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**MORGAN STANLEY & CO. INTERNATIONAL plc**

**Report and financial statements**

**31 December 2016**

# MORGAN STANLEY & CO. INTERNATIONAL plc

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# **MORGAN STANLEY & CO. INTERNATIONAL plc**

## **STRATEGIC REPORT**

The Directors present their Strategic report for Morgan Stanley & Co. International plc (the “Company”) and all of its subsidiary undertakings (together “the Group”) for the year ended 31 December 2016.

### **PRINCIPAL ACTIVITY**

The principal activity of the Group is the provision of financial services to corporations, governments and financial institutions.

The Company operates branches in the Dubai International Financial Centre, France, the Netherlands, Poland, the Qatar Financial Centre, South Korea and Switzerland. Subsequent to the year end, on 1 February 2017, the Company transferred the assets and liabilities of the French branch to Morgan Stanley (France) S.A., a wholly owned subsidiary of the Company. On transfer, the branch was dissolved. See note 36.

There have not been any changes in the Group’s principal activity during the year and no significant change in the Group’s principal activity is expected.

The Group’s ultimate parent undertaking and controlling entity is Morgan Stanley, which, together with the Group and Morgan Stanley’s other subsidiary undertakings, form the “Morgan Stanley Group”.

The Morgan Stanley Group is a global financial services firm that maintains significant market positions in each of its business segments: Institutional Securities, Wealth Management and Investment Management. The Morgan Stanley Group provides a wide variety of products and services to a large and diversified group of clients and customers, including corporations, governments, financial institutions and individuals. As a key contributor to the execution of the Morgan Stanley Group’s Institutional Securities strategy in Europe, the Middle East and Africa (“EMEA”), the Group provides capital raising; financial advisory services, including advice on mergers and acquisitions, restructurings, real estate and project finance; corporate lending; sales, trading, financing and market-making activities in equity and fixed income products, including foreign exchange and commodities; and investment activities.

Certain disclosures required by relevant accounting frameworks in relation to the Company’s and Group’s financial risk management have been presented alongside other risk management information in this Strategic Report. Such disclosures are identified as audited. All other information in the Strategic Report is unaudited.

### **REGULATION**

The Company is authorised by the Prudential Regulation Authority (“PRA”) and regulated by the Financial Conduct Authority (“FCA”) and the PRA. In addition, the Company is a registered swap dealer and is regulated by the United States (“US”) Commodity Futures Trading Commission (“CFTC”).

### **BUSINESS REVIEW**

#### **Global market and economic conditions**

Growth in the global economy hovered just above the 3% mark in the first half of 2016, with soft growth in the US providing a drag. Headwinds to the US economy came from the Federal Reserve’s December 2015 interest rate increase, the marked appreciation in the US dollar since the summer of 2014 and the sharp fall in investment by the energy sector. Growth was solid in the Eurozone and Japan and strong in China. The Bank of Japan introduced negative interest rates in January 2016, whilst the European Central Bank moved interest rates further into negative territory in March 2016. Meanwhile, despite the United Kingdom (“UK”) public’s vote to leave the European Union (the “EU”) in June, global growth strengthened in the second half of 2016. Growth was solid in both the Eurozone and the UK, with the latter benefitting from an interest rate cut and renewed quantitative easing by the Bank of England. US growth strengthened, and surveys showed increased business and consumer confidence following the November US presidential election. The Federal Reserve increased interest rates again in December 2016. Chinese growth remained solid, aided by supportive fiscal policy and continued credit expansion. Survey indicators suggest that global growth has remained strong in the early months of 2017 and consumer price inflation is moving back towards central bank targets in the key developed economies. In March 2017, the Federal Reserve increased interest rates for the third time in the cycle.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### BUSINESS REVIEW (CONTINUED)

#### UK referendum

On 23 June 2016, the UK electorate voted to leave the EU. It is difficult to predict the future of the UK's relationship with the EU, which uncertainty may increase the volatility in the global financial markets in the short- and medium-term. On 29 March 2017, the UK formally invoked Article 50 of the Lisbon Treaty, which triggered a two-year period, subject to extension, during which the UK government is expected to negotiate its withdrawal agreement with the EU. Absent any extension, the UK is expected to leave the EU in early 2019. The terms and conditions of the anticipated withdrawal from the EU, and which of the several alternative models of relationship that the UK might ultimately negotiate with the EU, remain uncertain. However, the UK government has stated that the UK will leave the EU single market and will seek a phased period of implementation for the new relationship that may cover the legal and regulatory framework applicable to financial institutions with significant operations in Europe, such as Morgan Stanley. Potential effects of the UK exit from the EU and potential mitigation actions may vary considerably depending on the timing of withdrawal and the nature of any transition or successor arrangements. Any future limitations on providing financial services into the EU from our UK operations could require us to make potentially significant changes to our operations in the UK and Europe and our legal structure there, which could have an adverse effect on our business and financial results.

#### Overview of 2016 financial results

The consolidated income statement for the year is set out on page 38. The Group reported a profit after tax for the year of \$451 million, compared to a profit after tax of \$401 million for the year ended 31 December 2015 reflecting reduced expenses and a reduced taxation charge.

The Group's revenues are best reviewed across the aggregate of 'Net gains on financial instruments classified as held for trading', 'Net gains on financial instruments designated at fair value through profit or loss', 'Interest income', 'Interest expense' and 'Other income' ("aggregate revenues"). Aggregate revenues for the year increased by 0.2% to \$4,458 million compared to \$4,451 million in 2015. Certain currencies, in which the Group's trades are denominated, may at times have negative interest rates, of which a current example is the Euro. When financial assets and financial liabilities are denominated in such currencies with negative interest rates, this results in negative 'Interest income' and positive 'Interest expense' being recognised. For 2016, this has resulted in overall 'Interest income' in the consolidated income statement for the Group being negative.

The increase in aggregate revenues was primarily driven by increased sales and trading revenues in the equities division offset by a decrease in revenues in the fixed income division.

Equity sales and trading revenues increased during the year compared to 2015 primarily due to increased prime brokerage revenues as a result of increased client activity and client balances.

Fixed income sales and trading revenues decreased during the year compared to 2015 as result of the sale of the global oil merchanting unit of its commodities division in 2015, partly offset by an increase in revenues from increased client activity and higher market volatility.

Other expense decreased by 0.5% from \$3,741 million in 2015 to \$3,723 million in 2016. Reported expenses for 2015 included a \$223 million credit related to a reimbursement following the implementation of the new UK accounting framework of net costs which were previously recharged from certain UK incorporated Morgan Stanley Group undertakings. Excluding the impact of the prior year reimbursement, expenses decreased by \$241 million from 2015 as a result of lower headcount combined with the depreciation of the British Pound against the US Dollar (see note 6).

The Group incurred a tax expense of \$284 million (2015: \$309 million). This represents an effective tax rate of 38.6% (2015: 43.5%), which is higher than the average standard rate of UK corporation tax of banking companies of 28.0%, including the 8.0% UK Bank surcharge. The decrease in effective tax rate from 2015 is due to the 2015 tax charge including a provision against certain withholding tax reclaim balances recognised in prior years (see note 7).

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### BUSINESS REVIEW (CONTINUED)

#### Overview of 2016 financial results (continued)

The Group's total assets and liabilities increased by \$29,262 million and \$28,987 million respectively, an increase of 7.0% and 8.0% respectively as at 31 December 2016 when compared to the total assets and total liabilities as at 31 December 2015. The increase in total assets is principally driven by an increase in securities purchased under agreements to resell of \$18,802 million primarily reflecting increased client financing trading activity. Total assets also increased as a result of an increase in cash of \$8,464 million driven by higher amounts held at central banks as a result of the Group holding more liquid assets in the form of cash. The increase in total liabilities is driven by an increase in securities sold under agreements to repurchase of \$10,405 million, again reflecting increased client financing trading activity. Financial liabilities classified as held for trading increased by \$9,681 million as a result of increased client trading activity.

The consolidated statement of cash flows presented on page 42 shows a net increase in cash of \$8,439 million during the year (2015: net increase of \$226 million). The increase in cash mainly reflects higher amounts held at central banks and is a result of net cash inflows from operating activities, which were \$8,672 million (2015: \$246 million cash inflow), offset by net cash outflows from financing activities of \$292 million (2015: \$149 million cash outflows).

#### Key performance indicators

The Board of Directors monitors the results of the Group by reference to a range of performance and risk based metrics, including, but not limited to, the following:

##### *Profitability metrics*

*Return on ordinary shareholders equity:* The Group's return on ordinary shareholders equity (Profit/loss for the year attributable to the parent less dividends paid on Additional Tier 1 ("AT1") instruments as a percentage of ordinary shareholders equity at the beginning of the year (total equity less AT1 Instruments and Non-controlling Interest)) was 2.2% (2015: 2.6%).

*Return on assets:* The Group's return on assets (net profit/loss for the year as a percentage of total assets at the beginning of the year) was 0.1% (2015: 0.1%).

##### *Balance Sheet Assets*

*Total assets:* Total assets of the Group continue to be closely monitored. The Group's total assets, as disclosed on page 41, increased by 7.0% to \$423 billion at 31 December 2016, which was within internal balance sheet management targets.

##### *Capital*

The Group continues to closely monitor its capital position against a range of key metrics including the following:

*Tier 1 regulatory capital:* The Company's Tier 1 capital as calculated in accordance with PRA rules which are based on the fourth EU Capital Requirements Directive and EU Capital Requirements Regulation ("CRR"), collectively known as "CRD IV", was \$15,185 million (2015: \$15,255 million) and its Tier 1 capital ratio was 14.8% (2015: 15.5%), which is in excess of the required minimum regulatory ratio. Tier 1 capital ratio is defined as Tier 1 capital divided by risk-weighted assets ("RWAs").

