MORGAN STANLEY CAPITAL GROUP (SINGAPORE) PTE.

Registered Number: 199002583D

Report and financial statements

Year ended 31 December 2021

MORGAN STANLEY CAPITAL GROUP (SINGAPORE) PTE.

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MORGAN STANLEY CAPITAL GROUP (SINGAPORE) PTE.

DIRECTORS' STATEMENT
Year ended 31 December 2021

The Directors of Morgan Stanley Capital Group (Singapore) Pte. (the 'Company') present their statement together with the audited financial statements for the year ended 31 December 2021.

1 OPINION OF THE DIRECTORS

In the opinion of the Directors, the accompanying financial statements set out on pages 6 to 63 are drawn up so as to give a true and fair view of the financial position of the Company as at 31 December 2021, and the financial performance, changes in equity and cash flows of the Company for the financial year ended 31 December 2021, and at the date of this statement, there are reasonable grounds to believe that the Company will be able to pay its debts when they fall due.

2 DIRECTORS

The Directors of the Company in office at the date of this statement are:

Gian, Jia Ying (Yan Jiaying)
Ong, Whatt Soon Ronald
Trikha, Kapil
Dhingra, Tarunjeet (appointed on 22 June 2021)

3 ARRANGEMENTS TO ENABLE DIRECTORS TO ACQUIRE BENEFITS BY MEANS OF THE ACQUISITION OF SHARES AND DEBENTURES

Neither at the end of the financial year nor at any time during the financial year did there subsist any arrangement to which the Company is a party, being arrangements whose object is to enable the Directors of the Company to acquire benefits by means of the acquisition of shares in or debentures of, the Company or any other body corporate, other than in relation to the Morgan Stanley Equity Incentive Compensation Plan.

4 DIRECTORS' INTERESTS IN SHARES AND DEBENTURES

The Directors of the Company holding office at the end of the financial year have interests in the shares of the ultimate holding company, Morgan Stanley. The Company has obtained an exemption from the Accounting and Corporate Regulatory Authority from compliance with the relevant disclosure requirements for Directors' interests in such shares.

5 SHARE OPTIONS

(a) Options to take up unissued shares

During the financial year, no option to take up unissued shares of the Company was granted.

(b) Options exercised

During the financial year, there were no shares of the Company issued by virtue of the exercise of an option to take up unissued shares of the Company.

(c) Unissued shares under option

At the end of the financial year, there were no unissued shares of the Company under option.

6 AUDITORS

The auditors, Deloitte & Touche LLP, have expressed their willingness to accept re-appointment.

On behalf of the directors

....
Gian, Jia Ying (Yan Jiaying)

....
Dhingra, Tarunjeet

25 February 2022

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INDEPENDENT AUDITOR'S REPORT TO THE MEMBER OF

MORGAN STANLEY CAPITAL GROUP (SINGAPORE) PTE.

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of Morgan Stanley Capital Group (Singapore) Pte. (the "Company"), which comprise the statement of financial position of the Company as at 31 December 2021, statement of comprehensive income, statement of changes in equity and statement of cash flows of the Company for the year then ended, and notes to the financial statements, including a summary of significant accounting policies, as set out on pages 6 to 63.

In our opinion, the accompanying financial statements are properly drawn up in accordance with the provisions of the Companies Act, Chapter 50 (the "Act") and Financial Reporting Standards in Singapore ("FRSs") so as to give a true and fair view of the financial position of the Company as at 31 December 2021 and of the financial performance, changes in equity and cash flows of the Company for the year ended on that date.

Basis for Opinion

We conducted our audit in accordance with Singapore Standards on Auditing ("SSAs"). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Company in accordance with the Accounting and Corporate Regulatory Authority Code of Professional Conduct and Ethics for Public Accountants and Accounting Entities ("ACRA Code") together with the ethical requirements that are relevant to our audit of the financial statements in Singapore, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ACRA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Information Other than the Financial Statements and Auditor's Report Thereon

Management is responsible for the other information. The other information comprises the Directors' Statement set out on pages 1 to 2.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

INDEPENDENT AUDITOR'S REPORT TO THE MEMBER OF

MORGAN STANLEY CAPITAL GROUP (SINGAPORE) PTE.

Responsibilities of Management and Directors for the Financial Statements

Management is responsible for the preparation of financial statements that give a true and fair view in accordance with the provisions of the Act and FRSs, and for devising and maintaining a system of internal accounting controls sufficient to provide a reasonable assurance that assets are safeguarded against loss from unauthorised use or disposition; and transactions are properly authorised and that they are recorded as necessary to permit the preparation of true and fair financial statements and to maintain accountability of assets.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

The directors' responsibilities include overseeing the Company's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SSAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

INDEPENDENT AUDITOR'S REPORT TO THE MEMBER OF

MORGAN STANLEY CAPITAL GROUP (SINGAPORE) PTE.

Auditor's Responsibilities for the Audit of the Financial Statements (continued)

- Conclude on the appropriateness of the management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Report on Other Legal and Regulatory Requirements

In our opinion, the accounting and other records required by the Act to be kept by the Company have been properly kept in accordance with the provisions of the Act.

Deloitte & Touche LLP

Public Accountants and
Chartered Accountants
Singapore

25 February 2022

MORGAN STANLEY CAPITAL GROUP (SINGAPORE) PTE.

STATEMENT OF COMPREHENSIVE INCOME
Year ended 31 December 2021

	Note	2021 US$'000	2020 US$'000
Net trading income		82,158	80,072
Net income from other financial instruments held at fair value	4	—	—
Fee and commission income	5	7,064	3,800
Fee and commission expense		(12,682)	(8,225)
Interest income	6	1,537	753
Interest expense	6	(2,132)	(5,402)
Other revenue	7	17,051	11,631
Other expense	8	(38,380)	(23,427)
PROFIT BEFORE INCOME TAX		54,616	59,202
Income tax	9	(3,385)	(10,437)
PROFIT AND TOTAL COMPREHENSIVE INCOME FOR THE YEAR		51,231	48,765

All results were derived from continuing operations.

The notes on pages 10 to 63 form an integral part of the financial statements.

STATEMENT OF CHANGES IN EQUITY
Year ended 31 December 2021

	Note	Share capital	(Accumulated losses)/ Retained earnings	Total equity
		US$'000	US$'000	US$'000
Balance as at 1 January 2020		43,634	(17,303)	26,331
Profit and total comprehensive income for the year		—	48,765	48,765
Balance at 31 December 2020		43,634	31,462	75,096
Profit and total comprehensive income for the year		—	51,231	51,231
Transactions with owner:				
Issue of share capital	20	320,000	—	320,000
Balance at 31 December 2021		363,634	82,693	446,327

The notes on pages 10 to 63 form an integral part of the financial statements.

MORGAN STANLEY CAPITAL GROUP (SINGAPORE) PTE.

STATEMENT OF FINANCIAL POSITION
As at 31 December 2021

	Note	2021	2020
		US$'000	US$'000
ASSETS			
Cash at bank	21a	704,358	22,082
Trading financial assets	11	4,883,235	1,250,594
Secured financing		241,211	47,084
Trade and other receivables	12	945,274	337,866
Prepayments		802	856
Property, plant and equipment	13	132,701	40,132
TOTAL ASSETS		6,907,581	1,698,614
LIABILITIES AND EQUITY			
LIABILITIES			
Trading financial liabilities	11	4,883,842	1,284,064
Secured borrowing		241,211	47,084
Trade and other payables	14	1,229,068	278,012
Debt and other borrowings	15	100,000	—
Provisions	16	2,240	1,844
Current tax liabilities		3,571	10,977
Deferred tax liabilities	17	1,291	1,493
Accruals		31	44
TOTAL LIABILITIES		6,461,254	1,623,518
EQUITY			
Share capital	20	363,634	43,634
Retained earnings		82,693	31,462
Equity attributable to owner of the Company		446,327	75,096
TOTAL EQUITY		446,327	75,096
TOTAL LIABILITIES AND EQUITY		6,907,581	1,698,614

These financial statements were approved by the Board and authorised for issue on 25 February 2022.

The notes on pages 10 to 63 form an integral part of the financial statements.

STATEMENT OF CASH FLOWS
Year ended 31 December 2021

	Note	2021 US$'000	2020 US$'000
NET CASH FLOWS FROM OPERATING ACTIVITIES	21b	327,944	17,274
INVESTING ACTIVITY			
Purchase of property, plant and equipment	13	(52,535)	(1,533)
NET CASH FLOWS USED IN INVESTING ACTIVITY		(52,535)	(1,533)
FINANCING ACTIVITIES			
Issue of ordinary share capital	20	320,000	—
Payment of principal portion of lease liabilities		(13,133)	(7,363)
Issue of subordinated loan liabilities	15	100,000	—
NET CASH FLOWS FROM / (USED IN) FINANCING ACTIVITIES		406,867	(7,363)
NET INCREASE IN CASH AND CASH EQUIVALENTS		682,276	8,378
CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE YEAR		22,082	13,704
CASH AND CASH EQUIVALENTS AT THE END OF THE YEAR	21a	704,358	22,082

The notes on pages 10 to 63 form an integral part of the financial statements.

1. CORPORATE INFORMATION

The Company (Registration Number 199002583D) is incorporated and domiciled in the Republic of Singapore, with its principal place of business at 23 Church Street, #16-01 Capital Square, Singapore 049481 and registered office at One Marina Boulevard, #28-00, Singapore 018989.

The principal activities of the Company are the trading of commodities and the provision of market support services. The Company also provides property, plant and equipment to its related companies for their use.

The Company is provisionally registered with the United States Commodity Futures Trading Commission ("CFTC") as a swap dealer effective 1 June 2020 and subject to the minimum capital requirements of the CFTC with effect from 6 October 2021.

The Company's ultimate parent undertaking and controlling entity is Morgan Stanley which, together with the Company and Morgan Stanley's other subsidiary undertakings, form the Morgan Stanley Group. Morgan Stanley is incorporated in the State of Delaware, the United States of America. Copies of its financial statements can be obtained from www.morganstanley.com/investorrelations.

2. BASIS OF PREPARATION

Statement of compliance

The Company has prepared its annual financial statements in accordance with the provisions of the Singapore Companies Act, the Financial Reporting Standards in Singapore ('FRS') and the Interpretations of the Financial Reporting Standards ('INT FRS') issued by the Accounting Standards Council ('ASC'). The primary financial statements in this document are presented in accordance with FRS 1 '*Presentation of financial statements*'.

New standards and interpretations adopted during the year

The following amendment to standards relevant to the Company's operations were adopted during the year. Except where otherwise stated, this amendment to standards did not have a material impact on the Company's financial statements.

An amendment to FRS 116 *'Leases'*: Covid-19-Related Rent Concessions beyond 30 June 2021 was issued by the ASC in March 2021, for retrospective application in accounting periods beginning on or after April 2021. The Company has early adopted this amendment from 1 January 2021.

There were no other standards, amendments to standards or interpretations relevant to the Company's operations which were adopted during the year.

New standards and interpretations not yet adopted

At the date of authorisation of these financial statements, the following amendments to standards relevant to the Company's operations were issued by the ASC but not mandatory for annual periods beginning 1 January 2021. Except where otherwise stated, the Company does not expect that the adoption of the following amendments to standards will have a material impact on the Company's financial statements.

Amendments to FRS 1 *'Presentation of Financial Statements'*: Classification of Liabilities as Current or Non-current were issued by the ASC in May 2020 for retrospective application in accounting periods beginning on or after 1 January 2023. Early application is permitted.

NOTES TO THE FINANCIAL STATEMENTS
Year ended 31 December 2021

Amendments to FRS 37 *'Provisions, Contingent Liabilities and Contingent Assets'*: Onerous Contracts – Cost of Fulfilling a Contract were issued by the ASC in July 2020, for modified retrospective application in accounting periods beginning on or after 1 January 2022. Early application is permitted.

As part of the 2018-2020 Annual Improvements Cycle published in July 2020, the ASC made an amendment to FRS 109 'Financial Instruments', relating to the treatment of fees in the assessment of whether financial liabilities are modified or exchanged, where such transactions occur on or after 1 January 2022. Early application is permitted.

