDITIONAL CASH FLOW INFORMATION****a. Cash and Cash Equivalents**

For the purposes of the consolidated statement of cash flows, cash and cash equivalents comprise the following balances, which have less than three months maturity from the date of acquisition:

in \$ millions	2022	2021
Cash and short term deposits	18,754	28,532
Bank loans and overdrafts	(59)	(48)
	18,695	28,484

Included within Group and Company 'Cash and short term deposits' is \$9,424 million (2021: \$10,569 million) of segregated client money, held in accordance with the FCA's Client Money Rules. Additionally, an amount for the Group of \$170 million (2021: \$168 million) and for the Company of \$104 million (2021: \$107 million) represents other client money, that is not available for use. The corresponding payable is recognised and included in 'Trade and other payables'.

b. Reconciliation of Cash Flows from Operating Activities

in \$ millions	Note	2022	2021
Profit for the year		1,396	1,351
<i>Adjustments for:</i>			
Net impairment loss/(reversal) on financial instruments		148	(2)
Depreciation on property, plant and equipment		7	6
Provisions	18	91	35
Interest income	6	(2,926)	398
Interest expense	6	3,874	134
Income tax expense	9	321	589
Share based payments		4	2
Gain on modification of subordinated loan liabilities		(2)	—
Operating cash flows before changes in operating assets and liabilities		2,913	2,513
Changes in operating assets			
Net increase in secured financing		(3,884)	(12,098)
Net decrease in loans and advances		4	51
Net (increase)/decrease in trade and other receivables		(2,354)	3,953
Net decrease/(increase) in investment securities		23	(14)
Net decrease in trading financial assets		3,253	42,374
Net increase in other assets		(65)	(104)
		(3,023)	34,162
Changes in operating liabilities			
Net (decrease)/increase in secured borrowing		(3,296)	8,912
Net increase in trade and other payables		2,691	1,539
Net decrease in debt and other borrowings		(7,658)	(3,176)
Net decrease in trading financial liabilities		(1,635)	(40,067)
Net decrease in other liabilities		(116)	(43)
Net decrease in provisions		—	(2)
		(10,014)	(32,837)
Interest received		2,787	(541)
Interest paid		(3,137)	144
Income taxes paid		(190)	(397)
Effect of foreign exchange movements		1,314	802
Net cash flows used in operating activities		(9,350)	3,846

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022****c. Reconciliation of Equity and Liabilities arising from Financing Activities**

in \$ millions	Note	AT1	Senior Subordinated loans	Subordinated Loans	Total equity and liabilities from financing activities
Balance as at 1 January 2021		3,500	6,000	5,000	14,500
Issuance	17	—	—	1,400	1,400
Repayment	17	—	(400)	—	(400)
Balance as at 31 December 2021 and 1 January 2022		3,500	5,600	6,400	15,500
Issuance	17	800	600	2,500	3,900
Repayment	17	—	(2,300)	—	(2,300)
Gain on modification of subordinated loan liabilities		—	—	(2)	(2)
Balance as at 31 December 2022		4,300	3,900	8,898	17,098

24. EXPECTED MATURITY OF ASSETS AND LIABILITIES

The table below shows an analysis of assets and liabilities analysed according to when they are expected to be recovered, realised or settled.

Group	2022			2021		
	Less than or equal to twelve months	More than twelve months	Total	Less than or equal to twelve months	More than twelve months	Total
in \$ millions						
ASSETS						
Secured financing	129,142	637	129,779	125,365	530	125,895
Loans and advances	—	63	63	—	67	67
Investment securities	—	142	142	—	165	165
Trade and other receivables	80,669	1,111	81,780	78,349	985	79,334
Deferred tax assets	29	122	151	48	165	213
Property, plant and equipment	—	33	33	—	33	33
Other	348,441	2	348,443	361,477	2	361,479
	558,281	2,110	560,391	565,239	1,947	567,186
LIABILITIES						
Secured borrowing	91,551	2,415	93,966	92,568	4,694	97,262
Trade and other payables	96,600	550	97,150	93,598	454	94,052
Debt and other borrowings	6,814	38,868	45,682	4,584	48,095	52,679
Post-employment benefit obligations	—	4	4	—	9	9
Other	299,356	—	299,356	301,009	—	301,009
	494,321	41,837	536,158	491,759	53,252	545,011