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### BUSINESS REVIEW (CONTINUED)

#### Key performance indicators (continued)

##### *Capital (continued)*

*Leverage ratio:* CRD IV, as amended by the European Commission Delegated Act, introduced a new requirement to calculate a leverage ratio on 10 October 2014, which compares Tier 1 capital to a measure of leverage exposure, defined as the sum of assets less Tier 1 capital deductions plus off-balance sheet exposures. Currently no regulatory minimum ratio has been set pending further European legislation, although public disclosure requirements were effective for reporting periods from 1 January 2015. As at 31 December 2016, the Company had a leverage ratio of 4.0% (2015: 4.4%), which is above the minimum regulatory ratio of 3% that is expected to apply in the future once new legislation is introduced.

##### *Market risk*

*Management VaR:* The Group uses Value at Risk (“VaR”) measures as a useful indicator of possible trading losses resulting from adverse daily market movements. The Group’s average total VaR for risk management purposes (“Management VaR”) for 2016 was \$20 million compared with \$23 million for 2015 and was below internal risk management targets.

### RISK MANAGEMENT

Risk is an inherent part of the Group’s business activity. The Group seeks to identify, assess, monitor and manage each of the various types of risk involved in its business activities, in accordance with defined policies and procedures. The Group has developed its own risk management policy framework, which leverages the risk management policies and procedures of the Morgan Stanley Group and the Morgan Stanley International Limited (“MSI”) Group and which includes escalation to the Group’s Board of Directors and to appropriate senior management personnel of the Group as well as oversight through the Group’s Board of Directors and through a dedicated Risk Committee of non-executive Directors that reports to the Board of MSI, the Company’s ultimate UK parent undertaking.

Note 27 to the consolidated financial statements provides additional qualitative and quantitative disclosures about the Group’s management of and exposure to financial risks.

#### **Risk Strategy and Appetite**

The Group assesses appetite for risk-adjusted returns through prudent and conservative risk-taking, utilising risk limits and tolerances that avoid outsized risk-taking. The Group Appetite Statement is the articulation of the aggregate level and types of risk that the Group is willing to accept in order to execute its business strategy and protect its capital, franchise and liquidity resources. The Risk Appetite Statement is further expanded into qualitative and quantitative risk tolerance statements, that are supported by a focused suite of risk metrics and limits designed to cover the Group’s risks. The combination of risk appetite, tolerance statements and limits aims to ensure that the Group’s businesses are carried out in line with its risk strategy in both normal and stressed environments.

The Group has no risk appetite for conduct risk/reputational risk. It acknowledges, however, that conduct risk/reputational risk remains inherent in doing business and thus cannot be entirely eliminated.

The Group risk appetite is set by the MSI Board in conjunction with the MSI Group’s strategy and the MSI Group capital and liquidity resource adequacy framework.

**STRATEGIC REPORT**

**RISK MANAGEMENT (CONTINUED)**

**Risk Management Framework**

Risk of loss is an inevitable consequence of the Group’s businesses activities and effective risk management is vital to the Group’s success. The Risk Management Framework includes a well-defined, comprehensive risk governance structure with appropriate risk management expertise, including processes for periodically assessing the efficacy of the Risk Management Framework. The key elements of the Risk Management Framework are outlined in Figure 1.

**Figure 1 Risk Management Framework**



**Risk Policies and Processes**

Morgan Stanley Group has a number of well-established policies and processes which establish the standards that govern the identification, assessment, monitoring, management and mitigation of the various types of risk involved in its business activities. Specific risk management policies have been implemented to address local business and regulatory requirements where appropriate. The policies are approved by the MSI Board and reviewed annually.

# **MORGAN STANLEY & CO. INTERNATIONAL plc**

## **STRATEGIC REPORT**

### **RISK MANAGEMENT (CONTINUED)**

#### **Control Framework**

The Group operates an array of controls across all its lines of business and across all risk classes.

The Framework within which the Group organises its controls is a “Three Lines of Defence”. The Group believes that this structure creates clear delineation of responsibilities between the elements of risk control (1st Line), independent oversight and challenge (2nd Line) and audit assurance (3rd Line).

Business unit management has primary responsibility and accountability for managing all the business unit risks, this includes market, credit, and operational risk. It implements policy and ensures compliance with applicable laws, rules and regulations, for every legal entity in the MSI Group and in all jurisdictions business is undertaken and booked.

Independent Risk Management provides governance and oversight of activities carried out by the business units. The EMEA Risk Management Division is the Group’s Independent Risk Management function and is responsible for the management of all risk exposures arising from Group business activities. It also sets policy, monitors compliance, challenges the risk profile and ensures effective communication of risk matters to senior management and ultimately to the MSIP Board. The EMEA Risk Management Division is independent of business units.

The Internal Audit Department is an independent source of assurance to the MSIP Board on financial, operational, and compliance controls. Internal Audit independently verifies that the Risk Management Framework has been implemented as intended and is functioning effectively, including opining on the overall appropriateness and adequacy of the framework and the associated governance processes.

**STRATEGIC REPORT**

**RISK MANAGEMENT (CONTINUED)**

**Limits and Tolerance Framework**

The Group’s risk appetite is translated into a comprehensive suite of limits and tolerance frameworks across four primary areas: market risk, credit risk, operational risk and liquidity risk. Other risks that are monitored regularly include leverage risk, valuation risk, conduct risk, reputational risk, model risk and earnings at risk. The Group maintains risk limits and tolerances at various levels of the governance structure to support linkages between the Group’s overall risk appetite and more granular risk-taking decisions and activities. Using a suite of tools, most notably limits, these risks are tracked, monitored and reported to the appropriate executive risk committees, MSI Risk Committee and the MSI Board. All risk limits are reviewed periodically as appropriate at least annually.

Board-level risk limits address the most important aggregations of risk, primarily through stress limits. Stress tests set the boundary for risk-taking activities relative to the MSI Group’s risk capacity and are used to set risk limits and tolerances. Figure 3 outlines the MSI Group’s Risk Limit Framework for specific risk areas.

The Framework is comprised of market and credit risk limits including aggregate macroeconomic stress scenarios and proprietary tail risk metric limits, quantitative loss tolerances for each of the top operational risks and liquidity sufficiency limits which are all set by the MSI Board. These are complemented by granular business line limits that are set by the in-business Risk senior management for day-to-day risk management.

**Stress Testing**

Stress testing is one of the Group’s principal risk management tools, used to identify and assess the impact of severe stresses on its portfolios. It informs a number of processes and associated decisions. It complements other Group risk metrics by providing a clear and flexible approach to assessing the Group’s resilience in the face of various scenarios over a range of severities, relevant to current market conditions and forward looking macroeconomic views. Most notably, stress testing is used for:

- Risk Management: Identifying areas of potential vulnerabilities in the portfolio, measuring portfolio losses and concentrations as a basis for senior management to review portfolio-level risk and determine risk mitigation actions and set exposure limits.
- Capital and Liquidity planning: Informing the proposed stressed capital and liquidity forecasts through severe and liquidity forecasts through severe but plausible stress tests.
- Strategy Planning: Identifying business model vulnerabilities through Reverse Stress Testing and identifying the potential mitigating actions available as part of recovery planning.

**Figure 3 MSI Group Limit Framework**

	<b>MARKET RISK</b>	<b>CREDIT RISK</b>	<b>OPERATIONAL RISK</b>	<b>LIQUIDITY AND FUNDING RISK</b>
<b>RISK METRICS AND LIMITS</b>	<ul style="list-style-type: none"> <li>• MSI Group-wide macroeconomic scenario loss limits and proprietary tail risk metric</li> <li>• Legal entity Value at Risk (“VaR”) and exposure limits</li> <li>• Detailed risk exposure limits are allocated by desk/products</li> </ul>	<ul style="list-style-type: none"> <li>• MSI Group-wide macroeconomic scenario loss limits and proprietary tail risk metric</li> <li>• MSI Group credit limits</li> <li>• Single name, country, and industry credit limits</li> </ul>	<ul style="list-style-type: none"> <li>• Quantitative tolerances for each top operational risk and against an aggregate risk tolerance level</li> </ul>	<ul style="list-style-type: none"> <li>• Liquidity and parent support limits</li> <li>• Portfolio level liquidity and funding mix limits</li> <li>• Granular business area specific limits on liquidity and funding</li> </ul>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### Risk Reporting and Measurement

The Group has a suite of risk reporting across its main risk classes. The information includes quantitative measurements and qualitative assessments that enable a comparison of the Group's risk profile against risk limits and risk tolerance statements. Reporting identifies matters for escalation and highlights emerging risks. Material risk issues are investigated and escalated where appropriate, as per the specific escalation procedures set down by the Group. Escalation triggers have been articulated, with separate triggers for notification and further escalation including to the MSIP Board where relevant. The EMEA Risk Management Division has constituted specific committees which provide senior management review of the risk reporting including stress testing and data quality information.

The risk reporting capabilities are supported by a well-controlled infrastructure, including Front Office risk systems and the Group's Risk Management systems. Key risk data are subject to several control assessments, including: self-assessments, attestations, independent validation, reconciliation and internal audit reviews.

#### Risk Governance

The Group has a comprehensive risk management governance Framework which includes Board approved policies and a defined senior management risk oversight and escalation process. The MSIP Board is ultimately responsible for the Group's risk management. The MSI Risk Committee and EMEA Risk Committee assist and provide guidance to the MSIP Board on the oversight of Group's risk management activities.

The MSI Board (and its committees) determines the strategy for the MSI Group and provides oversight of the key risk and control issues that the execution of the strategy presents, or is likely to present. The MSI Board has delegated authority to its Audit, Risk and Nomination and Governance committees. The MSI Board, through the MSI Risk Committee, is regularly informed of the MSI Group's risk profile and relevant trends impacting its risk profile. The executive committees are the most senior MSI Group executive management committees and have responsibility for overseeing business performance, operations and risks identified in relation to the MSI Group. The management level committees support the executive committees in their oversight of specific areas of the MSI Group's activities.