Amendments to FRS 8 *'Accounting Policies, Changes in Accounting Estimates and Errors'*: Definition of Accounting Estimates were issued by the ASC in February 2021, for prospective application in accounting periods beginning on or after 1 January 2023. Early application is permitted.

Amendments to FRS 1 *'Presentation of Financial Statements'*: Disclosure of Accounting Policies were issued by the ASC in February 2021, for prospective application in accounting periods beginning on or after 1 January 2023. Early application is permitted.

Amendments to FRS 12 *'Income Taxes'*: Deferred Tax related to Assets and Liabilities arising from a Single Transaction were issued by the ASC in September 2021, for retrospective application in accounting periods beginning on or after 1 January 2023. Early application is permitted.

Basis of measurement

The financial statements of the Company are prepared under the historical cost basis, except for certain financial instruments that have been measured at fair value as explained in the accounting policies below.

Critical accounting judgements and key sources of estimation uncertainty

In preparing the financial statements, the Company makes judgements and estimates that affect the application of accounting policies and reported amounts.

Critical accounting judgements are key decisions made by management in the application of the Company's accounting policies, other than those involving estimations, which have the most significant effects on the amounts recognised in the financial statements.

Key sources of estimation uncertainty represent assumptions and estimations made by management that have a significant risk of resulting in a material adjustment to the carrying amount of assets and liabilities within the next financial year.

The critical judgements in applying the Company's accounting policies are relating to the impairment of assets, see note 3(f) below and recognition of deferred tax, see note 3(l) and note 17 below.

The key sources of estimation uncertainty are valuation of certain financial instruments. For further details on the assumptions and/or estimations uncertainties used in determining fair value of certain assets and liabilities, see note 3(d) and note 25 below.

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

COVID-19

Although the global economy has begun to recover from the COVID-19 pandemic, as many health and safety restrictions have been lifted and vaccine distribution continues to increase, certain adverse consequences of the pandemic continue to impact the global economy and may persist for sometime, including labor shortages and disruptions of global supply chains. The growth in economic activity and demand for goods and services, alongside labor shortages and supply chain complications, has also contributed to rising inflationary pressures. Should these ongoing effects of the pandemic continue for an extended period or worsen, the Company could experience reduced client activity and demand for products and services.

Morgan Stanley Group and the Company continues to be fully operational and, recognizing that local conditions vary for our offices around the world and that trajectory of the virus continues to be uncertain, our employees are able to work from home and in our offices as deemed necessary. If significant portions of our workforce, including key personnel, are unable to work effectively because of illness, government actions, or other restrictions in connection with the pandemic, the impact of the pandemic on the Company's business could be exacerbated.

The extent to which the consequences of the COVID-19 pandemic affect the Company's businesses, results of operations and financial condition, as well as its regulatory capital ratios and liquidity position, and ability to take capital actions, will depend on future developments that remain uncertain, including the rate of distribution and administration of vaccines globally, the severity and duration of any resurgence of COVID-19 variants, future actions taken by governmental authorities, central banks and other third-party service providers.

The going concern assumption

The notes to the financial statements include the Company's objectives, policies and processes for managing its capital; its financial risk management objectives; details of its financial instruments; and its exposures to credit risk and liquidity risk. Retaining sufficient liquidity and capital to withstand market pressures remains central to the Morgan Stanley Group's and the Company's strategy.

The existing and potential effects of COVID-19 on the business of the Company, as described in the "COVID-19" note above, have been considered as part of the going concern analysis.

Taking the above factors into consideration, the Company's management believe that the Company will have access to adequate resources to continue in operational existence for the foreseeable future. Accordingly, they continue to adopt the going concern basis in preparing the financial statements.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

a. Functional currency

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

All currency amounts in the financial statements are rounded to the nearest thousand 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.

All translation differences are taken through the statement of comprehensive income. Exchange differences recognised in the statement of comprehensive income are presented in 'Other revenue' or 'Other 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 derivative contracts where the Company 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.

Trading financial instruments, including all derivatives are initially recorded on trade date at fair value, see note 3(d) below. All subsequent changes in fair value and foreign exchange differences are reflected in the statement of comprehensive income in 'Net trading income'.

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 statement of comprehensive income in 'Other expense'.

Non-trading financial assets at fair value through profit or loss

Non-trading financial assets at fair value through profit or loss ('FVPL') include commodities spot purchases and corresponding forward sale undertaken contemporaneously that are accounted for as financing transactions and presented as 'Secured Financing' on the statement of financial position.

Non-trading financial assets at FVPL are principally financial assets where the Company 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 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, foreign exchange differences and unrealised interest are reflected in the statement of comprehensive income in 'Net income from other financial instruments held at fair value.

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

ii) Financial instruments designated at fair value through profit or loss

Financial liabilities designated at FVPL include commodities spot sales and corresponding forward purchases undertaken contemporaneously that are accounted for as financing transactions and reflected as 'Secured Borrowing' on the statement of financial position.

The Company has 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.

From the date the transaction in a financial instrument designated at FVPL is entered into (trade date) until settlement date, the Company 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 and foreign exchange differences are reflected in the statement of comprehensive income in 'Net income from other financial instruments held at fair value'.

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

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

iii) Financial assets and financial liabilities at amortised cost

Financial assets at amortised cost include cash at bank and trade and other receivables.

Financial assets are recognised at amortised cost when the 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 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 expected credit loss ("ECL") allowance. Interest is recognised in the statement of comprehensive income 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 statement of comprehensive income in 'Net impairment loss on financial instruments'.

Financial liabilities classified at amortised cost includes trade and other payables and 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 Company 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 statement of comprehensive income 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.

iv) Secured financing and secured borrowings

As part of its trading activities, the Company enters into transactions which involve physical commodities spot purchases and sales and corresponding forward sale or purchases undertaken contemporaneously that are accounted for as financing transactions.

Securities received by the Company under resale arrangements are generally not recognised on the statement of financial position.

Securities sold by the Company under sale and repurchase agreements 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 Company believes market participants would use in pricing the asset or liability at the measurement date.

Where the 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 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 Company uses various valuation approaches and establishes a hierarchy for inputs used in measuring fair value that requires the most observable inputs be used when available.

Observable inputs are inputs that market participants would use in pricing the asset or liability that were developed based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect assumptions the Company believes other market participants would use in pricing the asset or liability, that are developed based on the best information available in the circumstances.

The fair value hierarchy is broken down into three levels based on the observability of inputs as follows, with Level 1 being the highest and Level 3 being the lowest level:

- Level 1 - 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, block discounts and discounts for equity-specific restrictions that would not transfer to market participants are not applied to Level 1 instruments. Since valuations are based on quoted prices that are readily and regularly available in an active market, valuation of these products does not entail a significant degree of 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 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 Company in determining fair value is greatest for instruments categorised in Level 3 of the fair value hierarchy.

The 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 from Level 1 to Level 2 or from Level 2 to Level 3 of the fair value hierarchy.

In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, the total fair 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 Company incorporates Funding Valuation Adjustment ("FVA") into the fair value measurements of over-the-counter ("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 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 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 Company carries positions at the point within the bid-ask range that meets its best estimate of fair value. For offsetting positions in the same financial instrument, the same price within the bid-ask spread is used to measure both the long and short positions.

Fair value for many 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 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 and funding.

Adjustments for liquidity risk adjust model-derived mid-market amounts of Level 2 and Level 3 financial instruments for the bid-mid or mid-ask spread required to properly reflect the exit price of a risk position. Bid-mid and mid-ask spreads are marked to levels observed in trade activity, broker quotes or other external third-party data. Where these spreads are unobservable for the particular position in question, spreads are derived from observable levels of similar positions.

The Company applies credit-related valuation adjustments to its Borrowings which are designated at FVPL and to OTC derivatives. The Company considers 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 Company's and the counterparty's credit rating is considered when measuring fair value. In determining the expected exposure, the Company simulates the distribution of the future exposure to a counterparty, then applies market-based default probabilities to the future exposure, leveraging external third-party credit default swap ("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 Company 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 Company may apply concentration adjustments to certain of its OTC derivative portfolios to reflect the additional cost of closing out a particularly large risk exposure. Where possible, these adjustments are based on observable market information but in many instances significant judgement is required to estimate the costs of closing out concentrated risk exposures due to the lack of liquidity in the marketplace.

Valuation process
Valuation Control ("VC") within Finance is responsible for the Company's fair value valuation policies, processes and procedures. 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 Company's financial instruments. VC implements valuation control processes designed to validate the fair value of the Company's financial instruments measured at fair value including those derived from pricing models.

Model Review.
VC, in conjunction with the Model Risk Management Department ("MRM"), which reports to the Chief Risk Officer of the Morgan Stanley Group ("CRO"), independently reviews valuation models' theoretical soundness, the appropriateness of the valuation methodology and calibration techniques developed by the business units using observable inputs. Where inputs are not observable, VC reviews the appropriateness of the proposed valuation methodology to determine that it is consistent with how a market participant would arrive at the unobservable input. The valuation methodologies utilised in the absence of observable inputs may include extrapolation techniques and the use of comparable observable inputs. As part of the review, VC develops a methodology to independently verify the fair value generated by the business unit's valuation models. The Company generally subjects 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 independently validates the fair values of financial instruments determined using valuation models 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.

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

VC uses recently executed transactions, other observable market data such as exchange data, broker/ dealer quotes, third-party pricing vendors and aggregation services for validating the fair values of financial instruments generated using valuation models. VC assesses the external sources and their valuation methodologies to determine if the external providers meet the minimum standards expected of a third-party pricing source. Pricing data provided by approved external sources are evaluated using a number of approaches; for example, by corroborating the external sources' prices to executed trades, by analysing the methodology and assumptions used by the external source to generate a price and/ or by evaluating how active the third-party pricing source (or originating sources used by the third-party pricing source) is in the market. Based on this analysis, VC generates a ranking of the observable market data designed to ensure that the highest-ranked market data source is used to validate the business unit's fair value of financial instruments.

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.

Level 3 Transactions.
VC reviews the business unit's valuation techniques to assess whether these are consistent with market participant assumptions.

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 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 statement of comprehensive income, but is deferred and recognised over the life of the instrument or at the earlier of when the unobservable market data become observable, maturity or disposal of the instrument.

e. Derecognition of financial assets and liabilities

The Company derecognises a financial asset when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risk and rewards of ownership of the asset.

If the asset has been transferred, and the Company neither transfers nor retains substantially all of the risks and rewards of the asset, then the Company determines whether it has retained control of the asset.

If the Company has retained control of the asset, it continues to recognise the financial asset to the extent of its continuing involvement in the financial asset. If the Company has not retained control of the asset, it derecognises the asset and separately recognises any rights or obligation created or retained in the transfer.

Upon derecognition of a financial asset, the difference between the previous carrying amount and the sum of any consideration received, together with the transfer of any cumulative gain/loss previously recognised in equity, are recognised in the statement of comprehensive income within 'Net gains/ (losses) on derecognition of financial assets measured at amortised cost', when applicable.

The Company derecognises financial liabilities when the Company's obligations are discharged or cancelled or when they expire.

f. Impairment of financial assets

The Company recognises loss allowances for ECL for financial assets measured at amortised cost.

Measurement of ECL
For financial assets, ECLs are the present value of cash shortfalls (i.e. the difference between contractual and expected cash flows) over the expected life of the financial instrument, discounted at the asset's EIR.

Where a financial asset is credit-impaired at the reporting date, the ECL is measured as the difference between the asset's gross carrying amount and the present value of future cash flows, discounted at the original EIR.

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

The probability of default ("PD") is derived from internal credit rating grades (based on available information about the borrower) and multiple forward-looking macroeconomic scenarios which are probability weighted. Credit risk is considered to have increased significantly if the PD has significantly increased at the reporting date relative to the PD of the facility, at the date of initial recognition. The assessment of whether a change in PD is "significant" is based both on a consideration of the relative change in PD and on qualitative indicators of the credit risk of the facility, which indicate whether a loan is performing or in difficulty. In addition, as a backstop, the Company considers that SICR has occurred in all cases when an asset is more than 30 days past due.