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

Company in \$ millions	2022		2021		Total	
	Less than or equal to twelve months	More than twelve months	Less than or equal to twelve months	More than twelve months	Less than or equal to twelve months	More than twelve months
ASSETS						
Secured financing	129,142	437	129,579	125,365	330	125,695
Loans and advances	—	29	29	—	26	26
Investment securities	—	141	141	—	165	165
Trade and other receivables	80,773	1,095	81,868	78,439	968	79,407
Deferred tax assets	29	121	150	48	164	212
Investments in subsidiaries	—	132	132	—	130	130
Property, plant and equipment	—	14	14	—	11	11
Other	347,855	2	347,857	361,010	2	361,012
	557,799	1,971	559,770	564,862	1,796	566,658
LIABILITIES						
Secured borrowing	91,261	2,181	93,442	92,568	4,286	96,854
Trade and other payables	96,613	550	97,163	93,609	454	94,063
Debt and other borrowings	6,814	38,833	45,647	4,584	47,879	52,463
Post-employment benefit obligations	—	1	1	—	6	6
Other	299,303	—	299,303	300,942	—	300,942
	493,991	41,565	535,556	491,703	52,625	544,328

25. SEGMENT REPORTING

Segment information is presented in respect of the Group's business and geographical segments. The business segments and geographical segments are based on the Group'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 Group's own business segments are consistent with those of Morgan Stanley.

The Group has one reportable business segment, Institutional Securities, which includes capital raising and financial advisory services; corporate lending; sales, trading, financing and market-making activities in equity and fixed income securities and related products, including global macro, credit and commodities products and investment activities.

Geographical Segments

The Group operates in three geographic regions, being EMEA, the Americas and Asia.

The following table presents selected consolidated income statement and consolidated statement of financial position information of the Group's operations by geographic area. The external revenues (net of interest expense) and total assets disclosed in the following table reflect the regional view of the Group's operations, on a managed basis. The attribution of external revenues (net of interest expense) and total assets is determined by a combination of client and trading desk location.

in \$ millions	Net Revenue		Profit before Tax	
	2022	2021	2022	2021
EMEA	4,645	5,174	700	1,138
Asia	2,012	2,014	820	701
Americas	465	377	197	101
Total	7,122	7,565	1,717	1,940

in \$ millions	Total Assets	
	2022	2021
EMEA	339,424	337,702
Asia	114,501	99,774
Americas	106,466	129,710
Total	560,391	567,186

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022****26. FINANCIAL RISK MANAGEMENT****26.1 Risk Management Procedures**

Risk is an inherent part of the Group and Company's business activities. The Group seeks to identify, assess, monitor, and manage each of the various types of risks involved in its business activities in accordance with defined policies and procedures. The Group has developed a risk management policy framework, which is consistent with and leverages the risk management policies and procedures of the Morgan Stanley Group and which includes escalation to the Group's Board of Directors and to appropriate senior management personnel of the Group.

Significant risks faced by the Group resulting from trading, financing and investment activities are set out below.

26.2 Market Risk

Market risk refers to the risk that a change in the level of one or more market prices, rates, indices, implied volatilities (the price volatility of the underlying instrument imputed from option prices), correlations or other market factors, such as market liquidity, will result in losses for a position or portfolio.

26.2.1 Primary Market Risk Exposures

During the year, the Group had exposures to a wide range of market risk factors related to the global markets in which it conducts its trading activities. These market risk factors include interest rate and credit spread risk, equity prices, foreign exchange rates and commodity prices and the associated implied volatilities.

The Group is exposed to interest rate and credit spread risk, as well as associated implied volatility risks, as a result of its market making activities in interest rate or credit sensitive financial instruments (e.g. risk arising from changes in the level of interest rates, the shape of the yield curve and credit spreads). The activities from which those exposures arise and the markets in which the Group is active include, but are not limited to: interest rate and credit derivatives, corporate and government debt across both developed and emerging markets and asset-backed debt (including mortgage-related securities).