#### MSI Board Committees

The **MSI Risk Committee** is appointed by the MSI Board to assist and provide guidance to the MSI Board on the management of financial and non-financial risks, including: (i) risk strategy and appetite; (ii) risk identification and management; (iii) risk governance framework and policies; (iv) measurement of risk and risk tolerance levels and limits; (v) risk culture; and (vi) financial resource management and capital. The MSI Risk Committee met 14 times in 2016. The MSI Risk Committee review quarterly detailed risk reports on portfolio risk, market risk, credit risk, operational risk and model changes.

The Committee's focus during the year included:

- Improvements to risk appetite to include new risk categories.
- Enhancements to the MSI Group stress testing process, with key concentrations and actions for the management of geopolitical events.
- Improvements to risk reporting, to monitor material risk factors and manage event risk.
- Areas of regulatory focus and corresponding Risk projects.

The **MSI Audit Committee** is appointed by the MSI Board to assist and provide guidance to the MSI Board in monitoring: (i) financial reporting; (ii) internal controls; (iii) legal and regulatory compliance; (iv) internal audit; and (v) external auditors.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### MSI Board Committees (continued)

The **MSI Nomination and Governance Committee** is appointed by the MSI Board to (i) identify and recommend candidates qualified to become board members for approval; (ii) assess the structure, size, composition, performance and effectiveness of the board and the committees; (iii) recommend to the board corporate governance principles applicable to the MSI Group.

#### EMEA Executive Committees

The **EMEA Operating Committee** is the forum for key decisions regarding matters affecting the operations and performance of the MSI Group and is responsible for the execution of strategy. The Committee provides oversight of: (i) strategy; (ii) financial performance; (iii) risk and control; (iv) operational, legal and regulatory matters; and (v) human resources.

The **EMEA Risk Committee** (“RC”) assists in the oversight of the MSI Group’s management of risk (including financial and non-financial risks) within the MSI Group. The Committee provides oversight of: (i) risk strategy and appetite; (ii) risk identification and measurement; (iii) risk framework and policies; (iv) culture; and (v) financial resource management.

#### Management Committees (associated with Risk Governance)

The **EMEA Franchise Committee** assists in the oversight of potentially significant franchise risks including by reviewing relevant activities, transactions and clients, and reviewing the franchise implications of situations that involve suitability or conflicts of interest concerns.

The **EMEA Asset and Liability Committee** (“EMEA ALCO”) assists the EMEA Risk Committee to oversee the capital adequacy, including the risk of excessive leverage, and liquidity risk management of the MSI Group.

The **EMEA Operational Risk Oversight Committee** provides guidance to the EMEA Risk Committee in relation to the oversight of the management of operational risk of the MSI Group.

The **Client Assets Governance Committee** provides support for MSI Group’s compliance with Client Assets Sourcebook (CASS) requirements, and acts as the principal body for providing governance of CASS related issues, being responsible for co-ordinating the approach to managing Client Money and Client Assets.

The **EMEA Conduct Risk Committee** assists the EMEA Risk Committee in the oversight and management of conduct risk within the MSI Group.

The **EMEA Electronic Trading Governance Committee** was established in 2016. Its role is to undertake the review and challenge controls applicable to the electronic trading business. Further, the Committee will monitor the risk appetite and limits set by the EMEA RC which is applicable to electronic trading, and provide a forum to oversee the resolution of identified control issues in an appropriate and timely manner and escalate matters to the EMEA RC as necessary.

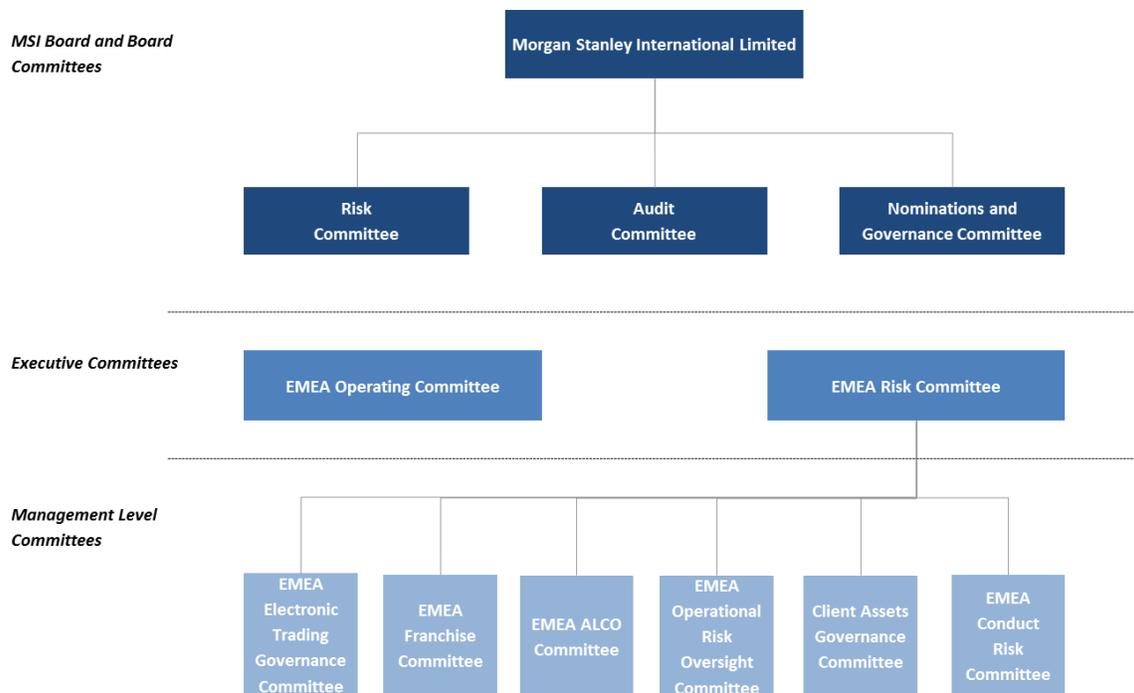
# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### Management Committees (associated with Risk Governance) (continued)

Figure 4 MSI Board Committee Structure and EMEA Executive Management Structure<sup>1</sup>



1. Select management committees associated with risk governance.
2. Does not include all management committees.

#### Market risk (Audited)

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

The Group manages the market risk associated with its trading activities at both a 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 Group's culture. The Group is responsible for ensuring that market risk exposures are well-managed and monitored. The Group 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 Group monitors its market risk against limits on aggregate risk exposures, performs a variety of risk analyses including monitoring 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.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### Market risk (Audited) (continued)

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

#### *Primary market risk exposures and market risk management*

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

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

The Group is exposed to equity price and implied volatility risk as a result of making markets in equity securities and derivatives and maintaining other positions (including positions in non-public entities). Positions in non-public entities may include, but are not limited to, exposures to private equity, venture capital, private partnerships, real estate funds and other funds. Such positions are less liquid, have longer investment horizons and are more difficult to hedge than listed equities.

The Group is exposed to foreign exchange rate and implied volatility risk as a result of making markets in foreign currencies and foreign currency derivatives, from maintaining foreign exchange positions and from holding non-US dollar-denominated financial instruments.

The Group has very limited exposure to commodities. This exposure is due to price and implied volatility risk as a result of market-making activities in crude and refined oil products, natural gas, electricity, and precious and base metals. Commodity exposures are subject to periods of high price volatility as a result of changes in supply and demand. These changes can be caused by weather conditions, physical production, and transportation; or geopolitical and other events that affect the available supply and level of demand for these commodities.

The Group manages its trading positions by employing a variety of risk mitigation strategies. These strategies include diversification of risk exposures and hedging. Hedging activities consist of the purchase or sale of positions in related securities and financial instruments, including a variety of derivative products (e.g., futures, forwards, swaps and options). Hedging activities may not always provide effective mitigation against trading losses due to differences in the terms, specific characteristics or other basis risks that may exist between the hedge instrument and the risk exposure that is being hedged. The Group manages and monitors its market risk exposures, including outright and basis risks, in such a way as to maintain a portfolio that the Group believes is well-diversified in the aggregate with respect to market risk factors and that reflects the Group's aggregate risk tolerance, as established by the Group's Board of Directors.

Aggregate market risk limits have been approved for the Group 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 ("MRD") monitors market risk measures against limits in accordance with policies set by the Board of Directors and senior management.

#### *Trading risks*

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

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### Market risk (Audited) (continued)

##### *VaR methodology, assumptions and limitations*

The Group estimates VaR using a model based on volatility adjusted 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 Group's VaR model uses four years of historical data with a volatility adjustment to reflect current market conditions. A set of internal processes and controls ensure that all trading positions booked by the Group are being included in VaR. Management VaR is computed at a 95% level of confidence over a one day time horizon, which is a useful indicator of possible trading losses resulting from adverse daily market moves. The 95%/one-day VaR corresponds to the unrealised loss in portfolio value that, based on historically observed market risk factor movements, could have been exceeded with a frequency of 5%, or five times in every 100 trading days, if the portfolio were held constant for one day.

The Group uses VaR as one of a range of risk management tools. Among their benefits, VaR models permit estimation of a portfolio's aggregate market risk exposure, incorporating a range of 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 modeling of the risk characteristics of some positions relies on approximations that, under certain circumstances, could produce significantly different results from those produced using more precise measures. VaR is most appropriate as a risk measure for trading positions in liquid financial markets and will understate the risk associated with severe events, such as periods of extreme illiquidity. The Group is aware of these and other limitations and, therefore, uses VaR as only one component in its risk management oversight process. This process also incorporates stress testing and scenario analyses and extensive risk monitoring, analysis, quantification of risk not captured in VaR, and control at the trading desk, division, entity and Group levels.