The Company does not use the 'low' credit risk practical expedient, so monitors all financial instruments subject to impairment for SICR, with the exception of trade receivables, which do not have a significant financing component, as noted.

In general, ECL are measured so that they reflect:

- A probability-weighted range of possible outcomes
- The time value of money; and
- Relevant information relating to past, current and future economic conditions.

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 EIR. 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 Company considers 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. 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 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 Company measures ECL on an individual asset basis and has no purchased or originated credit-impaired ("POCI") financial assets.

More information on measurement of ECL is provided in note 23 Financial risk management.

Presentation of ECL

ECL is recognised in the statement of comprehensive income within 'Net impairment loss on financial instruments'. ECL on financial assets measured at amortised cost is presented as an ECL allowance. The allowance reduces the net carrying amount on the face of the statement of financial position.

Credit-impaired financial instruments
In assessing the impairment of financial instruments under the ECL model, the Company defines credit-impaired financial instruments in accordance with the 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 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 Company defines default in accordance with Credit Risk Management Department's policies and procedures. This considers whether the borrower is unlikely to pay its credit obligations to the 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 ("DPD") has defaulted.

Write-offs

Financial assets at amortized cost are written off (either partially or in full) when they are deemed uncollectible which generally occurs when all commercially reasonable means of recovering the loan balance have been exhausted. Such determination is based on an indication that the borrower can no longer pay the obligation, or that the proceeds from collateral will not be sufficient to pay the loan. Partial write-offs are made when a portion of the loan is uncollectable. Financial assets that are written off could still be subject to enforcement activities for recoveries of amounts due. If the amount to be written off is greater than the accumulated loss allowance, the difference is reflected directly in the statement of comprehensive income within 'Net impairment loss on financial instruments' and is not recognised in the loss allowance account. Any subsequent recoveries are credited to 'Net impairment loss on financial instruments' within the statement of comprehensive income.

g. Revenue recognition

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

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. Fee and commission income is recognised on trade date when the performance obligation is satisfied.

Fee and commission income in the statement of comprehensive income includes sales and marketing support which is recognised as the related service is performed.

Other items

Receivables from contracts with customers are recognised within 'Trade and other receivables' in the statement of financial position when the underlying performance obligations have been satisfied and the Company has the right per the contract to bill the customer.

Incremental costs to obtain the contract are expensed as incurred if the contract duration is one year or less. Revenues are not discounted when payment is expected within one year.

h. Fees and commission expense

Fee and commission expense in the statement of comprehensive income include transaction and service fees. Amounts are recognised as the related services are received.

i. Property, plant and equipment

Property, plant and equipment are stated at cost net of depreciation and any provision for impairment in value, see note 3(j) below, which are included within 'Other expense' in the statement of comprehensive income. For assets in the course of construction, interest that is directly attributable to the construction of the qualifying asset is capitalised as a cost of the asset. The interest capitalisation rate is based on the Morgan Stanley Group's blended funding rates.

For premises held under leases, a reinstatement provision is recognised for the estimated cost to reinstate the premises at the end of the lease period. When the reinstatement provision is established and included within 'Provisions' in the statement of financial position, an equivalent asset is recognised and included in the cost of leasehold improvements at the initial present value of the reinstatement obligations. The discount effect included in the reinstatement provision is reversed over time using a constant effective yield method and included within 'Interest expense' in the statement of comprehensive income. The reinstatement asset is depreciated over the useful economic life of the relevant leasehold improvement asset and the depreciation charge is included within 'Other expense' in the statement of comprehensive income.

Depreciation is provided on property, plant and equipment at rates calculated to write off the cost of the assets on a straight line basis over their expected useful lives as follows:

Leasehold improvements, including reinstatement assets	–	shorter of remaining lease term and 15 years
Fixtures, fittings and equipment	–	3 to 9 years
Right-of-use assets - Property	–	6 to 9 years

The carrying amount of an item of property, plant and equipment shall be derecognised on disposal or when no further economic benefits are expected from its use or disposal.

Gains and losses on disposals are determined by comparing proceeds with carrying amount.

j. Impairment of non-financial assets

Non-financial assets that are subject to depreciation or amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and its value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units 'CGU'). Such impairment losses are recognised in the statement of comprehensive income within 'Other expense' and are recognised against the carrying amount of the impaired asset on the statement of financial position. Non-financial assets, other than goodwill, that have suffered an impairment are reviewed for possible reversal of the impairment at the end of each reporting period.

k. Cash and cash equivalents

For the purposes of the statement of cash flows, Cash and cash equivalents comprise cash and demand deposits with banks, net of outstanding bank overdrafts, 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.

l. 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 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 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 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 probable that taxable profits will be available against which deductible temporary differences can be utilised.

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, based on the laws that have been enacted or substantively enacted by the reporting date. Deferred tax is charged or credited in the statement of comprehensive income, 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 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 Company intends to settle its current tax assets and current tax liabilities on a net basis.

m. Leases

For leases whose original lease term exceeds one year, right-of-use ("ROU") assets and lease liabilities are initially recognised based on the present value of the lease payments over the lease term. The discount rate used in determining the present value is the Company's incremental borrowing rate. The ROU asset also includes any prepaid lease payments and initial direct costs incurred and is reduced to reflect lease incentives received. The interest on lease liabilities is accrued at a constant periodic rate of interest on the remaining balance of the lease liability. The liability is remeasured when there is a change in future lease payments arising from a change in an index or rate or from a market rent review. Additionally, the lease liability is remeasured if the Company changes its assessment of whether it will exercise an extension or termination option or undertakes certain modifications of the lease. The ROU asset is depreciated on a straight line basis from the lease commencement date to the earlier of the end of its useful life or the end of the lease term. Depreciation of ROU assets is presented within 'Other expenses'. In addition, the ROU asset is tested for impairment losses where there is an impairment event.

The Company evaluates contracts greater than one year to determine whether they contain lease components at inception. Where contracts contain both lease and non-lease components, they are accounted for as a single lease.

The Company presents ROU assets within the 'Property, plant and equipment' line and lease liabilities within the 'Trade and other payables' line of the statement of financial position.

n. Provisions, contingent liabilities and commitments

Provisions are recognised when the 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.

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.

A contingent liability is a possible obligation, that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the company or a present obligation that arises from past events but is not recognised because either an outflow of economic benefits is not probable or the amount of the obligation cannot be reliably measured.

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

Commitments and contingent liabilities are not recognised in the financial statements. Disclosure is made unless the probability of settlement is remote.

o. Offsetting of financial assets and financial liabilities

Where there is a 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 statement of financial position. In the absence of such conditions, financial assets and financial liabilities are presented on a gross basis.

p. 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 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 grant date ("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 Company recognises compensation cost 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 Company pays Morgan Stanley for the procurement of shares. The Company pays 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.

Share based compensation expense is recorded within 'Other expense' in the statement of comprehensive income.

ii) Deferred cash-based compensation plans

Morgan Stanley may award deferred cash-based compensation on behalf of the 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 Company recognises 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 'Other expense' in the statement of comprehensive income. The liability for the awards is measured at fair value and is included within 'Trade and other payables' in the statement of financial position.

q. Post-employment benefits

The Company participates in defined contribution plans.

Contributions due in relation to the Company's defined contribution post-employment benefit plan are recognised in 'Other expense' in the statement of comprehensive income when payable.

Details of the plan are given in note 29 to these financial statements.

4. NET INCOME FROM OTHER FINANCIAL INSTRUMENTS HELD AT FAIR VALUE

	2021 US$'000	2020 US$'000
Net gains/(losses) on:		
Non-trading financial assets at FVPL		
Secured financing	14,370	2,247
Financial liabilities designated at FVPL		
Secured borrowing	(14,370)	(2,247)
	—	—

5. FEE AND COMMISSION INCOME

	2021	2020
	US$'000	US$'000
Fee and commission income	7,064	3,800
Of which, revenue from contracts with customers	*6,383*	*3,425*

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 EIR method for financial assets and financial liabilities measured at amortised cost.

	2021	2020
	US$'000	US$'000
Financial assets measured at amortised cost	1,537	753
Total interest income	**1,537**	**753**
Financial liabilities measured at amortised cost	1,074	4,623
Interest expense on lease liabilities	1,058	779
Total interest expense	**2,132**	**5,402**

No other gains or losses have been recognised in respect of financial assets measured at amortised cost other than as disclosed as 'Interest income' within the statement of comprehensive income and foreign exchange differences disclosed in 'Other revenue' (note 7) or 'Other expense' (note 8).

No other gains or losses have been recognised in respect of financial liabilities measured at amortised cost other than as disclosed as 'Interest expense' within the statement of comprehensive income and foreign exchange differences disclosed in 'Other revenue' (note 7) or 'Other expense' (note 8).

7. OTHER REVENUE

	2021	2020
	US$'000	US$'000
Management charges to other Morgan Stanley Group undertakings	17,051	11,035
Net foreign exchange gains	—	596
	17,051	11,631
Of which, revenue from contracts with customers	*17,051*	*11,035*

Revenue from contracts with customers

The following table presents revenue from contracts with customers in the current and prior year. The Company had no unsatisfied performance obligations from contracts with customers.

	2021 US$'000	2020 US$'000
Fee and commission income	6,383	3,425
Other revenue from contracts with customers	17,051	11,035
Total revenue from contracts with customers	23,434	14,460

8. OTHER EXPENSE

	2021 US$'000	2020 US$'000
Direct staff costs	9,921	7,446
Directors' remuneration	1,356	735
Management charges from other Morgan Stanley Group undertakings relating to other services and staff costs	8,273	4,735
Depreciation on property, plant and equipment	16,633	9,781
Net foreign exchange losses	238	—
Audit fees	114	97
Other	1,845	633
	38,380	23,427

A description of the Company's leasing arrangements is presented at note 19.

Further information regarding employee compensation plans is provided in note 28.

NOTES TO THE FINANCIAL STATEMENTS
Year ended 31 December 2021

9. INCOME TAX

	2021 US$'000	2020 US$'000
Current tax		
Current year	3,017	9,736
Adjustments in respect of prior years	540	177
	3,557	9,913
Deferred tax		
Origination and reversal of temporary differences	(172)	524
	(172)	524
Income tax	3,385	10,437

Reconciliation of effective tax rate

The current year income tax expense is lower (2020: higher) than that resulting from applying the standard rate of corporation tax in Singapore of 17% (2020: 17%). The main differences are explained below:

	2021 US$'000	2020 US$'000
Profit before income tax	54,616	59,202
Income tax using the standard rate of corporation tax in Singapore of 17% (2020: 17%)	9,285	10,064
Impact on tax of:		
Expenses not deductible for tax purposes	1	10
Non-taxable income	—	(106)
Tax underprovided in prior year	540	177
Concessionary tax rate(1)	(6,554)	—
Other	113	292
Total income tax in the statement of comprehensive income	3,385	10,437

(1) On 20 March 2021, the Monetary Authority of Singapore ("MAS") awarded the Company with the Financial Sector Incentive Scheme Derivative Market ("FSI-DM") Award effective from 1 January 2021 and valid for 5 years. The Company's qualifying activities will be subject to a corporate income tax rate at 5%.

NOTES TO THE FINANCIAL STATEMENTS
Year ended 31 December 2021

10. FINANCIAL ASSETS AND LIABILITIES BY MEASUREMENT CATEGORY

The following table analyses financial assets and financial liabilities as presented in the statement of financial position by the FRS 109 measurement classifications.

31 December 2021	FVPL (mandatorily) US$'000	FVPL (designated) US$'000	Amortised cost US$'000	Total US$'000
Cash at bank	—	—	704,358	704,358
Trading financial assets	4,883,235	—	—	4,883,235
Secured financing	241,211	—	—	241,211
Trade and other receivables	—	—	945,274	945,274
Total financial assets	5,124,446	—	1,649,632	6,774,078
Trading financial liabilities	4,883,842	—	—	4,883,842
Secured borrowings	—	241,211	—	241,211
Trade and other payables[(1)]	—	—	1,154,696	1,154,696
Debt and other borrowings	—	—	100,000	100,000
Total financial liabilities	4,883,842	241,211	1,254,696	6,379,749

(1) Lease liabilities of US$74,372,000 is excluded from the above table.