The Group is exposed to equity price 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.

The Group is exposed to foreign exchange rate 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-US dollar-denominated financial instruments.

The Group has exposure to commodities. This exposure is due to price and implied volatility risk as a result of market-making activities in crude and refined oil products, natural gas, electricity, and precious and base metals.

26.2.2 Risk Management

The Group manages its 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.

The Group manages and monitors its market risk exposures, including outright and basis risks, in such a way as to maintain a portfolio that the Group believes is well-diversified in the aggregate with respect to market risk factors and that reflects the Group's aggregate risk tolerance, as established by the Group's Board. The effectiveness of hedges and mitigants is monitored using processes such as risk and limit reporting.

Aggregate market risk limits have been approved for the Group in line with the risk appetite set by the Board. Additional market risk limits are assigned, as appropriate, to trading desks, products and/ or regions and are commensurate with the aggregate limits. MRD monitors market risk measures against limits in accordance with

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

policies set by the Board and senior management.

26.2.3 Measurement - Value at Risk

The Group uses the statistical technique known as VaR as one of the tools used to measure, monitor and review the market risk exposures of its trading portfolios. MRD calculates and distributes daily VaR-based risk measures to various levels of management.

The Group calculates VaR using a model based on historical simulation for general market risk factors and name specific equity risk, and a Monte Carlo simulation for name-specific risk in corporate bonds, loans and related derivatives. Market risk factors' daily moves are modelled either as difference changes or relative changes, dependent on the most suitable stochastic process (normal or log normal diffusion process) to describe the daily risk factor changes. 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.

26.2.4 VaR Methodology, Assumptions and Limitations

The basic methodology for VaR at Morgan Stanley is historical simulation. The risk exposures used for the daily VaR calculation are based on Greeks and full-revaluation grids, and simulations cover both systematic and specific risk components. The same valuation approach is used for Stressed VaR. The time series data is updated on a weekly basis, with the exception of idiosyncratic risk factors which are updated quarterly. A set of internal processes and controls ensure that all trading positions booked by the Group are being included in VaR. 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 unrealised loss in portfolio value that, based on historically observed market risk factor movements, could have been exceeded with a frequency of five times in every 100 trading days, if the portfolio were held constant for one day.

The Group uses 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 market risks and portfolio assets. One key element of the VaR model is that it reflects 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 behaviour 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 modelling 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. The Group is aware of these and other limitations and, therefore, uses VaR as only one component in its risk management oversight process. This process also incorporates stress testing and scenario analyses and extensive risk monitoring, analysis, quantification of risk not captured in VaR, and control at the trading desk, division, entity and Group levels.

The Group is committed to continuous review and enhancement of VaR methodologies and assumptions to capture evolving risks associated with changes in market structure and dynamics. As part of regular process improvement, additional systematic and name-specific risk factors may be added to improve the VaR model's ability to estimate more accurately 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 the Group's future revenues or financial performance or of its ability to manage risk. There can be no assurance that the Group's actual losses on a particular day will not exceed the VaR amounts indicated in the following paragraphs or that such losses will not occur more than five times in 100 trading days

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

for a 95%/one-day VaR. VaR does not predict the magnitude of losses which, 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, modelling 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.

26.2.5 VaR for the Year Ended 31 December 2022

The table below presents the Management VaR for the Group and Company's trading portfolio on a year-end, average and annual high and low basis for 31 December 2022 and 31 December 2021.

in \$ millions	95%/ one-day VaR for the year ended 95%/one-day Var for the year ended 31 December 2022				95%/ one-day VaR for the year ended 95%/one-day Var for the year ended 31 December 2021			
	Period end	Average	High	Low	Period end	Average	High	Low
Market risk category:								
Interest rate and credit spread	19	16	26	11	12	16	26	12
Equity price	11	18	26	11	19	22	31	17
Foreign exchange rate	11	6	14	2	4	6	13	3
Commodity price	5	7	11	2	3	3	7	2
Less diversification benefit ⁽¹⁾⁽²⁾	(22)	(22)	N/A	N/A	(15)	(18)	N/A	N/A
Primary Market Risk Categories	24	25	32	19	23	29	37	22
Credit Portfolio ⁽³⁾	12	8	15	4	6	7	12	5
Less diversification benefit ⁽¹⁾⁽²⁾	(6)	(7)	N/A	N/A	(6)	(6)	N/A	N/A
Total Management VaR	30	26	35	19	23	30	41	23

(1) Diversification benefit equals the difference between total trading VaR and the sum of the VaRs for the four risk categories. This benefit arises because the simulated one-day losses for each of the four primary market risk categories occur on different days; similar diversification benefits also are taken into account within each category.