The Group's VaR model evolves over time in response to changes in the composition of trading portfolios and to improvements in modelling techniques and systems capabilities. The Group 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 improvement, 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 Group's future revenues or financial performance or of its ability to monitor and manage risk. There can be no assurance that the Group's actual losses on a particular day will not exceed the VaR amounts indicated below or that such losses will not occur more than five times in 100 trading days for a 95%/one-day VaR. VaR does not predict the magnitude of losses that, should they occur, may be significantly greater than the VaR amount.

VaR statistics are not readily comparable across firms because of differences in the firms' portfolios, modeling assumptions and methodologies. These differences can result in materially different VaR estimates across firms for similar portfolios. The impact of such differences varies depending on the factor history assumptions, the frequency with which the factor history is updated and the confidence level. As a result, VaR statistics are more useful when interpreted as indicators of trends in a firm's risk profile rather than as an absolute measure of risk to be compared across firms.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### Market risk (Audited) (continued)

*VaR methodology, assumptions and limitations (continued)*

The table below shows the Group's VaR for primary risk categories and total Management VaR for the year ended 31 December 2016 and for the year ended 31 December 2015.

	95%/ one-day VaR for the year ended 31 December 2016		95%/ one-day VaR for the year ended 31 December 2015	
	Period end \$millions	Average \$millions	Period end \$millions	Average \$millions
Primary Risk Categories	16	17	18	22
Credit Portfolio (1)	7	8	6	6
Less diversification benefit (2)	(6)	(5)	(4)	(5)
<b>Total Management VaR</b>	<b>17</b>	<b>20</b>	<b>20</b>	<b>23</b>

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

(2) Diversification benefit equals the difference between total trading 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.

The Group's average VaR for Primary Risk Categories for 2016 was \$17 million compared with \$22 million for 2015. The decrease in average VaR for Primary Risk Categories is due to risk reduction across interest rate, equity and foreign exchange.

The average Credit Portfolio VaR for 2016 was \$8 million compared with \$6 million for 2015. The increase in the average VaR over the year was driven by a combination of market moves (credit spread and volatility) and exposure changes during 2016.

The average total VaR for 2016 was \$20 million compared with \$23 million for 2015.

Additional information on non-trading risks and currency risk together with an analysis of VaR sensitivity is presented in Note 27 to the Consolidated Financial Statements.

#### Credit risk

*Credit risk management framework (Audited)*

Credit risk refers to the risk of loss arising when a borrower, counterparty or issuer does not meet its financial obligations to the Group. Credit risk includes country risk, which is further described below.

The Group primarily incurs credit risk exposure to institutions mainly through its Institutional Securities business segment. This risk may be incurred through a variety of activities, including, but not limited to, the following:

- entering into derivative contracts under which counterparties have obligations to make payments to the Group;
- extending credit to clients through lending commitments;
- providing short or long-term funding that is secured by physical or financial collateral whose value may at times be insufficient to fully cover the loan repayment amount;
- posting margin and/ or collateral to clearing houses, clearing agencies, exchanges, banks, securities firms and other financial counterparties;
- placing funds on deposit at other financial institutions to support the Group's clearing and settlement obligations; and

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### Credit risk (continued)

*Credit risk management framework (Audited) (continued)*

- investing or trading in securities and loan pools, whereby the value of these assets may fluctuate based on realised or expected defaults on the underlying obligations or loans.

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, ensuring compliance with established limits and escalating risk concentrations to appropriate senior management.

*Monitoring and control (Audited)*

In order to help protect the Group from losses, the Credit Risk Management Department establishes Firm-wide practices to evaluate, monitor and control credit risk exposure at the transaction, obligor and portfolio levels. The Credit Risk Management Department approves extensions of credit, evaluates the creditworthiness of the Group's counterparties and borrowers on a regular basis, and ensures 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 Morgan Stanley International Group (parent company). The Credit Limits Framework is calibrated within the Morgan Stanley International Group's (parent company) risk tolerance and includes single-name limits and portfolio concentration limits by country and industry. The Credit Risk Management Department ensures transparency of material credit risks, compliance with established limits and escalation of risk concentrations to appropriate senior management.

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

*Credit evaluation (Audited)*

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

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### Credit risk (continued)

##### *Credit evaluation (Audited) (continued)*

In addition to assessing and monitoring its credit exposure and risk at the individual obligor level, the Group also reviews its credit exposure and risk to geographic regions. As at December 2016, credit exposure was concentrated in North American, Asian and Western European countries. In addition, the Group pays particular attention to smaller exposures in emerging markets given their unique risk profile. Country ceiling ratings are derived using methodologies generally consistent with those employed by external rating agencies.

The Group also reviews its credit exposure and risk to certain types of customers. At 31 December 2016, the Group's material credit exposure was to central clearing counterparties, corporate entities, sovereign-related entities and financial institutions.

##### *Risk Mitigation (Audited)*

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

- *Securities purchased under agreements to resell and securities borrowed*

The Group manages credit exposure arising from securities purchased under agreements to resell and securities borrowed transactions by, in appropriate circumstances, entering into master netting agreements and collateral agreements with counterparties that provide the Group, in the event of a counterparty default, with the right to net a counterparty's rights and obligations under such agreement and liquidate and set off collateral held by the Group against the net amount owed by the counterparty. Under these securities purchased under agreements to resell and securities borrowed transactions, the Group receives collateral, including US government and agency securities, other sovereign government obligations, corporate and other debt and corporate equities. The Group also monitors the fair value of the underlying securities as compared with the related receivable or payable, including accrued interest, and, as necessary, requests additional collateral to ensure such transactions are adequately collateralised.

- *Derivatives*

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

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### Credit risk (continued)

##### Exposure to credit risk

- *Counterparty risk exposure (Audited)*

The table below shows the Group's maximum exposure to credit risk and credit exposure for certain financial assets the Group believes are subject to credit risk and where the Group has entered into credit enhancements, including receiving cash and security as collateral and master netting agreements. The financial effect of the credit enhancements is also disclosed in the table. The net credit exposure represents the credit exposure remaining after the effect of the credit enhancements. Exposure to other Morgan Stanley Group undertakings is included in this table.

Class	31 December 2016			31 December 2015		
	Gross credit exposure <sup>(1)</sup> \$millions	Credit enhancements \$millions	Net credit exposure <sup>(2)</sup> \$millions	Gross credit exposure <sup>(1)</sup> \$millions	Credit enhancements \$millions	Net credit exposure <sup>(2)</sup> \$millions
Cash collateral on securities borrowed	19,601	(18,900)	701	22,433	(21,116)	1,317
Securities purchased under agreements to resell	77,446	(75,053)	2,393	58,644	(57,951)	693
Financial assets classified as held for trading - derivatives	183,553	(175,809)	7,744	187,111	(178,730)	8,381
Financial assets designated at fair value through profit or loss	4,312	(3,697)	615	1,636	(958)	678
	<u>284,912</u>	<u>(273,459)</u>	<u>11,453</u>	<u>269,824</u>	<u>(258,755)</u>	<u>11,069</u>

(1) The carrying amount recognised in the consolidated statement of financial position best represents the Group'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 \$3,696 million (2015: \$2,716 million) to be offset in the event of default by certain Morgan Stanley counterparties.

Additional information on the exposure to credit risk, including the maximum exposure to credit risk by credit rating is presented in note 27 to the Consolidated Financial Statements.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### Credit risk (continued)

##### *Exposure to credit risk (continued)*

- *Country risk exposure*

Country risk is the risk that events in, or affecting, a foreign country might adversely affect the Group. “Foreign country” means any country other than the UK. Sovereign Risk, by contrast, is the risk that a government will be unwilling or unable to meet its debt obligations, or renege on the debt it guarantees. Sovereign risk is single-name risk for a sovereign government, its agencies and guaranteed entities.

Country risk exposure is measured in accordance with the Group’s internal risk management standards and includes obligations from sovereign governments, corporations, clearing houses and financial institutions. The Group actively manages country risk exposure through a comprehensive risk management framework that combines credit and market fundamentals and allows the Group to effectively identify, monitor and limit country risk. Country risk exposure before and after hedges is monitored and managed by the Credit Risk Management Department.

The Group’s obligor credit evaluation process may also identify indirect exposures whereby an obligor has vulnerability or exposure to another country or jurisdiction. Examples of indirect exposures include mutual funds that invest in a single country, offshore companies whose assets reside in another country to that of the offshore jurisdiction and finance company subsidiaries of corporations. Indirect exposures identified through the credit evaluation process may result in a reclassification of country risk.

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

The Group’s sovereign exposures consist of financial instruments entered into with sovereign and local governments. Its non-sovereign exposures consist of exposures to primarily corporations and financial institutions. The table below shows the Group’s five largest non-UK country net exposures. Exposure to other Morgan Stanley Group undertakings has been excluded from this table.