31 December 2020	FVPL (mandatorily) US$'000	FVPL (designated) US$'000	Amortised cost US$'000	Total US$'000
Cash at bank	—	—	22,082	22,082
Trading financial assets	1,250,594	—	—	1,250,594
Secured financing	47,084	—	—	47,084
Trade and other receivables	—	—	337,866	337,866
Total financial assets	1,297,678	—	359,948	1,657,626
Trading financial liabilities	1,284,064	—	—	1,284,064
Secured borrowings	—	47,084	—	47,084
Trade and other payables[(1)]	—	—	246,533	246,533
Total financial liabilities	1,284,064	47,084	246,533	1,577,681

(1) Lease liabilities of US$31,479,000 is excluded from the above table.

NOTES TO THE FINANCIAL STATEMENTS
Year ended 31 December 2021

Financial liabilities designated at FVPL

The financial liabilities in the table above which are designated at FVPL consist of the following financial liabilities:

Secured Borrowing: As part of its trading activities, the Company enters into transactions which involve physical commodities spot purchases and sales and corresponding forward sale or purchases undertaken contemporaneously that are accounted for as financing transactions.

	2021	2020
	Liabilities	Liabilities
	US$'000	US$'000
Secured borrowing		
Other financial liabilities	241,211	47,084
	241,211	47,084

The Company determines the amount of changes in fair value attributable to changes in counterparty credit risk or own credit risk, as relating to financial assets and financial liabilities designated at FVPL, by first determining the fair value including the impact of counterparty credit risk or own credit risk, and then deducting those changes in fair value representing managed market risk. In determining fair value, the Company considers the 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 Company considers that this approach most faithfully represents the amount of change in fair value due to both counterparty credit risk and the Company's own credit risk.

The carrying amount of financial liabilities designated at FVPL for which all changes in fair value are presented through the statement of comprehensive income was US$3,987,000 (2020:US$1,447,000) lower than the contractual amount due at maturity.

11. TRADING FINANCIAL ASSETS AND LIABILITIES

Trading assets and trading liabilities are summarised as follows:

	2021		2020	
	Assets	Liabilities	Assets	Liabilities
	US$'000	US$'000	US$'000	US$'000
OTC Derivatives – Commodity contracts	4,883,235	4,883,842	1,250,594	1,284,064

12. TRADE AND OTHER RECEIVABLES

	2021	2020
	US$'000	US$'000
Trade receivables		
Amounts due from other Morgan Stanley Group undertakings	352,649	297,818
Customer receivable	568,545	27,239
Other	8,305	—
	929,499	325,057
Other receivables		
Amounts due from other Morgan Stanley Group undertakings	10,889	10,179
Deposits	2,215	2,259
Other amounts receivable	2,671	371
	15,775	12,809
Total trade and other receivables	945,274	337,866

13. PROPERTY, PLANT AND EQUIPMENT

2021	Leasehold improvements	Assets in the course of construction	Fixtures, fittings and equipment	Right-of-use assets - Property	Total
	US$'000	US$'000	US$'000	US$'000	US$'000
Cost					
At 1 January 2021	11,557	6	17,925	42,036	71,524
Additions	15,851	748	35,936	56,673	109,208
Disposals	—	(6)	(2)	—	(8)
At 31 December 2021	27,408	748	53,859	98,709	180,724
Depreciation					
At 1 January 2021	6,111	—	12,284	12,997	31,392
Charge for the year	1,802	—	2,129	12,702	16,633
Disposals	—	—	(2)	—	(2)
At 31 December 2021	7,913	—	14,411	25,699	48,023
Carrying amount					
At 31 December 2021	19,495	748	39,448	73,010	132,701

2020	Leasehold improvements	Assets in the course of construction	Fixtures, fittings and equipment	Right-of-use assets - Property	Total
	US$'000	US$'000	US$'000	US$'000	US$'000
Cost					
At 1 January 2020	10,703	—	17,109	18,778	46,590
Additions	517	6	1,010	23,258	24,791
Disposals	(49)	—	(194)	—	(243)
Others[(1)]	386	—	—	—	386
At 31 December 2020	11,557	6	17,925	42,036	71,524
Depreciation					
At 1 January 2020	4,534	—	11,088	5,834	21,456
Charge for the year	1,228	—	1,390	7,163	9,781
Disposals	(37)	—	(194)	—	(231)
Others[(1)]	386	—	—	—	386
At 31 December 2020	6,111	—	12,284	12,997	31,392
Carrying amount					
At 31 December 2020	5,446	6	5,641	29,039	40,132

(1) Represents the asset earlier erroneously retired, now reinstated

14. TRADE AND OTHER PAYABLES

	2021 US$'000	2020 US$'000
Trade payables		
Amounts due to other Morgan Stanley Group undertakings	596	703
Customer payable	1,140,793	15,058
	1,141,389	15,761
Other payables		
Amount due to the Company's direct and indirect parent undertakings	51	121
Amounts due to other Morgan Stanley Group undertakings	3,872	224,176
Staff compensation and benefits accruals	8,375	5,866
Lease liabilities	74,372	31,479
Other amounts payable	1,009	609
	87,679	262,251
Total trade and other payables	1,229,068	278,012

15. DEBT AND OTHER BORROWINGS

	2021 US$'000	2020 US$'000
Debt and other borrowings (amortised cost)		
Subordinated debt	100,000	—

The amount subject to subordinated debt agreement is wholly repayable as shown below:

Counterparty	Repayment date	Interest rate	2021 Accrued interest US$'000	2021 Balance US$'000	2020 Accrued interest US$'000	2020 Balance US$'000
Morgan Stanley (Singapore) Holdings Pte. Ltd.	16 December 2026	MS proxy rate[(1)]	9	100,000	—	—

[(1)] MS Proxy Rate means at any time, the interest rate at which Morgan Stanley is offering unsecured loans in the relevant currency to members of the Group at such time.

On 30 December 2021, the Company drew down an advance of US$100,000,000 under a Subordinated Debt Agreement dated 16 December 2021 between the Company and Morgan Stanley (Singapore) Holdings Pte. Ltd..

All amounts outstanding under subordinated debt agreements are repayable at any time at the Company's option with the prior written approval of the National Futures Association ("NFA").

The Company has not defaulted on principal, interest or made any other breaches with respect to its subordinated debt during the year.

16. PROVISIONS

	Property US$'000
At 1 January 2021	1,844
Additional provisions	425
Effect of unwinding discount rate	1
Foreign exchange revaluation	(30)
At 31 December 2021	2,240

Property

Property provisions represent the net present value of expected future costs of reinstating leasehold improvements at the end of the lease term. Lease reinstatement provisions are released when the reinstatement obligations have been fulfilled. The related asset for lease reinstatement provisions is included in 'Leasehold improvements' within 'Property, plant and equipment' (note 13).

17. DEFERRED TAX ASSETS AND LIABILITIES

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

	2021		2020	
	Deferred tax asset US$'000	Deferred tax liability US$'000	Deferred tax asset US$'000	Deferred tax liability US$'000
At 1 January	250	(1,743)	182	(1,087)
Amount recognised in the statement of comprehensive income	26	146	68	(592)
Foreign exchange revaluation	(3)	33	—	(64)
	273	(1,564)	250	(1,743)
Effect of netting within tax jurisdiction	(273)	273	(250)	250
At 31 December	—	(1,291)	—	(1,493)

For the purpose of presentation in the statement of financial position, certain deferred tax assets and liabilities have been offset. The deferred tax included in the statement of financial position and changes recorded in 'Income tax' are as follows:

	2021			2020		
	Deferred tax asset	Deferred tax liability	Statement of comprehensive income	Deferred tax asset	Deferred tax liability	Statement of comprehensive income
	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000
Depreciation - temporary differences	—	(1,380)	249	—	(1,638)	(571)
Deferred compensation	273	—	26	161	—	(21)
Other temporary differences	—	(184)	(103)	—	(16)	68
	273	(1,564)	172	161	(1,654)	(524)

The deferred tax assets recognised are based on management assessment that it is probable that the Company will have taxable profits against which the temporary differences can be utilised.

18. COMMITMENTS

At 31 December, the Company had the following outstanding commitments:

	2021	2020
	US$'000	US$'000
Capital commitments	24,197	9,272

19. LEASES

Leases

The Company's leases are primarily real estate leases. The firm has made the election to include the non-lease component when computing the ROU asset and lease liability.

Extension and termination options

Certain real estate leases contain extension and termination options to provide additional operational flexibility. Extension and termination options that are at the option of the lessee are included in the assessment of the lease term where the extensions are considered reasonably certain of being exercised or where termination options are considered reasonably certain not to be exercised. Where the option is controlled by the lessor, the lease term assumes that extension options will be exercised and that termination options will not be exercised.

Lessee disclosures

The statement of financial position includes ROU assets within 'Property, Plant and Equipment' (note 13) and lease liabilities within 'Trade and other payables' (note 14).

The statement of comprehensive income includes depreciation of right-of-use assets within 'Other expense' (note 8) and interest expense on lease liabilities within 'Interest expense' (note 6).

The total cash outflow relating to leases was US$13,976,000 during the year (2020:US$8,771,000).

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Year ended 31 December 2021

Maturity analysis of lease liabilities

The following table represents lease liabilities analysed according to their earliest contractual maturity.

31 December 2021	Less than 1 month	Equal to or more than 1 month but less than 3 months	Equal to or more than 3 months but less than 1 year	Equal to or more than 1 year but less than 5 years	Equal to or more than 5 years	Total
	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000
Lease liabilities	845	3,012	13,711	60,956	7,732	86,256

31 December 2020	Less than 1 month	Equal to or more than 1 month but less than 3 months	Equal to or more than 3 months but less than 1 year	Equal to or more than 1 year but less than 5 years	Total
	US$'000	US$'000	US$'000	US$'000	US$'000
Lease liabilities	733	1,465	6,593	24,133	32,924

20. EQUITY

Ordinary share capital

	Ordinary shares	Total ordinary shares
	Number	US$'000
Issued and fully paid		
At 1 January 2020 and 31 December 2020	59,843,002	43,634
Issued in the year:		
28 June 2021	190,000,000	190,000
5 October 2021	130,000,000	130,000
	320,000,000	320,000
At 31 December 2021	**379,843,002**	**363,634**

On 28 June 2021 and 5 October 2021, the Company issued 190,000,000 and 130,000,000 ordinary shares respectively at an issue price of US$1 each to its parent company, Morgan Stanley (Singapore) Holdings Pte. Ltd..

Fully paid ordinary shares have no par value. The holders of ordinary shares are entitled to receive dividends as declared from time to time and are entitled to one vote per share at meetings of the shareholders of the Company.

NOTES TO THE FINANCIAL STATEMENTS
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21. ADDITIONAL CASH FLOW INFORMATION

a. Cash and cash equivalents

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

	2021 US$'000	2020 US$'000
Cash at bank	704,358	22,082

b. Reconciliation of cash flows from operating activities

	2021 US$'000	2020 US$'000
Profit for the year	51,231	48,765
Adjustments for:		
Depreciation on property, plant and equipment	16,633	9,781
Loss on disposal of property, plant and equipment	—	12
Interest income	(1,537)	(753)
Interest expense	2,132	5,402
Income tax expense	3,385	10,437
Operating cash flows before changes in operating assets and liabilities	71,844	73,644
Changes in operating assets		
Increase in trade and other receivables	(607,408)	(271,627)
Increase in trading financial assets	(3,632,641)	(794,577)
Increase in secured financing	(194,127)	(47,084)
Increase in prepayments	—	(652)
	(4,434,176)	(1,113,940)
Changes in operating liabilities		
Increase in trade and other payables	908,160	213,748
Increase in trading financial liabilities	3,599,778	802,319
Increase in secured borrowing	194,127	47,084
(Decrease)/increase in accruals	(13)	18
Increase/(decrease) in provisions	426	(25)
	4,702,478	1,063,144
Interest received	1,537	753
Interest paid	(1,909)	(5,362)
Income taxes paid	(10,799)	(1,341)
Effect of foreign exchange movements	(1,031)	376
Net cash flows from operating activities	327,944	17,274

NOTES TO THE FINANCIAL STATEMENTS
Year ended 31 December 2021

c. Reconciliation of liabilities arising from financing activities

	Balance at 1 January 2021	Cash flows [1]	Non-cash changes			Balance at 31 December 2021
			New leases	Interest accrued	Foreign exchange revaluation	
	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000
Lease liabilities	31,479	(13,976)	56,584	1,058	(773)	74,372
Subordinated loans	—	100,000	—	9	—	100,009
Total liabilities from financing activities	**31,479**	**86,024**	**56,584**	**1,067**	**(773)**	**174,381**

	Balance at 1 January 2020	Cash flows [1]	Non-cash changes			Balance at 31 December 2020
			New leases	Interest accrued	Foreign exchange revaluation	
	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000
Lease liabilities	15,066	(8,080)	23,082	779	632	31,479

[1] Include US$843,000 (2020: US$717,000) of payments related to interest on lease liabilities which are disclosed in statement of cash flows from operating activities – trade and other payables

22. 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.