(2) N/A - Not Applicable. The minimum and maximum VaR values for the total VaR and each of the component VaRs might have occurred on different days during the year and therefore the diversification benefit is not an applicable measure.

(3) The Credit Portfolio VaR is disclosed as a separate category from the Primary Risk Categories and includes loans that are carried at fair value and associated hedges as well as counterparty credit valuation adjustments and related hedges.

26.2.6 Non-trading Risks for the Year Ended 31 December 2022

The Group and Company believes that sensitivity analysis is an appropriate representation of the Group and Company's non-trading risks. Reflected below is this analysis, which covers substantially all of the non-trading risks in the Group and Company's portfolio, with the exception of counterparty credit valuation adjustments, which are covered in the previous section.

26.2.7 Interest Rate Risk

The Group and Company's VaR excludes certain funding liabilities and money market transactions.

The application of a parallel shift in interest rates of 200 basis points increase or decrease to these positions would result in a net loss or gain, respectively, of approximately \$60.8 million as at

31 December 2022, compared to a net loss or gain of \$39.6 million as at 31 December 2021.

26.2.8 Funding Liabilities

The credit spread risk sensitivity of the Group's mark-to-market funding liabilities corresponds to an increase in value of approximately \$5.6 million and \$5.4 million for each 1 basis point widening in the Group's credit spread level at 31 December 2022 and 31 December 2021 respectively.

26.2.9 Equity Investments Price Risk

The Group and Company are exposed to equity price risk as a result of changes in the fair value of its investments in listed and private equities classified as FVPL financial assets. These investments are predominantly equity positions with long investment horizons, the majority of which are for business facilitation purposes. The market risk related to these investments is

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

measured by estimating the potential reduction in net revenues associated with a 10% decline in asset values as shown in the table below.

	2022	2021
in \$ millions	10% sensitivity	10% sensitivity
Investment securities	14	17

26.2.10 Currency Risk

The Group and Company have foreign currency exposure arising from foreign operations. The majority of this foreign currency risk has been hedged by other members of the Morgan Stanley Group, primarily Morgan Stanley, by utilising forward foreign currency exchange contracts.

The Group and Company also have foreign currency exposure arising from its trading activities in currencies other than US dollars. The Group and Company actively manage this

exposure by hedging with other Morgan Stanley Group undertakings.

The analysis below details the foreign currency exposure for the Group and Company, by foreign currency, relating to the retranslation of branches and subsidiaries which are not denominated in US dollars. The largest foreign currency exposures for Group and Company are driven by the Company's South Korean branch and Morgan Stanley Taiwan Limited, a direct subsidiary of the Company. The analysis calculates the impact on total comprehensive income of a reasonably possible parallel shift of the foreign currency in relation to the US dollar, with all other variables held constant. This analysis does not take into account the effect of the foreign currency hedges held by other members of the Morgan Stanley Group.

Group	2022			2021		
	Sensitivity to applied percentage change in currency (+/-)			Sensitivity to applied percentage change in currency (+/-)		
	Foreign currency exposure	Percentage change applied	Other comprehensive income	Foreign currency exposure	Percentage change applied	Other comprehensive income
in \$ millions						
Euro	(13)	9%	(1)	2	14%	—
Taiwan New Dollar	186	11%	20	195	8%	16
South Korean Won	420	9%	38	417	11%	46
Swiss Franc	41	8%	3	35	8%	3
	634		60	649		65

Company	2022			2021		
	Sensitivity to applied percentage change in currency (+/-)			Sensitivity to applied percentage change in currency (+/-)		
	Foreign currency exposure	Percentage change applied	Other comprehensive income	Foreign currency exposure	Percentage change applied	Other comprehensive income
in \$ millions						
Euro	54	9%	5	58	14%	8
South Korean Won	420	9%	38	417	11%	46
Swiss Franc	41	8%	3	35	8%	3
	515		46	510		57

The reasonably possible percentage change in the currency rate in relation to US dollars has been calculated based on the greatest annual percentage change over the 5 year period from 1 January 2018 to 31 December 2022 (2021: 1 January 2017 to 31 December 2021).