Each reference entity within an index is allocated to that reference entity’s country of risk. Index exposures are allocated to the underlying reference entities in proportion to the notional weighting of each reference entity in the index, adjusted for any fair value receivable/ payable for that reference entity. Where credit risk crosses multiple jurisdictions, for example, a credit default swap (“CDS”) purchased from an issuer in a specific country that references bonds issued by an entity in a different country, the fair value of the CDS is reflected in the Net counterparty exposure column based on the country of the CDS issuer. Further, the notional amount of the CDS, adjusted for the fair value of the receivable/ payable, is reflected in the Net inventory column, based on the country of the underlying reference entity.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### Credit risk (continued)

*Exposure to credit risk (continued)*

*Five largest non-UK country risk net exposures:*

Country	Net inventory <sup>(1)</sup> \$millions	Net counterparty exposure <sup>(2)</sup> \$millions	Funded lending \$millions	Unfunded commitments \$millions	Exposure before hedges \$millions	Hedges <sup>(3)</sup> \$millions	Net exposure <sup>(4)</sup> \$millions
<b>France</b>							
Sovereigns	3,350	5	-	-	3,355	(50)	3,305
Non-sovereigns	292	1,800	-	1,265	3,357	(686)	2,671
<b>Total France</b>	<b>3,642</b>	<b>1,805</b>	<b>-</b>	<b>1,265</b>	<b>6,712</b>	<b>(736)</b>	<b>5,976</b>
<b>United States</b>							
Sovereigns	227	85	-	-	312	-	312
Non-sovereigns	1,930	1,550	25	10	3,515	(122)	3,393
<b>Total United States</b>	<b>2,157</b>	<b>1,635</b>	<b>25</b>	<b>10</b>	<b>3,827</b>	<b>(122)</b>	<b>3,705</b>
<b>Italy</b>							
Sovereigns	953	(2)	-	-	951	(17)	934
Non-sovereigns	76	551	39	423	1,089	(229)	860
<b>Total Italy</b>	<b>1,029</b>	<b>549</b>	<b>39</b>	<b>423</b>	<b>2,040</b>	<b>(246)</b>	<b>1,794</b>
<b>United Arab Emirates</b>							
Sovereigns	(21)	923	-	-	902	-	902
Non-sovereigns	(15)	219	-	-	204	(10)	194
<b>Total United Arab Emirates</b>	<b>(36)</b>	<b>1,142</b>	<b>-</b>	<b>-</b>	<b>1,106</b>	<b>(10)</b>	<b>1,096</b>
<b>Japan</b>							
Sovereigns	(51)	-	-	-	(51)	-	(51)
Non-sovereigns	24	827	-	-	851	(37)	814
<b>Total Japan</b>	<b>(27)</b>	<b>827</b>	<b>-</b>	<b>-</b>	<b>800</b>	<b>(37)</b>	<b>763</b>

(1) Net inventory represents exposure to both long and short single-name and index positions (i.e. bonds and equities at fair value and CDS based on notional amount assuming zero recovery adjusted for any fair value receivable or payable). As a market maker, the Group transacts in these CDS positions to facilitate client trading.

(2) Net counterparty exposure (i.e. repurchase transactions, securities lending and over the counter (“OTC”) derivatives) taking into consideration legally enforceable master netting agreements and collateral.

(3) Represents CDS hedges (purchased and sold) on net counterparty exposure and lending executed by trading desks responsible for hedging counterparty and lending credit risk exposures for the Group. Amounts are based on the CDS notional amount assuming zero recovery adjusted for any fair value receivable or payable.

(4) In addition, as at 31 December 2016, the Group had exposure to these countries for overnight deposits with banks of approximately \$535 million.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### Liquidity and funding risk

*Liquidity and funding risk management framework (Audited)*

Liquidity and funding risk refers to the risk that the Group will be unable to finance its operations due to a loss of access to the capital markets or difficulty in liquidating its assets. Liquidity and funding risk also encompasses the Group's ability to meet its financial obligations without experiencing significant business disruption or reputational damage that may threaten its viability as a going concern.

Market or idiosyncratic stress events may negatively affect the Group's liquidity and may impact its ability to raise new funding. Generally, the Group incurs liquidity and funding risk as a result of its trading, investing and client facilitation activities.

The Morgan Stanley Group's Liquidity Risk Management Framework is critical to helping ensure that the Group maintains sufficient liquidity reserves 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 to which oversees and monitors liquidity and funding risk. The Liquidity Risk Department is independent of the business units and reports to the Chief Risk Officer. The Liquidity Risk Department ensures transparency of material liquidity and funding risks, compliance with established risk limits and escalation of risk concentrations to appropriate senior management. To execute these responsibilities, the Liquidity Risk Department:

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

The liquidity and funding risks identified by these processes are summarised in reports produced by the Liquidity Risk Department that are circulated to and discussed with the EMEA ALCO, EMEA Risk Committee and the MSI Risk Committee as appropriate.

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

The Group's liquidity and funding risk management policies and procedures are consistent with those of the Morgan Stanley Group. The Board of Directors of the Group is ultimately responsible for establishing the liquidity risk tolerance and ensuring the Group's liquidity risk is appropriately managed. In addition to the internal liquidity risk management framework, the Group is locally subject to the liquidity regulations prescribed by the PRA. The Group has daily monitoring and reporting processes in place to ensure compliance with its regulatory requirements.

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

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### Liquidity and funding risk (continued)

*Liquidity and funding risk management framework (Audited) (continued)*

The following principles guide the Group's liquidity and funding 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 Group's liquidity and funding risk management framework, are the Required Liquidity Framework, Liquidity Stress Tests and the Liquidity Reserve (as defined below), which supports its target liquidity profile.

*Required liquidity framework (Audited)*

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

*Liquidity stress tests (Audited)*

The Group uses Liquidity Stress Tests to model liquidity inflows and outflows across multiple scenarios over 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 Group's Liquidity Stress Tests are important components of the Required Liquidity Framework.

The assumptions underpinning the Liquidity Stress Tests include, but are not limited to, the following:

- no government support;
- no access to equity and unsecured debt markets;
- repayment of all unsecured debt maturing within the stress horizon;
- higher haircuts and significantly lower availability of secured funding;
- additional collateral that would be required by trading counterparties, certain exchanges and clearing organisations related to credit rating downgrades;
- additional collateral that would be required due to collateral substitutions, collateral disputes and uncalled collateral;
- discretionary unsecured debt buybacks;
- drawdowns on lending commitments provided to third parties;
- client cash withdrawals and reduction in customer short positions that fund long positions;
- limited access to the foreign exchange swap markets; and
- maturity roll-off of outstanding letters of credit with no further issuance.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### Liquidity and funding risk (continued)

##### *Liquidity stress tests (Audited) (continued)*

Liquidity Stress Tests are produced for the Group, 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 reserves that are subject to any regulatory, legal or tax constraints. In addition to the assumptions underpinning the Liquidity Stress Tests, the Group takes into consideration the settlement risk related to intra-day settlement and clearing of securities and financing activities.

At 31 December 2016 and 31 December 2015, the Group maintained sufficient liquidity to meet current and contingent funding obligations as modelled in its Liquidity Stress Tests.

##### *Liquidity reserve (Audited)*

The Group maintains sufficient liquidity reserves ("Liquidity Reserve") to cover daily funding needs and to meet strategic liquidity targets sized by the Required Liquidity Framework and Liquidity Stress Tests. The size of the Liquidity Reserve is actively managed by the Group. The following components are considered in sizing the Liquidity Reserve: unsecured debt maturity profile, balance sheet size and composition, funding needs in a stressed environment inclusive of contingent cash outflows and collateral requirements. In addition, the Group's Liquidity Reserve includes a discretionary surplus based on risk tolerance and is subject to change dependent on market and firm-specific events.

The Group holds its own Liquidity Reserve which is composed of diversified cash and cash equivalents and unencumbered highly liquid securities. Eligible unencumbered highly liquid securities include highly liquid non-US government securities in addition to US government securities and other highly liquid investment grade securities.

##### *Funding management (Audited)*

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

The Group funds itself through diverse sources. These sources may include equity capital, long-term debt, securities sold under agreements to repurchase, securities lending, deposits, commercial paper, letters of credit and lines of credit. The Group has active financing programmes for both standard and structured products, targeting global investors and currencies.

##### *Balance sheet management (Audited)*

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

The Group continues to actively manage its capital and liquidity position to ensure adequate resources are available to support its activities, to enable it to withstand market stresses, and to meet regulatory stress testing requirements proposed by its regulators globally. The Group's capital and liquidity is deemed sufficient to exceed regulatory minimums under both a normal and in a stressed market environment for the foreseeable future. Additionally, the Group has access to further Morgan Stanley Group capital and liquidity as required.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### Liquidity and funding risk (continued)

##### *Balance sheet management (Audited) (continued)*

The maturity analysis of financial liabilities, derivative contracts and other financial liabilities held as part of the Group's trading activities is presented in Note 27 to the Consolidated Financial Statements.

##### *Secured funding*

A substantial portion of the Group's total assets consists of liquid marketable securities and short term receivables arising principally from its sales and trading activities. The liquid nature of these assets provides the Group with flexibility in funding these assets with secured financing. The Group's goal is to achieve an optimal mix of durable secured and unsecured financing. Secured financing investors principally focus on the quality of the eligible collateral posted. Accordingly, the Group actively manages its secured financing book based on the quality of the assets being funded.

The Group utilises shorter-term secured financing only for highly liquid assets and has established longer tenor limits for less liquid asset classes, for which funding may be at risk in the event of a market disruption. The Group defines highly liquid assets as those that are consistent with the standards of the Liquidity Reserve, and less liquid assets as those that do not meet these standards. To further minimise the refinancing risk of secured financing for less liquid assets, the Group has established concentration limits to diversify its investor base and reduce the amount of monthly maturities for secured financing of less liquid assets. Furthermore, the Group obtains "spare capacity", or term secured funding liabilities in excess of less liquid inventory, as an additional risk mitigant to replace maturing trades in the event that secured financing markets or our ability to access them become limited. Finally, in addition to the above risk management framework, the Group holds a portion of its Liquidity Reserve against the potential disruption to its secured financing capabilities.

The table below presents the Group's secured funding split between short term secured funding (with a maturity of less than one year remaining from 31 December) and long term secured funding (with a maturity of more than one year remaining from 31 December) consisting of securities sold under agreements to repurchase and cash collateral on securities loaned. The Group views other sources of financing as unsecured.