At 31 December 2021

	Less than or equal to twelve months	More than twelve months	Total
	US$'000	US$'000	US$'000
ASSETS			
Cash at bank	704,358	—	704,358
Trading financial assets	4,883,235	—	4,883,235
Secured financing	241,211	—	241,211
Trade and other receivables	943,131	2,143	945,274
Prepayments	802	—	802
Property, plant and equipment	—	132,701	132,701
	6,772,737	134,844	6,907,581
LIABILITIES			
Trading financial liabilities	4,883,842	—	4,883,842
Secured borrowing	241,211	—	241,211
Trade and other payables	1,170,034	59,034	1,229,068
Debt and other borrowings	—	100,000	100,000
Provisions	—	2,240	2,240
Current tax liabilities	3,571	—	3,571
Deferred tax liabilities	—	1,291	1,291
Accruals	31	—	31
	6,298,689	162,565	6,461,254

At 31 December 2020

	Less than or equal to twelve months	More than twelve months	Total
	US$'000	US$'000	US$'000
ASSETS			
Cash at bank	22,082	—	22,082
Trading financial assets	1,250,594	—	1,250,594
Secured financing	47,084	—	47,084
Trade and other receivables	335,678	2,188	337,866
Prepayments	856	—	856
Property, plant and equipment	—	40,132	40,132
	1,656,294	42,320	1,698,614
LIABILITIES			
Trading financial liabilities	1,284,064	—	1,284,064
Secured borrowing	47,084	—	47,084
Trade and other payables	253,606	24,406	278,012
Provisions	—	1,844	1,844
Current tax liabilities	10,977	—	10,977
Deferred tax liabilities	—	1,493	1,493
Accruals	44	—	44
	1,595,775	27,743	1,623,518

23. FINANCIAL RISK MANAGEMENT

Risk management procedures

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

Significant risks faced by the Company resulting from its trading and financing activities are set out below.

23.1 Credit risk

Credit risk refers to the risk of loss arising when a borrower, counterparty or issuer does not meet its financial obligations to the Company. The Company is primarily exposed to credit risk from institutions and sophisticated investors through its Institutional Securities business segment.

23.1.1 Credit risk management

Credit risk exposure is managed on a global basis and in consideration of each significant legal entity within the Morgan Stanley Group. The credit risk management policies and procedures establish the framework for identifying, measuring, monitoring and controlling credit risk whilst ensuring transparency of material credit risks, compliance with established limits and escalating risk concentrations to appropriate senior management.

The Company may incur credit risk in its Institutional Securities business segment through a variety of activities, including, but not limited to, the following:

- entering into derivative contracts under which counterparties may have obligations to make payments to the Company;
- providing short or long-term funding 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; and
- placing funds on deposit at other financial institutions to support the Company's clearing and settlement obligations.

Monitoring and Control

In order to help protect the Company from losses, the Credit Risk Management Department establishes firm-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 Company'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 Company. The Credit Limits Framework is calibrated within the Morgan Stanley 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 ("MRD") and applicable business units to monitor risk exposures and to perform stress tests to identify, analyse and control credit risk concentrations arising from the Company's lending and trading activities. The stress tests shock market factors (e.g. interest rates, commodity prices, credit spreads), risk parameters (e.g. probability of default and LGD), in order to assess the impact of stresses on exposures, profit and loss, and the Company's capital position. Stress tests are conducted in accordance with established Company policies and procedures.

Credit Evaluation

The evaluation of corporate and institutional counterparties and borrowers includes assigning obligor credit ratings, which reflect an assessment of an obligor's PD and LGD. An obligor credit rating can be categorised into Investment grade, Non-investment grade and Default. Credit evaluations typically involve the 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 Company'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 Company also reviews its credit exposure and risk to geographic regions. As at 31 December 2021, credit exposure was concentrated in Asian countries. In addition, the Company pays particular attention to smaller exposures in emerging markets given the 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 Company also reviews its credit exposure and risk to certain types of customers. At 31 December 2021, the Company's material credit exposure was to corporate entities.

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 Morgan Stanley Group actively hedges its lending and derivatives exposure through various financial instruments that may include single-name, portfolio and structured credit derivatives. Additionally, the Morgan Stanley Group may sell, assign or syndicate funded loans and lending commitments to other financial institutions in the primary and secondary loan markets. In connection with its derivatives trading activities, the Morgan Stanley Group generally enters into master netting agreements and collateral arrangements with counterparties. These agreements provide the Morgan Stanley Group with the ability to demand collateral, as well as to liquidate collateral and offset receivables and payables covered under the same master agreement in the event of a counterparty default.

- *Derivatives*

The Company 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 Company seeks to mitigate risk through management of key risk elements such as size, tenor, financial covenants, seniority and collateral. The Company actively hedges its derivatives exposure through various financial instruments that may include single-name, portfolio and structured credit derivatives. The Company may enter into master netting agreements and collateral arrangements with counterparties. These master netting agreements and collateral arrangements may provide the Company 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 Company monitors the creditworthiness of counterparties to these transactions on an ongoing basis and requests additional collateral in accordance with collateral arrangements when deemed necessary.

23.1.2 Exposure to credit risk

The maximum exposure to credit risk ('gross credit exposure') of the Company as at 31 December 2021 is disclosed below, based on the carrying amounts of the financial assets which the Company believes are subject to credit risk. The table includes financial instruments subject to ECL and not subject to ECL. Those financial instruments that bear credit risk but are not subject to ECL are subsequently measured at fair value.

Where the Company enters into credit enhancements, including receiving cash and security as collateral and master netting agreements, to manage the credit exposure on these financial instruments the financial effect of the credit enhancements is also disclosed below. The net credit exposure represents the credit exposure remaining after the effect of the credit enhancements.

The Company does not have any significant exposure arising from items not recognised on the statement of financial position.

Collateral and other credit enhancements

The Company employs a range of policies and practices to mitigate credit risk, the most common being acceptance of collateral for funds advanced. The main types of collateral held are cash or similar highly-liquid assets. The Company has internal policies on the acceptability of specific classes of collateral or credit risk mitigation. There has been no change in the collateral policy of the Company during the year.

At 31 December 2021, the carrying amount of financial assets on which no ECL were recognised because of collateral held was $nil.

The Company closely monitors collateral held for financial assets considered to be credit-impaired, as in such cases it is considered more likely that the Company will take possession of collateral to mitigate potential credit losses.

Exposure to credit risk by class

	31 December 2021			31 December 2020		
Class	Gross credit exposure(1)	Credit enhancements	Net credit exposure(2)	Gross credit exposure(1)	Credit enhancements	Net credit exposure
	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000
Subject to ECL:						
Cash at bank	704,358	—	704,358	22,082	—	22,082
Trade and other receivables(3)	945,274	(589,729)	355,545	337,866	(324,384)	13,482
Not subject to ECL:						
Trading financial assets	4,883,235	(4,436,205)	447,030	1,250,594	(861,344)	389,250
Secured financing	241,211	—	241,211	47,084	—	47,084
	6,774,078	**(5,025,934)**	**1,748,144**	**1,657,626**	**(1,185,728)**	**471,898**

(1) The carrying amount recognised in the statement of financial position best represents the Company's maximum exposure to credit risk.
(2) Of the residual net credit exposure, intercompany cross product netting arrangements are in place which would allow for an additional $nil (31 December 2020: US$7,816,000) of an available $nil (31 December 2020: US$47,084,000) to be offset in the ordinary course of business and/ or in the event of default by certain Morgan Stanley counterparties.
(3) 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.

23.1.3 Credit quality

Exposure to credit risk by internal rating grades

Internal credit ratings, as below, are derived using methodologies generally consistent with those used by external agencies:

Investment grade: AAA - BBB
Non-investment grade: BB - CCC
Default: D

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The table below shows gross carrying amount. All exposures subject to ECL are Stage 1, unless otherwise shown.

31 December 2021	AAA	A	A-	BBB	Total Investment Grade	Total Non-Investment Grade	Unrated[1]	Total Gross Carrying Amount and Carrying Amount
	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000
Subject to ECL:								
Cash at bank	—	507,408	196,902	48	704,358	—	—	704,358
Trade and other receivables:								
Stage 1	2,661	363,501	—	566,691	932,853	10,195	2,226	945,274
	2,661	**870,909**	**196,902**	**566,739**	**1,637,211**	**10,195**	**2,226**	**1,649,632**
Not Subject to ECL:								
Trading financial assets:								
Derivatives	—	2,953,378	—	1,709,374	4,662,752	219,615	868	4,883,235
Secured Financing	—	241,211	—	—	241,211	—	—	241,211
	—	**3,194,589**	**—**	**1,709,374**	**4,903,963**	**219,615**	**868**	**5,124,446**

(1) For the unrated trade receivables, a lifetime ECL is always calculated without considering whether SICR has occurred.

31 December 2020	AAA	A	BBB	Total Investment Grade	Total Non-Investment Grade	Unrated[1]	Total Gross Carrying Amount and Carrying Amount
	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000
Subject to ECL:							
Cash at bank	—	22,082	—	22,082	—	—	22,082
Trade and other receivables:							
Stage 1	372	13,280	321,947	335,599	9	2,258	337,866
	372	**35,362**	**321,947**	**357,681**	**9**	**2,258**	**359,948**
Not Subject to ECL:							
Trading financial assets:							
Derivatives	—	49,228	796,179	845,407	405,187	—	1,250,594
Secured Financing	—	—	47,084	47,084	—	—	47,084
	—	**49,228**	**843,263**	**892,491**	**405,187**	**—**	**1,297,678**

(1) For the unrated trade receivables, a lifetime ECL is always calculated without considering whether SICR has occurred.

23.3 Liquidity risk

Liquidity risk refers to the risk that the Company will be unable to finance its operations due to a loss of access to the capital markets or difficulty in liquidating its assets. Liquidity risk encompasses the Company's ability (or perceived ability) to meet its financial obligations without experiencing significant business disruption or reputational damage that may threaten the Company's viability as a going concern. Liquidity risk also encompasses the associated funding risks triggered by the market or idiosyncratic stress events that may cause unexpected changes in funding needs or an inability to raise new funding. Generally, the Company incurs liquidity risk as a result of its trading, lending, investing and client facilitation activities.

The Morgan Stanley Group's Liquidity Risk Management Framework is critical to helping ensure that the Company maintains sufficient liquidity resources and durable funding sources to meet its daily obligations and to withstand unanticipated stress events. The Liquidity Risk Department is a distinct area in Risk Management, which oversees and monitors liquidity risk. The Liquidity Risk Department ensures transparency of material liquidity risks, compliance with established risk limits and escalation of risk concentrations to appropriate senior management. To execute these responsibilities, the Liquidity Risk Department:

- Establishes limits in line with the Morgan Stanley Group's risk appetite;
- Identifies and analyses emerging liquidity risks to ensure such risks are appropriately mitigated;
- Monitors and reports risk exposures against metrics and limits, and;
- Reviews the methodologies and assumptions underpinning the Morgan Stanley Group's Liquidity Stress Tests to ensure sufficient liquidity and funding under a range of adverse scenarios.