The Group also has foreign currency exposure arising from its trading activities and assets and liabilities in currencies other than US dollars, which it actively manages by hedging with other Morgan Stanley Group undertakings.

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022****26.3 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 Group. Credit risk includes country risk, which is further described below. Additional information on credit risk monitoring, control and mitigation is presented in the Strategic Report and forms part of the audited financial statements.

26.3.1 Primary Credit Risk Exposure

The Group primarily incurs credit risk to institutions and sophisticated investors, mainly through its Institutional Securities business segment. The risk may be incurred 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 Group;
- extending credit to clients through lending commitments;
- providing short- or long-term funding that is secured by physical or financial collateral whose value may at times be insufficient to fully cover the repayment amount;
- posting margin and/ or collateral to clearing houses, clearing agencies, exchanges, banks, securities firms and other financial counterparties;
- placing funds on deposit at other financial institutions to support the Group's clearing and settlement obligations; and
- investing or trading in securities and loan pools, whereby the value of these assets may fluctuate based on realised or expected defaults on the underlying obligations or loans.

26.3.2 Risk Management**26.3.2.1 Stress Testing**

Stress testing is one of the Group's principal risk management tools, used to identify and assess the impact of severe stresses on its portfolios. A number of different scenarios are used to measure the impact on the Group's credit risks and market risks stemming from negative economic and political scenarios, including possible contagion effects where appropriate. The results of the stress tests may result in the amendment of limits or exposure mitigation.

26.3.2.2 Monitoring and Control

To help protect the Group from losses, the Credit Risk Management Department establishes Morgan Stanley-wide practices to evaluate, monitor and control credit risk at the transaction, obligor and portfolio levels. The Credit Risk Management Department approves extensions of credit, evaluates the creditworthiness of the Group's 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 subsequent losses that may occur when an obligor defaults. In addition, credit risk exposure is actively managed by credit professionals and committees within the Credit Risk Management Department and through various risk committees, whose membership includes individuals from the Credit Risk Management Department.

A Credit Limits Framework is utilised to manage credit risk levels across the MSI Group. The Credit Limits Framework is calibrated within the MSI Group's risk tolerance and includes single-name limits and portfolio concentration limits by country and industry. The Credit Risk Management Department helps ensure timely and transparent communication of material credit risks, compliance with established limits and escalation of risk concentrations to appropriate senior management.

The Credit Risk Management Department also works closely with the Market Risk Department and applicable business units to monitor risk exposures and to perform stress tests to identify, analyse and, control credit risk concentrations arising in the Group's lending and trading activities. The stress tests shock market factors (e.g. interest rates, commodity prices, credit spreads), and risk parameters (e.g. default probabilities and loss given default) to assess the impact of stresses on exposures, profit and loss, and the Group's capital position. Stress tests are conducted in accordance with established Group policies and procedures.

26.3.2.3 Credit Evaluation

The evaluation of corporate and institutional counterparties includes assigning obligor credit ratings, which reflect an assessment of an obligor's probability of default and loss given default. Credit evaluations typically involve the

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

assessment of financial statements, leverage, liquidity, capital strength, asset composition and quality, market capitalisation, access to capital markets, the adequacy of collateral, if applicable, and in the case of certain loans, cash flow projections and debt service requirements. The Credit Risk Management Department also evaluates strategy, market position, industry dynamics, management and other factors that could affect the obligor's risk profile. Additionally, the Credit Risk Management Department evaluates the relative position of the Group's exposure in the borrower's capital structure and relative recovery prospects, as well as adequacy of collateral (if applicable) and other structural elements of the particular transaction.