	2016	2015
	\$millions	\$millions
<i>Short term secured funding:</i>		
Cash collateral on securities loaned	21,119	14,875
Securities sold under agreement to repurchase	44,033	34,558
Total short term secured funding	<u>65,152</u>	<u>49,433</u>
<i>Long term secured funding:</i>		
Cash collateral on securities loaned	105	1,393
Securities sold under agreement to repurchase	4,383	3,453
Total long term secured funding	<u>4,488</u>	<u>4,846</u>
<b>Total secured funding</b>	<u><u>69,640</u></u>	<u><u>54,279</u></u>

##### *Credit ratings*

The Company relies on external sources to finance a significant portion of its day-to-day operations. The cost and availability of financing generally are impacted by, among other variables, the Company's credit ratings. In addition, the Company's credit ratings can have an impact on certain trading revenues, particularly in those businesses where longer-term counterparty performance is a key consideration, such as OTC derivative transactions, including credit derivatives and interest rate swaps. Ratings agencies consider company-specific factors; other industry factors such as regulatory or legislative changes; the macroeconomic environment; and perceived levels of government support, among other things.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### Liquidity and funding risk (continued)

##### *Credit ratings (continued)*

Some rating agencies have stated that they currently incorporate various degrees of credit rating uplift from non-governmental third party sources of potential support.

At 31 December 2016, the Company's senior unsecured ratings were as follows:

	<b>Short- Term Debt</b>	<b>Long- Term Debt</b>	<b>Rating Outlook</b>
Moody's Investors Service, Inc ("Moody's")	P-1	A1	Stable
Standard & Poor's Rating Service ("S&P") <sup>(1)</sup>	A-1	A+	Stable

(1) On 16 December 2016 S&P upgraded the Company's long-term rating by one notch to A+ from A and revised the outlook to Stable from Positive Watch.

##### *Collateral impact of a downgrade*

In connection with certain OTC trading agreements and certain other agreements where the Company is a liquidity provider to certain financing vehicles, the Company may be required to provide additional collateral or immediately settle any outstanding liability balances with certain counterparties or pledge additional collateral to certain exchanges and clearing organisations in the event of a future credit rating downgrade irrespective of whether the Company is in a net asset or net liability position.

The additional collateral or termination payments that may be called in the event of a future credit rating downgrade vary by contract and can be based on ratings by either or both of Moody's and S&P. As at 31 December 2016, the future potential collateral amounts and termination payments that could be called or required from the Company, by counterparties or exchanges and clearing organisations, in the event of one-notch or two-notch downgrade scenarios, from the lowest of Moody's or S&P ratings, based on the relevant contractual downgrade triggers, were \$561 million and an incremental \$314 million, respectively.

While certain aspects of a credit rating downgrade are quantifiable pursuant to contractual provisions, the impact it would have on the Company's business and results of operations in future periods is inherently uncertain and would depend on a number of interrelated factors, including, among others, the magnitude of the downgrade, the rating relative to peers, the rating assigned by the relevant agency pre-downgrade, individual client behaviour and future mitigating actions the Company might take. The liquidity impact of additional collateral requirements is included in the Group's Liquidity Stress Tests.

#### **Operational risk**

Operational risk refers to the risk of loss, or of damage to the Group's reputation, resulting from inadequate or failed processes, people and systems or from external events (e.g. fraud, theft, legal and compliance risks, cyber-attacks or damage to physical assets). Operational risk relates to the following risk event categories as defined by Basel Capital Standards: internal fraud; external fraud; employment practices and workplace safety; clients, products and business practices; business disruption and system failure; damage to physical assets; and execution, delivery and process management. The Group may incur operational risk across the full scope of its business activities, including revenue-generating activities (e.g. sales and trading) and support and control groups (e.g., information technology and trade processing). Legal and compliance risk is discussed below under "Legal, regulatory and compliance risk".

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### Operational risk (continued)

The Group has established an operational risk framework to identify measure, monitor and control risk across the Group. This framework is consistent with the framework established by the Morgan Stanley Group and includes escalation to the Group's Board of Directors and appropriate senior management personnel. Effective operational risk management is essential to reducing the impact of operational risk incidents and mitigating legal and reputational risks. The framework is continually evolving to account for changes in the Group and to respond to the changing regulatory and business environment. The Group has implemented operational risk data and assessment systems to monitor and analyse internal and external operational risk events, to assess business environment and internal control factors and to perform scenario analysis. The collected data elements are incorporated in the operational risk capital model. The model encompasses both quantitative and qualitative elements. Internal loss data and scenario analysis results are direct inputs to the capital model, while external operational incidents, business environment and internal control factors are evaluated as part of the scenario analysis process.

In addition, the Group employs a variety of risk processes and mitigants to manage its operational risk exposures. These include a strong governance framework, a comprehensive risk management program and insurance. Operational risks and associated risk exposures are assessed relative to the risk tolerance established by the Board and are prioritised accordingly. The breadth and range of operational risk are such that the types of mitigating activities are wide-ranging. Examples of such activities include enhancing defences against cyberattacks; use of legal agreements and contracts to transfer and/or limit operational risk exposures; due diligence; implementation of enhanced policies and procedures; exception management processing controls; and segregation of duties.

Primary responsibility for the management of operational risk is with the business, the control groups and the business managers therein. The business managers maintain processes and controls designed to identify, assess, manage, mitigate and report operational risk. Each of the business segments has a designated operational risk coordinator. The operational risk coordinator regularly reviews operational risk issues and reports to the Group's senior management within each business. Each control group also has a designated operational risk coordinator and a forum for discussing operational risk matters with the Group's senior management. Oversight of operational risk is provided by the Operational Risk Oversight Committee, regional risk committees and senior management. In the event of a merger; joint venture; divestiture; reorganisation; or creation of a new legal entity, a new product or a business activity, operational risks are considered, and any necessary changes in processes or controls are implemented.

The Operational Risk Department is independent of the business divisions and reports to the Chief Risk Officer. The Operational Risk Department provides oversight of operational risk management and independently assesses, measures and monitors operational risk. The Operational Risk Department works with the business divisions and control groups to help ensure a transparent, consistent and comprehensive framework for managing operational risk within each area and across the Group. The Operational Risk Department scope includes oversight of the technology and data risk management programs (e.g. cybersecurity), fraud risk management and prevention program and a supplier management (vendor risk oversight and assessment) program. Furthermore, the Operational Risk Department supports the collection and reporting of operational risk incidents and the execution of operational risk assessments; provides the infrastructure needed for risk measurement and risk management; and ensures ongoing validation and verification of the Group's advanced measurement approach for operational risk capital.

Business Continuity Management is responsible for identifying key risks and threats to the Group's resiliency and planning to ensure that a recovery strategy and required resources are in place for the resumption of critical business functions following a disaster or other business interruption. Disaster recovery plans are in place for critical facilities and resources on a Group-wide basis, and redundancies are built into the systems as deemed appropriate. The key components of the Group's Business Continuity Management Program include: crisis management; business recovery plans; applications/data recovery; work area recovery; and other elements addressing management, analysis, training and testing.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### Operational risk (continued)

The Group maintains an information security program that coordinates the management of information security risks and is designed to address regulatory requirements. Information security policies are designed to protect the Group's information assets against unauthorised disclosure, modification or misuse. These policies cover a broad range of areas, including: application entitlements, data protection, incident response, internet and electronic communications, remote access and portable devices. The Group has also established policies, procedures and technologies to protect its computers and other assets from unauthorised access.

In connection with its ongoing operations, the Group utilises the services of external vendors, which it anticipates will continue and may increase in the future. These services include, for example, outsourced processing and support functions and consulting and other professional services. The Group manages its exposures to these services through a variety of means such as the performance of due diligence, consideration of operational risk, implementation of service level and other contractual agreements, and ongoing monitoring of the vendors' performance. The Group maintains a supplier risk management program with policies, procedures, organisation, governance and supporting technology that satisfies regulatory requirements. The program is designed to ensure that adequate risk management controls over the services exist, including, but not limited to information security, operational failure, financial stability, disaster recoverability, reputational risk, safeguards against corruption and termination.

#### Conduct risk

Conduct risk refers to the risk that the Group's actions or behaviours do not adequately consider the impact on its clients, expected market users or the markets. Conduct risk is managed within the framework set out by the MSI Group and is managed and owned across the businesses and control functions through policies, process and controls within a designed framework.

#### Legal, regulatory and compliance risk

Legal, regulatory and compliance risk includes the risk of legal or regulatory sanctions, material financial loss; including fines, penalties, judgements, damages and/ or settlements or loss to reputation the Group may suffer as a result of a failure to comply with laws, regulations, rules, related self-regulatory organisation standards and codes of conduct applicable to our business activities. This risk also includes contractual and commercial risk, such as the risk that a counterparty's performance obligations will be unenforceable. It also includes compliance with Anti-Money Laundering and terrorist financing rules and regulations. The Group is generally subject to extensive regulation in the different jurisdictions in which it conducts its business.

The Group, principally through the Morgan Stanley Group's Legal and Compliance Division, has established procedures based on legal and regulatory requirements on a worldwide basis that are designed to facilitate compliance with applicable statutory and regulatory requirements and to require that the Group's policies relating to business conduct, ethics and practices are followed globally.

In addition, the Group has established procedures to mitigate the risk that a counterparty's performance obligations will be unenforceable, including consideration of counterparty legal authority and capacity, adequacy of legal documentation, the permissibility of a transaction under applicable law and whether applicable bankruptcy or insolvency laws limit or alter contractual remedies. The heightened legal and regulatory focus on the financial services industry presents a continuing business challenge for the Group.