The liquidity risks identified by these processes are summarised in reports produced by the Liquidity Risk Department that are circulated to and discussed with senior management, as appropriate.

The Treasury Department and applicable business units have primary responsibility for evaluating, monitoring and controlling the liquidity risks arising from the Morgan Stanley Group's business activities, and for maintaining processes and controls to manage the key risks inherent in their respective areas. The Liquidity Risk Department coordinates with the Treasury Department and these business units to help ensure a consistent and comprehensive framework for managing liquidity risk across the Morgan Stanley Group.

The Company's liquidity risk management policies and procedures are consistent with those of the Morgan Stanley Group.

The primary goal of the Company's liquidity risk and funding management framework is to ensure that the Company has access to adequate funding across a wide range of market conditions and time horizons. The framework is designed to enable the Company to fulfil its financial obligations and support the execution of its business strategies.

The following principles guide the Company's liquidity risk management framework:

- Sufficient liquid assets should be maintained to cover maturing liabilities and other planned and contingent outflows;
- Maturity profile of assets and liabilities should be aligned, with limited reliance on short-term funding;
- Source, counterparty, currency, region, and term of funding should be diversified; and
- Liquidity Stress Tests should anticipate, and account for, periods of limited access to funding

The core components of the Company's liquidity risk management framework that support our target liquidity profile are the Required Liquidity Framework, Liquidity Stress Tests and Liquidity Resources (as defined below).

Required Liquidity Framework

The Required Liquidity Framework establishes the amount of liquidity the Company must hold in both normal and stressed environments to ensure that its financial condition and overall soundness is not adversely affected by an inability (or perceived inability) to meet its financial obligations in a timely manner. The Required Liquidity Framework considers the most constraining liquidity requirement to satisfy all regulatory and internal limits at a Morgan Stanley Group and legal entity level.

Liquidity Stress Tests

The Company uses Liquidity Stress Tests to model external and intercompany liquidity flows across multiple scenarios and a range of time horizons. These scenarios contain various combinations of idiosyncratic and systemic stress events of different severity and duration. The methodology, implementation, production and analysis of the Company's Liquidity Stress Tests are important components of the Required Liquidity Framework.

Liquidity Stress Tests are produced for the Company, to capture specific cash requirements and cash availability. The Liquidity Stress Tests assume that a legal entity will use its own liquidity first to fund its obligations before drawing liquidity from its ultimate parent undertaking, Morgan Stanley. Morgan Stanley will support its subsidiaries and will not have access to subsidiaries' liquidity resources that are subject to any regulatory, legal or tax constraints.

At 31 December 2021 and 31 December 2020, the Company maintained sufficient liquidity to meet current and contingent funding obligations as modelled in its Liquidity Stress Tests.

Liquidity Resources

The Company maintains sufficient liquidity resources which consists of unencumbered highly liquid securities and cash deposits with banks (including central banks) ("Liquidity Resources") to cover daily funding needs and to meet strategic liquidity targets sized by the Required Liquidity Framework and Liquidity Stress Tests. The total amount of Liquidity Resources is actively managed by the Company considering the following components: unsecured debt maturity profile; balance sheet size and composition; funding needs in a stressed environment inclusive of contingent cash outflows; and collateral requirements. The amount of liquidity resources the Company holds is based on the Company's risk tolerance and is subject to change depending on market and firm-specific events. Unencumbered highly liquid securities consist netted trading assets, investment securities and securities received as collateral.

Liquidity Resources are held within Morgan Stanley and its major operating subsidiaries and is composed of diversified cash and cash equivalents and unencumbered highly liquid securities.

Eligible unencumbered highly liquid securities include non-US government securities in addition to US government securities and other highly liquid investment grade securities.

Funding management

The Company manages its funding in a manner that reduces the risk of disruption to the Company's operations. The Company pursues a strategy of diversification of secured and unsecured funding sources (by product, investor and region) and attempts to ensure that the tenor of its liabilities equals or exceeds the expected holding period of the assets being financed.

The Company funds itself through diverse sources. These sources include the Company's equity capital and borrowings.

Balance sheet management

In managing both the Morgan Stanley Group's and the Company's funding risk the composition and size of the entire balance sheet, not just financial liabilities, is monitored and evaluated. The liquid nature of the marketable securities and short-term receivables arising principally from sales and trading activities in the Institutional Securities business provides the Morgan Stanley Group and the Company with flexibility in managing the composition and size of its statement of financial position.

Maturity analysis

In the following maturity analysis of financial liabilities, derivative contracts and other trading financial liabilities measured at fair value are presented at fair value, consistent with how these financial liabilities are managed, and disclosed as on demand. All other amounts represent undiscounted cash flows payable by the Company arising from its financial liabilities to earliest contractual maturities as at 31 December 2021 and 31 December 2020. Repayments of financial liabilities that are subject to immediate notice are treated as if notice were given immediately and are classified as on demand. This presentation is considered by the Company to appropriately reflect the liquidity risk arising from those financial liabilities, presented in a way that is consistent with how the liquidity risk on these financial liabilities is managed by the Company.

31 December 2021	On demand	Less than or equal to 1 month	More than 1 month but less than or equal to 3 months	More than 3 months but less than or equal to 1 year	More than 1 year but less than or equal to 5 years	More than 5 years	Total
	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000
Financial liabilities							
Trading financial liabilities	4,883,842	—	—	—	—	—	4,883,842
Secured borrowing	—	24,610	—	216,601	—	—	241,211
Trade and other payables[1]	1,145,269	728	7,655	127	917	—	1,154,696
Debt and other borrowings	—	—	—	—	100,000	—	100,000
Total financial liabilities	**6,029,111**	**25,338**	**7,655**	**216,728**	**100,917**	**—**	**6,379,749**

[1] Maturity analysis of lease liabilities is disclosed in note 19.

31 December 2020	On demand	Less than or equal to 1 month	More than 1 month but less than or equal to 3 months	More than 3 months but less than or equal to 1 year	More than 1 year but less than or equal to 5 years	More than 5 years	Total
	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000
Financial liabilities							
Trading financial liabilities	1,284,064	—	—	—	—	—	1,284,064
Secured borrowing	47,084	—	—	—	—	—	47,084
Trade and other payables[1]	16,699	288	5,376	145	224,025	—	246,533
Total financial liabilities	**1,347,847**	**288**	**5,376**	**145**	**224,025**	**—**	**1,577,681**

[1] Maturity analysis of lease liabilities is disclosed in note 19.

Market risk

Market risk refers to the risk that a change in the level of one or more market prices, rates, spreads, indices, volatilities, correlations or other market factors, such as market liquidity, will result in losses for a position or portfolio.

The Company manages the market risk associated with its trading activities at both division and an individual product level, and includes consideration of market risk at the legal entity level.

Sound market risk management is an integral part of the Company's culture. The Company is responsible for ensuring that market risk exposures are well-managed and monitored. The Company also ensures transparency of material market risks, monitors compliance with established limits, and escalates risk concentrations to appropriate senior management.

To execute these responsibilities, the Company monitors its market risk against limits on aggregate risk exposures, performs a variety of risk analyses including monitoring Value-at-risk ("VaR") and stress testing analyses, routinely reports risk summaries and maintains the VaR and scenario analysis methodologies. The material risks identified by these processes are summarised and reported to senior management.

The market risk management policies and procedures for the Company are consistent with those of the Morgan Stanley Group and include escalation to the Company's Board of Directors and appropriate management personnel.

Primary market risk exposures and market risk management

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

The Company is exposed to interest rate and credit spread risk, as well as associated implied volatility risks, as a result of market making activities in interest-rate or credit sensitive financial instruments (i.e. risk arising from changes in the level of interest rates, the shape of the yield curve and/or credit spreads). The activities from which those exposures arise and the markets in which the Company is active include, but are not limited to, the following: interest rate and credit derivatives.

The Company is exposed to foreign exchange rate and implied volatility risk as a result of holding non-US dollar-denominated financial instruments.

The Company is exposed to commodity price and implied volatility risk as a result of making markets in crude and refined oil products, natural gas and precious base metals.

The Company 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 Company manages and monitors its market risk exposures, including outright and basis risks, in such a way as to maintain a portfolio that the Company believes is well-diversified in the aggregate with respect to market risk factors and that reflects the Company's aggregate risk tolerance, as established by the Company's senior management. 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 Company in line with the risk appetite set by the Board of Directors. Additional market risk limits are assigned, as appropriate, to trading desks, products and/ or regions and are commensurate with the aggregate limits. The Market Risk Department monitors market risk measures against limits in accordance with policies set by senior management.

Trading Risks

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

VaR methodology, assumptions and limitations

The Company estimates VaR using a model based on historical simulation for general market risk factors and Monte Carlo simulation for name-specific risk in corporate shares, bonds, loans and related derivatives. The model constructs a distribution of hypothetical daily changes in the value of trading portfolios based on the following: 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.

The basic methodology for VaR at Morgan Stanley is historical simulation. The Company's VaR model uses four years of historical data with a volatility adjustment to reflect current market conditions. Starting 1 July 2019, the model was updated to use one year of historical data with no volatility adjustment following a group wide model change. A set of internal processes and controls ensure that all trading positions booked by the Company are being included in VaR. VaR for risk management purposes ('Management VaR') is computed at a 95% level of confidence over a one day time horizon, which is a useful indicator of possible trading losses resulting from adverse daily market moves. The 95%/one-day VaR corresponds to the unrealised loss in portfolio value that, based on historically observed market risk factor movements, could have been exceeded with a frequency of 5%, or five times in every 100 trading days, if the portfolio were held constant for one day.

The Company 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 varied 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 Company 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 Company levels.

The Company is committed to continuous review and enhancement of VaR methodologies and assumptions in order to capture evolving risks associated with changes in market structure and dynamics. As part of regular process improvements, additional systematic and name-specific risk factors may be added to improve the VaR model's ability to more accurately estimate risks to specific asset classes or industry sectors.

Since the reported VaR statistics are estimates based on historical data, VaR should not be viewed as predictive of the Company's future revenues or financial performance or of its ability to monitor and manage risk. There can be no assurance that the Company'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 for a 95%/one-day VaR. VaR does not predict the magnitude of losses that, should they occur, may be significantly greater than the VaR amount.

VaR statistics are not readily comparable across firms because of differences in the firms' portfolios, 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.

Sensitivity analysis

VaR for the year ended 31 December 2021

The table below presents the Management VaR for the Company's Trading portfolio on a year-end, annual average and annual high and low basis for 31 December 2021 and 31 December 2020.

The Credit Portfolio VaR is disclosed as a separate category from the Primary Risk Categories and includes counterparty CVA and related hedges.

95% VaR	**95%/ one-day VaR 2021**				**95%/ one-day VaR 2020**			
	Period end	**Average**	**High**	**Low**	**Period end**	**Average**	**High**	**Low**
	US$'000	**US$'000**	**US$'000**	**US$'000**	**US$'000**	**US$'000**	**US$'000**	**US$'000**
Market risk category:								
Interest rate and credit spread	—	1	4	—	5	13	20	5
Commodity price	—	—	2	—	—	—	—	—
Foreign Exchange	—	—	6	—	—	—	—	—
Less diversification benefit(1)(2)	—	—	N/A	N/A	—	—	N/A	N/A
Primary Risk Categories VaR	—	1	8	—	5	13	20	5
Credit Portfolio VaR(3)	221	433	1,202	125	1,841	1,934	2,716	511
Less diversification benefit(1)(2)	—	(1)	N/A	N/A	(9)	(6)	N/A	N/A
Total Management VaR	221	433	1,210	125	1,837	1,941	2,736	516

(1) Diversification benefit equals the difference between total Management VaR and the sum of the VaRs for the individual risk categories. This benefit arises because the simulated one-day losses for each of the primary market risk categories occur on different days; similar diversification benefits are also 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 counterparty credit valuation adjustment and related hedges.

The Company's average VaR for Primary Risk Categories for 2021 was US$1,000 compared with US$13,000 for 2020. The decrease in average VaR for Primary Risk Categories is primarily due to decreased exposure to interest rate and credit spread.