In addition to assessing and monitoring its credit exposure and risk at the individual obligor level, the Group also reviews its credit exposure and risk to geographic regions. As at 31 December 2022, the Group had no significant geographical concentration of risk but had credit exposure to North America, Asia and Western Europe. In addition, the Group pays particular attention to smaller exposures in emerging markets given their unique risk profile. Sovereign ceiling ratings i.e. the maximum credit rating that can be assigned to a counterparty with a designated country of risk, are derived using methodologies generally consistent with those employed by external rating agencies.

The Group also reviews its credit exposure and risk to certain types of customers. At 31 December 2022, the Group's material credit exposure was to central clearing counterparties, corporate entities, financial institutions and sovereign-related entities.

The Group also reviews its credit exposure to industries identified as having high climate transition and physical risk. At 31 December 2022 this risk is not material.

26.3.3 Risk Mitigation

The Credit Risk Management Department may seek to mitigate credit risk from its lending and trading activities in multiple ways, including collateral provisions, guarantees and hedges. At the transaction level, the Credit Risk Management Department seeks to mitigate risk through management of key risk elements such as size, tenor, financial covenants, seniority and collateral. The main types of collateral held are cash or similarly highly-liquid assets. The Group

has internal policies on the acceptability of specific classes of collateral or credit risk mitigation. The Group closely monitors collateral held for financial assets considered to be credit-impaired, as in such cases it is considered more likely that the Group will take possession of collateral to mitigate potential credit losses. The Group actively hedges its lending and derivatives exposure through various financial instruments that may include single-name, portfolio and structured credit derivatives. Additionally, the Group may sell, assign or syndicate funded loans and lending commitments in the primary and secondary loan markets. In connection with its derivatives trading activities, the Group generally enters into master netting agreements and collateral arrangements with counterparties. These agreements provide the Group with the ability to demand collateral, to liquidate collateral and to offset receivables and payables covered under the same master agreement in the event of a counterparty default.

26.3.3.1 Securities Purchased Under Agreements to Resell and Securities Borrowed

The Group manages credit exposure arising from securities purchased under agreements to resell and securities borrowed transactions by, in appropriate circumstances, entering into master netting agreements and collateral agreements with counterparties that provide the Group, in the event of a counterparty default, with the right to net a counterparty's rights and obligations under such agreements and to liquidate and set off collateral held by the Group against the net amount owed by the counterparty. Under these securities purchased under agreements to resell and securities borrowed transactions, the Group receives collateral, including United States government and agency securities, other sovereign government obligations, corporate and other debt and corporate equities. The Group also 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 to ensure such transactions are adequately collateralised.

26.3.3.2 Derivatives

The Group may seek to mitigate credit risk from its derivatives transactions in multiple ways, including documentation, collateral provisions, guarantees and hedges. At the transaction level, the Group seeks to mitigate risk through

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022**

management of key risk elements such as size, tenor, financial covenants, seniority and collateral. The Group actively hedges its derivatives exposure through various financial instruments that may include single-name, portfolio and structured credit derivatives. The Group may enter into master netting agreements and collateral arrangements with counterparties. These master netting agreements and collateral arrangements may provide the Group with the ability to demand collateral, as well as to liquidate collateral and offset receivables and payables covered under the same master netting agreement in the event of counterparty default. The Group monitors the creditworthiness of counterparties to these transactions on an ongoing basis and requests additional collateral in accordance with collateral arrangements when deemed necessary.

26.3.4 Exposure to Credit Risk

The maximum exposure to credit risk ("gross credit exposure") of the Group and Company as at 31 December 2022 is disclosed below, based on the carrying amounts of the financial assets and the maximum amount that the Group and

Company could have to pay in relation to unrecognised financial instruments, which the Group and Company believes are subject to credit risk. The table includes financial instruments subject to ECL and not subject to ECL.

Where the Group or 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 disclosed below. The net credit exposure represents the credit exposure remaining after the effect of the credit enhancements.