#### Culture, values and conduct of employees

All employees of the Morgan Stanley Group are accountable for conducting themselves in accordance with the Morgan Stanley Group's core values *Putting Clients First, Doing the Right Thing, Leading with Exceptional Ideas, and Giving Back*. The Morgan Stanley Group is committed to establishing a strong culture anchored in these core values, and in its governance framework, which includes management oversight, effective risk management and controls, training and development programs, policies, procedures, and defined roles and responsibilities.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### RISK MANAGEMENT (CONTINUED)

#### Culture, values and conduct of employees (continued)

The Morgan Stanley Group's Code of Conduct (the "Code") establishes standards for employee conduct that further reinforce the Morgan Stanley Group's commitment to integrity and ethical conduct. Every new hire and every employee annually must attest to their understanding of and adherence to the Code. The annual employee performance appraisal process includes an evaluation of adherence to the Code and the Morgan Stanley Group's core values. The Global Incentive Compensation Discretion Policy sets forth standards that specifically provide that managers must consider whether their employees effectively managed and/or supervised risk control practices during the performance year. The Morgan Stanley Group also has several mutually reinforcing processes to identify employee conduct that may have an impact on employment status, current year compensation and/or prior year compensation. The Morgan Stanley Group's clawback and cancellation provisions permit recovery of deferred incentive compensation where an employee's act or omission (including with respect to direct supervisory responsibilities) causes a restatement of the Morgan Stanley Group's consolidated financial results, constitutes a violation of the Morgan Stanley Group's global risk management principles, policies and standards, or causes a loss of revenues associated with a position on which the employee was paid and the employee operated outside of internal control policies.

#### CAPITAL MANAGEMENT (Audited)

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

The Group, in line with Morgan Stanley Group's capital management policies, manages its 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 and, therefore, in the future may expand or contract its capital base to address the changing needs of its businesses. The appropriate level of capital is determined at a legal entity level to safeguard that entity's ability to continue as a going concern and ensure that it meets all regulatory capital requirements. The key components of the capital management framework used by the Group are set out in the Capital Management Policy and include a point in time capital assessment, forward looking capital projections and stress testing.

MSI and all of its subsidiary undertakings prepare an Internal Capital Adequacy Assessment Process ("ICAAP") document in order to meet obligations under CRD IV and the requirements of the PRA. The Group forms part of the MSI Group.

The ICAAP is one of the key tools used to inform the MSI Group's capital adequacy assessment, planning and management. The MSI Group ICAAP:

- Ensures the risks the MSI Group is exposed to are appropriately capitalised and risk managed, including those risks that are either not captured, or not fully captured under Pillar 1;
- Uses stress testing to size a capital buffer aimed at ensuring the MSI Group will continue to operate above regulatory requirements under a range of severe but plausible stress scenarios; and
- Assesses capital adequacy under normal and stressed operating environments over the 3 year capital planning horizon to ensure the MSI Group maintains a capital position in line with internal operating targets and above post stress minimums

The key elements of the ICAAP are embedded in the MSI Group's day-to-day management processes and decision making culture

The PRA reviews the ICAAP document through its Supervisory Review Process and issues an Individual Capital Guidance which sets the minimum level of regulatory capital for the MSI Group and the Company. In addition, the PRA sets a capital planning buffer which is available to support the MSI Group in a stressed market environment.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### CAPITAL MANAGEMENT (Audited) (continued)

The capital managed by the Group broadly includes share capital, Additional Tier 1 capital instruments, subordinated debt and reserves. In order to maintain or adjust its capital structure, the Group may adjust the amount of dividends paid, return capital to its shareholder, issue new shares, issue or repay subordinated debt or sell assets to reduce debt.

### REGULATORY REQUIREMENTS

#### Regulatory capital

The Group continues to actively manage its capital and liquidity position to ensure adequate resources are available to support its activities, to enable it to withstand market stresses, and to meet regulatory stress testing requirements proposed by its regulators globally.

The Company is regulated by the FCA and the PRA and as such is subject to minimum capital requirements. The Company's capital is monitored on an ongoing basis to ensure compliance with these requirements. At a minimum, the Company must ensure that Capital Resources described in accordance with CRR as Own Funds, are greater than the Capital Resource Requirement covering credit, market and operational risk.

The Company complied with all of its regulatory capital requirements during the year.

#### Own Funds

Set out below are details of the Company's Capital Resources, described in accordance with CRR and tables below as Own Funds, as at 31 December 2016 and 31 December 2015:

	2016	2015
	\$millions	\$millions
Capital instruments eligible as Common Equity Tier 1 capital ("CET 1")	11,978	11,978
Prior year retained earnings	1,762	1,518
Current year profit after tax, CET 1 eligible	-	353
Other reserves	1,220	1,286
CET 1 capital before deductions <sup>(1)</sup>	14,960	15,135
Regulatory deductions from CET 1	(1,075)	(1,180)
<b>CET1 capital</b>	13,885	13,955
Additional Tier 1 capital <sup>(1)</sup>	1,300	1,300
Tier 1 capital	15,185	15,255
Tier 2 capital (long-term subordinated loans)	7,906	7,906
<b>Own Funds</b>	<u>23,091</u>	<u>23,161</u>

Movement in Own Funds of the Company was as follows:

	2016
	\$millions
Own funds at 1 January 2016	23,161
Change in Tier 1 instruments:	
CET 1 capital instruments	(175)
Regulatory deductions from CET 1	105
<b>Own Funds at 31 December 2016</b>	<u>23,091</u>

(1) The sum of CET 1 capital before deductions and Additional Tier 1 capital agrees to the Company's managed capital in note 28 of the Company's financial statements, with the exception of \$513 million of current year profit after tax which was not eligible as CET 1 capital as at the balance sheet date.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### REGULATORY REQUIREMENTS (CONTINUED)

#### Basel Liquidity Framework

The Basel Committee on Banking Supervision (the “Basel Committee”) has developed two standards intended for use in liquidity risk supervision: the Liquidity Coverage Ratio (“LCR”) and the Net Stable Funding Ratio (“NSFR”).

*Liquidity Coverage Ratio:* The LCR was developed to ensure banking organisations have sufficient high quality liquid assets to cover net cash outflows arising from significant stress over 30 calendar days. The standard’s objective is to promote the short-term resilience of the liquidity risk profile of banking organisations. The Group was required to comply with LCR minimum standards from 1 October 2015. The Group is compliant with the minimum required LCR based on current interpretation. These minimum standards are increasing each year until 2018. The Group continues to evaluate the impact on its liquidity and funding requirements.

*Net Stable Funding Ratio:* The objective of the NSFR is to reduce funding risk over a one year horizon by requiring banking organisations to fund their activities with sufficiently stable sources of funding in order to mitigate the risk of future funding stress. In October 2014, the Basel Committee finalised revisions to the NSFR, which is expected to become effective on 1 January 2018. The Group continues to evaluate the NSFR and its potential impact on the Group’s current liquidity and funding requirements.

#### Resolution and recovery planning

Both the Morgan Stanley Group and the MSI Group prepare, on an annual basis, a recovery plan which identifies mitigation tools available to both groups in times of severe stress.

The Morgan Stanley Group has developed a resolution plan in accordance with the requirements of Section 165(d) of Title I of the Dodd-Frank Wall Street Reform and Consumer Protection Act and its implementing regulations adopted by the Federal Reserve Board and the Federal Deposit Insurance Corporation. The resolution plan presents the Firm’s strategy for resolution of the Firm upon material financial distress or failure in a severely adverse macroeconomic environment. The Company is a Material Operating Entity of the Morgan Stanley Group and is within the scope of the single point of entry resolution strategy adopted by the Morgan Stanley Group.

The EU Bank Recovery and Resolution Directive (“BRRD”) has established a recovery and resolution framework for EU credit institutions and investment firms, including the Company. The Company produces information required by the UK Resolution Authority in the form of a resolution pack and ad hoc regulatory submissions, as necessary under BRRD and UK regulatory requirements.

#### European Financial Regulation Reform

In November 2016, the European Commission published a comprehensive regulatory reform package which aims to continue the reforms that the EU implemented in the wake of the financial crisis. The proposals seek to amend to the existing prudential regime implemented through the Capital Requirements Directive (“CRD”) and the Capital Requirements Regulation (“CRR”), with the amendments to those regulations known as CRD5 and CRR2, the BRRD and the Single Resolution Mechanism (“SRM”).

These proposals are now subject to further discussion and negotiation among European policy-makers and it is not possible to anticipate their final content. The proposals are expected to be introduced in the EU in 2019 at the earliest, with Member States implementing the new rules in 2020-21 based on current estimates.

In light of these potential developments as well as the impact of the UK’s decision to leave the EU following the result of the EU Referendum, there remains uncertainty as to the rules which may apply to the Group post-2019.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## STRATEGIC REPORT

### REGULATORY REQUIREMENTS (CONTINUED)

#### Derivatives Regulation

Under the US regulatory regime for swaps implemented pursuant to the Dodd-Frank Act, the Group is subject to regulations including, among others, public and regulatory reporting, central clearing and mandatory trading on regulated exchanges or execution facilities for certain types of swaps.

In 2015, the federal banking regulators and the CFTC separately issued final rules establishing uncleared Swap margin requirements for Swaps Entities subject to their respective regulation, including MSIP. These final rules impose variation margin requirements under a phase-in compliance schedule that applied to the largest dealers as of 1 September 2016 and will apply to the remainder of in-scope market participants as of 1 March 2017. Similarly, the final rules phase-in initial margin requirements from 1 September 2016 through 1 September 2020, depending on the level of over-the-counter (“OTC”) derivatives activity of the swap dealer and the relevant counterparty. Margin rules with the same or similar compliance dates have been adopted or are in the process of being finalised by regulators out the US, including the EU.