The average Credit Portfolio VaR for 2021 was US$433,000 compared with US$1,934,000 for 2020. The decrease in the average VaR over the year was from decreased counterparty exposure during 2021.

The average total VaR for 2021 was US$433,000 compared with US$1,941,000 for 2020.

The Company believes that sensitivity analysis is an appropriate representation of the Company's non-trading risks. The following sensitivity analysis cover substantially all of the non-trading risks in the Company's portfolio with the exception of counterparty credit valuation adjustments covered in the previous section.

Interest rate risk

The Company's VaR excludes certain funding liabilities and money market transactions. The application of a parallel shift in market interest rates of 50 basis points increase or decrease to these positions, would result in negligible net gain or loss (2020: negligible net gain or loss).

Currency risk

The Company has foreign currency exposure arising from its assets and liabilities in currencies other than US dollars. It actively manages this exposure by hedging with other Morgan Stanley Group undertakings. The residual currency risk for the Company from this activity is not material.

The analysis below details the foreign currency exposure for the Company, by foreign currency. 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.

	2021			2020		
	Foreign currency exposure	Percentage change applied	Sensitivity to applied percentage change in currency (+/-) Profit or loss	Foreign currency exposure	Percentage change applied	Sensitivity to applied percentage change in currency (+/-) Profit or loss
	US$'000	%	US$'000	US$'000	%	US$'000
Hong Kong Dollar	(21)	1	—	(1)	1	—
Singapore Dollar	(4,140)	2	83	(4,801)	2	83
	(4,161)		83	(4,802)		83

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 2 year period from 1 January 2020 to 31 December 2021 (2020: from 1 January 2019 to 31 December 2020). Thus, the percentage change applied may not be the same percentage as the actual change in the currency rate for the year ended 31 December 2021, or for the year ended 31 December 2020.

24. FINANCIAL ASSETS AND FINANCIAL LIABILITIES SUBJECT TO OFFSETTING

In order to manage credit exposure arising from its business activities, the Company applies various credit risk management policies and procedures, see note 23 for further details. Primarily in connection with derivative transactions, the Company enters into master netting arrangements and collateral arrangements with its counterparties. These agreements provide the Company with the right, in the ordinary course of business and/ or in the event of a counterparty default (such as bankruptcy or a counterparty's failure to pay or perform), to net a counterparty's rights and obligations under such agreement and, in the event of counterparty default, set off collateral held by the Company against the net amount owed by the counterparty.

However, in certain circumstances, the Company may not have such an agreement in place; the relevant insolvency regime (which is based on type of counterparty entity and the jurisdiction of organisation of the counterparty) may not support the enforceability of the agreement; or the Company may not have sought legal advice to support the enforceability of the agreement. In cases where the Company has not determined an agreement to be enforceable, the related amounts are not offset.

The Company's policy is generally to pay or receive cash collateral. The enforceability of the master netting agreement is taken into account in the Company's risk management practices and application of counterparty credit limits. The Company also monitors the amount of the cash paid or received as collateral as compared to the fair value position of the related derivatives, and, as necessary, requests additional collateral as provided under the applicable agreement to ensure such transactions are adequately collateralised, or return of excess collateral.

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

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Year ended 31 December 2021

The following table presents information about the offsetting of financial instruments and related collateral amounts. The table does not include information about financial instruments that are subject only to a collateral agreement. The effect of master netting arrangements, collateral agreements and other credit enhancements, on the Company's exposure to credit risk is disclosed in note 23.

31 December 2021	Gross amounts	Amounts offset	Net amounts	Amounts not offset[1] Financial instruments	Amounts not offset[1] Cash collateral[2]	Net exposure[3]
	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000
Assets						
Trading financial assets: Derivatives	4,883,235	—	4,883,235	(3,888,989)	(547,216)	447,030
Liabilities						
Trading financial liabilities: Derivatives	4,883,842	—	4,883,842	(3,888,989)	(589,729)	405,124

31 December 2020	Gross amounts	Amounts offset	Net amounts	Amounts not offset[1] Financial instruments	Amounts not offset[1] Cash collateral[2]	Net exposure[3]
	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000
Assets						
Trading financial assets: Derivatives	1,250,594	—	1,250,594	(848,224)	(13,120)	389,250
Liabilities						
Trading financial liabilities: Derivatives	1,284,064	—	1,284,064	(848,224)	(324,384)	111,456

(1) Amounts relate to master netting arrangements and collateral arrangements which have been determined by the Company to be legally enforceable, but do not meet all criteria required for net presentation within the statement of financial position.
(2) Cash collateral not offset is recognised within Trade and other receivables and Trade and other payables, respectively.
(3) Intercompany cross-product legally enforceable netting arrangements are in place which would allow for an additional $nil (2020: $7,816,000) of the total statement of financial position, to be offset in the ordinary course of business and/ or in the event of default.

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25. ASSETS AND LIABILITIES MEASURED AT FAIR VALUE

a. Financial assets and liabilities recognised at fair value on a recurring basis

The following tables present the carrying value of the Company's financial assets and financial liabilities recognised at fair value on a recurring basis, classified according to the fair value hierarchy.

2021	Quoted prices in active market (Level 1)	Valuation techniques using observable inputs (Level 2)	Valuation techniques with significant unobservable inputs (Level 3)	Total
	US$'000	US$'000	US$'000	US$'000
Trading financial assets:				
Derivatives – commodities contracts	—	4,883,235	—	4,883,235
Secured financing	—	241,211	—	241,211
Total financial assets measured at fair value	—	5,124,446	—	5,124,446
Trading financial liabilities:				
Derivatives – commodities contracts	—	4,883,842	—	4,883,842
Secured borrowing	—	241,211	—	241,211
Total financial liabilities measured at fair value	—	5,125,053	—	5,125,053

2020	Quoted prices in active market (Level 1)	Valuation techniques using observable inputs (Level 2)	Valuation techniques with significant unobservable inputs (Level 3)	Total
	US$'000	US$'000	US$'000	US$'000
Trading financial assets:				
Derivatives – commodities contracts	—	1,250,594	—	1,250,594
Secured financing	—	47,084	—	47,084
Total financial assets measured at fair value	—	1,297,678	—	1,297,678
Trading financial liabilities:				
Derivatives – commodities contracts	—	1,284,064	—	1,284,064
Secured borrowing	—	47,084	—	47,084
Total financial liabilities measured at fair value	—	1,331,148	—	1,331,148

The Company's valuation approach and fair value hierarchy categorisation for certain significant classes of financial instruments recognised at fair value on a recurring basis is as follows:

Asset and Liability / Valuation Techniques	Valuation Hierarchy Classification
Derivatives	
OTC Derivative Contracts	
• OTC derivative contracts include forward, swap and option contracts related to commodity prices and performance of various referenced investments.	
• Depending on the product and the terms of the transaction, the fair value of OTC derivative products can be modeled using a series of techniques, including closed-form analytic formulas, such as the Black-Scholes option-pricing model, simulation models or a combination thereof. Many pricing models do not entail material subjectivity as the methodologies employed do not necessitate significant judgement, since model inputs may be observed from actively quoted markets, as is the case for generic interest rate swaps, many equity, commodity and foreign currency option contracts and certain credit default swaps. In the case of more established derivative products, the pricing models used by the Company are widely accepted by the financial services industry.	• Level 2 – when valued using observable inputs, or where the unobservable input is not deemed significant
• More complex OTC derivative products are typically less liquid and require more judgement in the implementation of the valuation technique since direct trading activity or quotes are unobservable. This includes certain types of interest rate derivatives with both volatility and correlation exposure, commodity derivatives that are either longer-dated or include exposure to multiple underlyings and credit derivatives, including credit default swaps on certain mortgage or asset-back securities, basket CDS. Where these inputs are unobservable, relationships to observable data points, based on historic and/or implied observations, may be employed as a technique to estimate the model input values.	• Level 3 – if an unobservable input is deemed significant
Other secured financing and secured borrowing	
• Other secured financing and secured borrowings are related to outstanding physical commodities spot purchases and sales and corresponding forward sale or purchases undertaken contemporaneously that are accounted for as financing transactions.	• Level 2 – when the valuation inputs are observable. • Level 3 – in instances where the unobservable inputs is deemed significant.
Listed Derivative Contracts	
• Listed derivatives that are actively traded are valued based on quoted prices from the exchange.	• Level 1 - listed derivatives that are actively traded
• Listed derivatives that are not actively traded are valued using the same techniques as those applied to OTC derivatives.	• Level 2 – when not actively traded

b. Transfers between Level 1 and Level 2 of the fair value hierarchy for financial assets and liabilities recognised at fair value on a recurring basis

There were no transfers between Level 1 and Level 2 of the fair value hierarchy during the current year and prior year.

c. Changes in Level 3 financial assets and liabilities recognised at fair value on a recurring basis

There were no transfers between Level 2 and Level 3 of the fair value hierarchy during the year.

26. ASSETS AND LIABILITIES NOT MEASURED AT FAIR VALUE

The table below presents the carrying value, fair value and fair value hierarchy category of certain financial liabilities that are not measured at fair value in the statement of financial position.

Financial assets and financial liabilities not measured at fair value for which the carrying value is considered to be a reasonable approximation of fair value are excluded from the table below.

31 December 2021			Fair value measurements using:		
	Carrying value (1)	Fair value	Quoted prices in active market (Level 1)	Valuation techniques using observable inputs (Level 2)	Valuation techniques with significant unobservable inputs (Level 3)
	US$'000	US$'000	US$'000	US$'000	US$'000
Debt and other borrowings:					
Subordinated debt	100,009	106,530	—	106,530	—

(1) The amounts include accrued interest expense on subordinated debt which is included in "Trade and other payables" in the statement of financial position.

There is no subordinated debt as of 31 December 2020.

The fair value of subordinated debt is determined based on current interest rates and credit spreads, with reference to Morgan Stanley Parent Company, for debt instruments with similar terms of maturity. The fair value of subordinated debt has been determined based on the assumption that all subordinated debt is held to the latest repayment date, although the amounts outstanding under the subordinated debt agreement can be repayable at any time prior to the repayment date, at the Company's option, with the prior written approval of the NFA.

27. CAPITAL MANAGEMENT

The Morgan Stanley Group manages its capital on a global basis with consideration for its legal entities. The capital managed by the Morgan Stanley Group broadly includes ordinary share capital, preference share capital, subordinated debt and reserves.

The Morgan Stanley Group manages its consolidated capital position based upon, among other things, business opportunities, risks, capital availability and rates of return together with internal capital policies, regulatory requirements and rating agency guidelines. In the future, the Morgan Stanley Group may adjust its capital base in reaction to the changing needs of its businesses.

The Company views capital as an important source of financial strength. It manages and monitors its capital in line with established policies and procedures and in compliance with regulatory requirements.

The Morgan Stanley Group also aims to adequately capitalise at a legal entity level whilst safeguarding that entity's ability to continue as a going concern and ensuring that it meets all regulatory capital requirements, so that it can continue to provide returns for the Morgan Stanley Group.

In order to maintain or adjust the capital structure as described above, the Company may adjust the amount of dividends paid, return capital to shareholders, issue new shares, issue or repay subordinated debt or sell assets to reduce debt.

The Company is regulated by the CFTC and is subject to minimum capital requirements with effect from 6 October 2021. The Company's capital is monitored on an ongoing basis to ensure compliance with these requirements. Refer to note 31 for details of the regulatory requirements that the Company is subject to.

The Company manages the following items as capital:

	2021	2020
	US$'000	US$'000
Share capital	363,634	43,634
Retained earnings	82,693	31,462
Subordinated debt	100,000	—
	546,327	**75,096**

28. EMPLOYEE COMPENSATION PLANS

Morgan Stanley maintains various equity-settled share-based and cash-based deferred compensation plans for the benefit of employees. Awards under these plans are generally granted in January following the performance year.