Trading financial assets are subject to traded credit risk through exposure to the issuer of the financial asset; the Group and Company manages this issuer credit risk through its market risk management infrastructure and this traded credit risk is incorporated within the VaR based risk measures included in the market risk disclosure. However, listed derivatives are included below as they are recognised as having credit risk exposure to central counterparties.

Exposure to Credit Risk by Class

Group	2022			2021		
Class	Gross credit exposure	Credit enhance-ments	Net credit exposure ⁽¹⁾	Gross credit exposure	Credit enhance-ments	Net credit exposure ⁽¹⁾
in \$ millions						
Subject to ECL:						
Cash and short-term deposits	18,754	—	18,754	28,532	—	28,532
Loans and advances	63	—	63	67	—	67
Trade and other receivables ⁽²⁾	80,172	—	80,172	78,069	—	78,069
Not subject to ECL:						
Trading financial assets:						
Derivatives	251,076	(240,879)	10,197	242,432	(229,230)	13,202
Secured financing	129,779	(128,908)	871	125,895	(124,594)	1,301
Trade and other receivables ⁽²⁾	1,298	(319)	979	993	(777)	216
	481,142	(370,106)	111,036	475,988	(354,601)	121,387
Unrecognised financial instruments						
Not subject to ECL:						
Loan commitments	15	—	15	121	(2)	119
Unsettled securities purchased under agreements to resell ⁽³⁾	54,628	—	54,628	34,493	—	34,493
Total unrecognised financial instruments	54,643	—	54,643	34,614	(2)	34,612
	535,785	(370,106)	165,679	510,602	(354,603)	155,999

(1) Of the residual net credit exposure, intercompany cross product netting arrangements are in place which would allow Group an additional \$8,756 million of an available \$34,119 million (31 December 2021: \$7,041 million of an available \$31,977 million) to be offset in the event of default by certain Morgan Stanley counterparties.

(2) Trade and other receivables primarily include cash collateral pledged against the payable on OTC derivative positions. These derivative liabilities are included within trading financial liabilities in the consolidated statement of financial position.

(3) For unsettled securities purchased under agreements to resell, collateral in the form of securities will be received at the point of settlement. Since the value of collateral is determined at a future date, it is currently unquantifiable and not included in the table.

[Table of contents](#)**MORGAN STANLEY & CO. INTERNATIONAL plc****NOTES TO THE FINANCIAL STATEMENTS****Year ended 31 December 2022***Exposure to Credit Risk by Class*

Company	2022			2021		
Class	Gross credit exposure	Credit enhance-ments	Net credit exposure ⁽¹⁾	Gross credit exposure	Credit enhance-ments	Net credit exposure ⁽¹⁾
in \$ millions						
Subject to ECL:						
Cash and short-term deposits	18,449	—	18,449	28,218	—	28,218
Loans and advances	29	—	29	26	—	26
Trade and other receivables ⁽²⁾	80,261	—	80,261	78,144	—	78,144
Not subject to ECL:						
Trading financial assets						
Derivatives	251,082	(240,885)	10,197	242,445	(229,243)	13,202
Secured financing	129,579	(128,712)	867	125,695	(124,394)	1,301
Trade and other receivables ⁽²⁾	1,298	(319)	979	993	(777)	216
	480,698	(369,916)	110,782	475,521	(354,414)	121,107
Unrecognised financial instruments						
Not subject to ECL:						
Loan commitments	15	—	15	121	(2)	119
Unsettled securities purchased under agreements to resell ⁽³⁾	54,628	—	54,628	34,493	—	34,493
Total unrecognised financial instruments	54,643	—	54,643	34,614	(2)	34,612
	535,341	(369,916)	165,425	510,135	(354,416)	155,719

(1) Of the residual net credit exposure, intercompany cross product netting arrangements are in place which would allow an additional \$8,754 million of an available \$34,119 million (31 December 2021: \$7,039 million of an available \$31,956 million) to be offset in the event of default by certain Morgan Stanley counterparties.

(2) Trade and other receivables primarily 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.

(3) For unsettled securities purchased under agreements to resell, collateral in the form of securities will be received at the point of settlement. Since the value of collateral is determined at a future date, it is currently unquantifiable and not included in the table.