Equity-settled share-based compensation plans

Morgan Stanley has granted RSU awards pursuant to several equity-based compensation plans. The plans provide for the deferral of a portion of certain current and former employees' incentive compensation, with awards made in the form of restricted common stock. Awards under these plans are generally subject to vesting over time, generally six months to seven years, and are generally contingent upon continued employment and subject to restrictions on sale, transfer or assignment until conversion to common stock. All, or a portion of, an award may be forfeited if employment is terminated before the end of the relevant vesting period or cancelled after the vesting period in certain situations. Recipients of equity-based awards may have voting rights, at Morgan Stanley's discretion, and generally receive dividend equivalents if the awards vest, unless this is prohibited by regulation.

During the year, Morgan Stanley granted 13,493 RSUs (2020: 7,089 RSUs) to employees of the Company with a weighted average fair value per unit of US$74.87 (2020: US$57.50), based on the market value of Morgan Stanley common stock at grant date.

The equity-based compensation expense recognised in the year is US$504,000 (2020: US$299,000). The Company has entered into a chargeback arrangement with Morgan Stanley under which it is committed to pay to Morgan Stanley the grant date fair value of awards granted as well as subsequent movements in their fair value. Therefore, the total amount included within 'Direct Staff costs' within 'Other expense' of US$1,072,000 (2020: US$528,000) includes the equity-based compensation expense and the movements in the fair value of the awards granted to employees.

The related liability due to Morgan Stanley at the end of the year, reported within 'Trade and other payables' in the statement of financial position, is US$1,452,000 (2020: US$704,000). US$629,000 (2020: US$266,000) is expected to be settled wholly within one year and US$823,000 (2020: US$438,000) thereafter.

Deferred cash-based compensation plans

Morgan Stanley has granted deferred cash-based compensation awards to certain employees which defer a portion of the employees' discretionary compensation. The plans generally provide a return based upon the performance of various referenced investments. Awards under these plans are generally subject to a sole vesting condition of service over time, which normally ranges from one to three years from the date of grant. All or a portion of an award may be forfeited if employment is terminated before the end of the relevant vesting period or cancelled after the vesting period in certain situations. The awards are settled in cash at the end of the relevant vesting period.

No deferred cash-based compensation awards were granted to employees of the Company during the year. In 2020, awards with a value of US$447,000 were granted to employees of the Company.

The liability to employees at the end of the year, reported within 'Trade and other payables' in the statement of financial position, is US$404,000 (2020: US$490,000). US$400,000 (2020: US$304,000) is expected to be settled wholly within one year, and US$4,000 (2020: US$186,000) thereafter.

29. POST EMPLOYMENT BENEFITS

Defined contribution plans

The employees of the Company are either members of a state-managed retirement benefit plan, the Central Provident Fund, operated by the Government of Singapore or members of the Morgan Stanley Asia Limited Retirement Plan ('Plan'). The Company is required to contribute a specified percentage of payroll costs to the retirement benefit scheme to fund the benefits. The only obligation of the Company with respect to the retirement plan is to make the specified contributions.

The defined contribution expense recognised within 'Direct staff costs' in 'Other expense' in the statement of comprehensive income was US$243,000 for the year (2020: US$198,000) of which US$155,000 was accrued at 31 December 2021 (2020: US$109,000).

30. RELATED PARTY DISCLOSURES

Parent and subsidiary relationships

Parent and ultimate controlling entity

The Company's immediate parent undertaking is Morgan Stanley (Singapore) Holdings Pte. Ltd., incorporated in the Republic of Singapore.

The ultimate parent undertaking and controlling entity and the largest group of which the Company is a member and for which group financial statements are prepared is Morgan Stanley. Morgan Stanley has its registered office c/o The Corporation Trust Company, the Corporation Trust Center, 1209 Orange Street, Wilmington, DE, 19801, United States of America and is incorporated in the state of Delaware, the United States of America and copies of its financial statements can be obtained from www.morganstanley.com/investorrelations.

Key management compensation

Key management personnel are defined as those persons having authority and responsibility for planning, directing and controlling the activities of the Company. Key management personnel include the Board of Directors of the Company.

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Key management personnel compensation, in respect of their services rendered to the Company, comprised the following:

	2021 US$'000	2020 US$'000
Short-term employee benefits	1,515	981
Post-employment benefits	11	19
Share-based payments	236	177
Other long-term employee benefits	17	80
	1,779	1,257

The share-based payment costs disclosed above reflect the amortisation of equity-based awards granted to key management personnel and are therefore not directly aligned with other staff costs in the current year.

Transactions with related parties

The Morgan Stanley Group conducts business for clients globally through a combination of both functional and legal entity organisational structures. Accordingly, the Company is closely integrated with the operations of the Morgan Stanley Group and enters into transactions with other Morgan Stanley Group undertakings on an arm's length basis for the purposes of utilising financing, trading and risk management, and infrastructure services. The nature of these relationships along with information about the transactions and outstanding balances is given below. Settlement of the outstanding balances will be made in cash. The Company has not recognised any expense and has made no provision for impairment relating to the amount of outstanding balances from related parties (2020: US$nil).

Funding

The Company receives funding from and provides funding to other Morgan Stanley Group undertakings in the following forms:

- *General funding*

General funding is undated, unsecured, floating rate lending, other than certain funding which is dated on a rolling 395 day term. Funding may be received or provided for specific transaction related funding requirements, or for general operational purposes. The interest rates are established by the Morgan Stanley Group Treasury function for all entities within the Morgan Stanley Group and approximate the market rate of interest that the Morgan Stanley Group incurs in funding its business.

Details of the outstanding balances on these funding arrangements and the related interest income or expense recognised in the statement of comprehensive income during the year are shown in the table below:

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Year ended 31 December 2021

Rolling 395 day term

	2021		2020	
	Interest	Balance	Interest	Balance
	US$'000	US$'000	US$'000	US$'000
Amounts due from other Morgan Stanley Group undertakings	1,409	—	181	—
Amounts due to other Morgan Stanley Group undertakings	801	89	4,283	223,400

Subordinated debt

On 30 December 2021, the Company received US$100,000,000 subordinated debt from its direct parent Morgan Stanley (Singapore) Holdings Pte. Ltd.. Details of the terms of the subordinated debt, including the contractual maturity and the interest rates are provided in Note 15. The interest rates are established by the Morgan Stanley Group Treasury function based on available market information at the time the loan is provided. For the year ended 31 December 2021, an interest expense of US$9,000 (2020: US$nil) was recognised in 'Interest expense' arising from subordinated debt received during the year of which US$9,000 (2020: US$nil) is outstanding as at 31 December 2021.

Non-funding balances

The Company enters into numerous intercompany non-funding transactions with other Morgan Stanley group undertakings arising from intra-group policies which ensure revenues and related costs are matched, infrastructure services and fees and commissions. Non-funding balances are undated, unsecured and non-interest bearing. Amounts arising from these transactions outstanding at the reporting date are as follows:

	2021	2020
	US$'000	US$'000
Amounts due from other Morgan Stanley Group undertakings	10,889	10,179
Amounts due to the Company's direct and indirect parent undertakings	42	121
Amounts due to other Morgan Stanley Group undertakings	3,783	776
	3,825	897

Trading and risk management

The Company enters into purchases and sales of securities and derivative transactions with other Morgan Stanley Group undertakings to manage the market risks associated with its trading position. For the year ended 31 December 2021, a net loss of US$536,276,000 (2020: net loss of US$267,690,000) was recognised in 'Net trading income' arising from such transactions. The total amounts receivable and payable on transactions not yet settled and the fair value of such derivatives contracts outstanding at the year-end were as follows:

	2021	2020
	US$'000	US$'000
Amounts due from other Morgan Stanley Group undertakings on unsettled securities and derivatives transactions	2,440,130	506,309
Amounts due from other Morgan Stanley Group undertakings on secured financing transactions	135,693	47,084
	2,575,823	553,393
Amounts due to other Morgan Stanley Group undertakings on unsettled securities and derivatives transactions	2,461,250	812,646
Amounts due to other Morgan Stanley Group undertakings on secured borrowing transactions	105,518	—
	2,566,768	812,646

As at 31 December 2021, the Company has pledged collateral of US$352,649,000 (2020: US$297,818,000) to other Morgan Stanley Group undertakings to mitigate credit risk on exposures arising under the derivatives contracts between the Company and other Morgan Stanley Group undertakings. For the year ended 31 December 2021, an interest expense of US$119,000 (2020: US$6,000) was recognised in 'Interest expense' arising from collateral received during the year and an interest income of US$99,000 (2020: US$548,000) was recognised in 'Interest income' arising from collateral pledged during the year.

In addition, the management and execution of business strategies on a global basis results in many Morgan Stanley transactions impacting a number of Morgan Stanley Group undertakings. The Morgan Stanley Group operates a number of intra-group policies to ensure that, where possible, revenues and related costs are matched. The Company applies global transfer pricing policies among affiliates. These policies are consistent with 2017 OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations. For the year ended 31 December 2021, a net gain of US$67,333,000 was recognised in the statement of comprehensive income arising from such policies (2020: net gain of US$90,926,000).

Infrastructure services

The Company receives and incurs management charges to and from other Morgan Stanley Group undertakings for infrastructure services, including the provision of staff and office facilities. Management recharges received and incurred during the year are as follows:

	2021 US$'000	2020 US$'000
Amounts recharged from other Morgan Stanley Group undertakings	8,273	4,735
Amounts recharged to other Morgan Stanley Group undertakings	17,051	11,035

Amounts outstanding at the reporting date are included within the non-funding balances disclosed above.

Fees and commissions

The Company earns fees and commission income from other Morgan Stanley Group undertakings for value added services which include sales and marketing support and consultancy. It also incurs fees and commission expense in respect of such services performed by other Morgan Stanley Group undertakings.

Fees and commissions received and incurred during the year are as follows:

	2021 US$'000	2020 US$'000
Fees and commissions received from other Morgan Stanley Group undertakings	7,064	3,800
	7,064	3,800
Fees and commissions paid to the Company's direct and indirect parent undertakings	1,924	1,440
Fees and commissions paid to other Morgan Stanley Group undertakings	10,758	6,785
	12,682	8,225

Amounts outstanding at the reporting date are included within the non-funding balances disclosed above.

31. REGULATORY REQUIREMENT

The Dodd-Frank Act requires the registration of "swap dealers" and "major swap participants" with the CFTC (collectively, "Swaps Entities"). The Company is a provisionally registered swap dealer and, accordingly, is subject to the minimum capital requirements of the CFTC.

Under these rules, the Company is required to maintain minimum Capital, as defined under CFTC Rule 23.101 (a)(1)(i), of

(A) $20 million of common equity tier 1 capital, as defined under the bank holding company ("BHC") regulations in 12 Code of Federal Regulations ("CFR") 217.20, as if the swap dealer itself were a bank holding company subject to 12 CFR part 217;

(B) An aggregate of common equity tier 1 capital, additional tier 1 capital, and tier 2 capital, all as defined under the BHC regulations in 12 CFR 217.20, equal to or greater than 8.0% of the swap dealer's BHC equivalent risk-weighted assets; provided, however, that the swap dealer must maintain a minimum of common equity tier 1 capital equal to 6.5% of its BHC equivalent risk-weighted assets; provided further, that any capital that is subordinated debt under 12 CFR 217.20 and that is included in the swap dealer's capital for purposes of this paragraph (a)(1)(i)(B) must qualify as subordinated debt under § 240.18a-1d of this title;

(C) An aggregate of common equity tier 1 capital, additional tier 1 capital, and tier 2 capital, all as defined under the bank holding company regulations in 12 CFR 217.20, equal to or greater than 8.0% of the amount of uncleared swap margin, as that term is defined in § 23.100; and

(D) The amount of capital required by a registered futures association of which the swap dealer is a member.

At 31 December 2021, the Company’s CET1 Capital Ratio was 13.4% and Total Capital Ratio was 16.5%, which were greater than its minimum capital requirement of 6.5% and 8.0% respectively based on BHC equivalent risk-weighted assets. The Company’s BHC equivalent risk-weighted asset requirements were greater than its uncleared swap margin requirements. The Company is compliant with the calculation of the applicable regulatory capital requirement under 17 CFR § 23.101 and no additional capital was required by the National Futures Association at 31 December 2021.