#### Going concern

Business risks associated with the uncertain market and economic conditions are being actively monitored and managed by the Group. Retaining sufficient liquidity and capital to withstand these market pressures remains central to the Group’s strategy. In particular, the Group’s capital and liquidity is deemed sufficient to exceed regulatory minimums under both a normal and in a stressed market environment for the foreseeable future. Additionally, the Group has access to further Morgan Stanley Group capital and liquidity as required.

Taking all of these factors into consideration, the Directors believe it is reasonable to assume that the Group will have access to adequate resources to continue in operational existence for the foreseeable future. Accordingly they continue to adopt the going concern basis in preparing the annual reports and financial statements.

Approved by the Board and signed on its behalf by



C Castello

Director

20 April 2017

# **MORGAN STANLEY & CO. INTERNATIONAL plc**

## **DIRECTORS' REPORT**

The Directors present their report and consolidated financial statements of Morgan Stanley & Co. International plc (the “Company”) and all of its subsidiary undertakings (together “the Group”), which comprise the consolidated income statement, consolidated statement of comprehensive income, consolidated statement of changes in equity, consolidated statement of financial position, consolidated statement of cash flows and the related notes 1 to 36, together with the Company’s statement of comprehensive income, statement of changes in equity, statement of financial position and related notes 1 to 31 and the appendix to the financial statements for the year ended 31 December 2016.

### **RESULTS AND DIVIDENDS**

The Group’s profit for the year, after tax, was \$451 million (2015: \$401 million profit after tax).

On 15 December 2016, the Directors approved a coupon payment on the Additional tier 1 capital instrument of \$158 million (2015: \$15 million) See note 23. No other dividends were proposed or paid during the year ended 31 December 2016 (2015: \$nil).

### **REGULATION, RISK MANAGEMENT, BRANCHES AND FUTURE DEVELOPMENTS**

Information regarding regulation, risk management, branches and future developments has been included in the Strategic report.

### **PILLAR 3 DISCLOSURES**

The regulatory disclosures made in order to comply with the EU Directives and Regulation implementing the Basel capital framework (“the Pillar 3 disclosures”) are available on the Morgan Stanley website (see note 28 of the Company’s financial statements for further details).

### **CAPITAL REQUIREMENTS COUNTRY-BY-COUNTRY REPORTING**

The disclosures made in order to comply with the Capital Requirements (Country-by-Country Reporting) Regulations 2016 will be made available on the Morgan Stanley website (see note 28 of the Company’s financial statements for further details).

### **DIRECTORS**

The following Directors held office throughout the year and to the date of approval of this report (except where otherwise shown):

J Bloomer	(appointed 1 November 2016)
D O Cannon	
C Castello	
T Duhon	(appointed 14 April 2016)
L Guy	
T C Kelleher	(resigned 5 February 2016)
J Horder	(appointed 8 June 2016)
A Kohli	(appointed 9 August 2016)
M C Phibbs	
I Plenderleith	(Chairman)
R P Rooney	
D A Russell	
C E Woodman	(resigned 5 February 2016)

### **DIRECTORS' AND OFFICERS' LIABILITY INSURANCE**

Directors’ and Officers’ Liability Insurance is taken out by Morgan Stanley, for the benefit of the Directors and Officers of the Group.

# **MORGAN STANLEY & CO. INTERNATIONAL plc**

## **DIRECTORS' REPORT**

### **DIRECTORS' INDEMNITY**

Qualifying third party indemnity provisions (as defined in section 234 of the Companies Act 2006) were in force during the year and up to and including the date of the Directors' report for the benefit of the Directors of the Group.

### **AUDIT COMMITTEE**

MSI, the Company's ultimate UK parent undertaking, has an Audit Committee which assists the Boards of MSI, the Company and other MSI regulated subsidiary undertakings in meeting their responsibilities in ensuring an effective system of internal control and compliance, and in meeting their external financial reporting obligations. The Audit Committee meets regularly and reports to the MSI Board on a quarterly basis.

### **EMPLOYEES**

Both the Group and the Morgan Stanley Group place considerable value on the investment in their employees and have continued their practice of keeping employees informed on matters affecting them. Employees are encouraged to present their suggestions and views on Morgan Stanley Group's performance to management and employees participate directly in the success of the business through Morgan Stanley Group's various compensation incentive plans.

Every effort is also made to ensure that disabled applicants, or those existing employees who are disabled or may have become disabled, are treated fairly on terms comparable with those of other employees. Appropriate training is arranged for disabled persons, including retraining for alternative work for employees who become disabled, to promote their career development within the organisation.

### **EMPLOYEE REMUNERATION**

The Group employs staff directly, in addition to utilising staff employed by other Morgan Stanley Group undertakings. The Group's policies are comparable and consistent with those of the Morgan Stanley Group, which include the deferral of significant portions of certain key employees' discretionary compensation. Notes 6 and 35 to the consolidated financial statements provides additional information and disclosure regarding the Group's compensation policies.

### **CHARITABLE CONTRIBUTIONS**

During the year the Group made donations to various charities totalling \$3.5 million (2015: \$3.6 million), of which \$1.7 million was donated to the Morgan Stanley International Foundation (2015: \$1.8 million).

### **EVENTS AFTER THE REPORTING DATE**

On 1 February 2017, the Company transferred the assets and liabilities of the French branch to Morgan Stanley (France) S.A., a wholly owned subsidiary of the Company. On transfer, the branch was dissolved. Refer to note 36 for additional information.

On 3 January 2017, the Group's subordinated loan was reassigned from Morgan Stanley UK Financing I LP to Morgan Stanley International Finance S.A., another Morgan Stanley Group company. On 8 February 2017 a new subordinated loan was issued by the Group to its immediate parent, Morgan Stanley Investments (UK). Part of the existing subordinated loan with Morgan Stanley International Finance S.A. was repaid. Refer to note 17 for additional information.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## DIRECTORS' REPORT

### AUDITOR

Deloitte LLP have expressed their willingness to continue in office as auditor of the Group and a resolution to re-appoint them will be proposed at the forthcoming annual general meeting.

#### **Statement as to disclosure of information to the auditor**

Each of the persons who are Directors of the Company at the date when this report is approved confirms that:

- so far as each of the Directors is aware, there is no relevant audit information (being information needed by the Group's auditor in connection with preparing their report) of which the Group's auditor is unaware; and
- each of the Directors has taken all the steps that he/she ought to have taken as a Director to make himself/herself aware of any relevant audit information and to establish that the Group's auditor is aware of that information.

This confirmation is given and should be interpreted in accordance with the provisions of section 418 of the Companies Act 2006.

Approved by the Board and signed on its behalf by



C Castello

Director

20 April 2017

# MORGAN STANLEY & CO. INTERNATIONAL plc

## DIRECTORS' REPORT

### DIRECTORS' RESPONSIBILITIES STATEMENT

The Directors are responsible for preparing the annual report and the financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare financial statements for each financial year. Under that law the Directors have prepared the financial statements in accordance with International Financial Reporting Standards ("IFRS") as adopted by the EU and Article 4 of the International Accounting Standards ("IAS") Regulation and have elected to prepare the parent company financial statements in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards and applicable law), including FRS 101 "Reduced Disclosure Framework" ("FRS 101"). Under company law the Directors must not approve the accounts unless they are satisfied that they give a true and fair view of the state of affairs of the Group and of the profit or loss of the Group for that period.

In preparing the Group financial statements, the Directors are required by IAS 1 '*Presentation of financial statements*' ("IAS 1") to:

- properly select and apply accounting policies;
- present information, including accounting policies, in a manner that provides relevant, reliable, comparable and understandable information;
- provide additional disclosures when compliance with the specific requirements in IFRSs is insufficient to enable users to understand the impact of particular transactions, other events and conditions on the entity's financial position and financial performance; and
- make an assessment of the Group's ability to continue as a going concern.

In preparing these financial statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and accounting estimates that are reasonable and prudent;
- state whether applicable UK accounting standards have been followed; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Company will continue in business.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Group's transactions and disclose with reasonable accuracy at any time the financial position of the Group and enable them to ensure that the financial statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the Group and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Directors, the names of whom are set out on page 32, confirm to the best of their knowledge:

- in accordance with rule 4.1.12(3)(a) of the FCA's Disclosure and Transparency Rules, the consolidated financial statements, which have been prepared in accordance with IFRSs as issued by the International Accounting Standards Board ("IASB") and as endorsed by the EU, have been prepared in accordance with the applicable set of accounting standards and give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group and the undertakings included in the consolidation taken as a whole; and
- the management report represented by the Strategic report has been prepared in accordance with rule 4.1.12(3)(b) of the FCA's Disclosure and Transparency Rules, and includes a fair review of the development and performance of the business and the position of the Group and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that the Group faces.

Approved by the Board and signed on its behalf by



C Castello, Director

20 April 2017

## **INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF MORGAN STANLEY & CO. INTERNATIONAL plc**

We have audited the Group and Company financial statements of Morgan Stanley & Co. International plc for the year ended 31 December 2016 which comprise the consolidated income statement, the consolidated statement of comprehensive income, the consolidated statement of changes in equity, the consolidated statement of financial position and the consolidated statement of cash flows and the Company's statement of comprehensive income, statement of changes in equity, statement of financial position and the related notes 1 to 36 for the consolidated financial statements and the related notes 1 to 31 for the Company financial statements and the appendix to the financial statements. The financial reporting framework that has been applied in the preparation of the Group financial statements is applicable law and IFRSs as adopted by the EU. The financial reporting framework that has been applied in the preparation of the Company financial statements is applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice), including Financial Reporting Standard ("FRS") 101 'Reduced Disclosure Framework'.

This report is made solely to the Group's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the Group's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Group and the Group's members as a body, for our audit work, for this report, or for the opinions we have formed.

### **Respective responsibilities of Directors and auditor**

As explained more fully in the Directors' responsibilities statement, the Directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Auditing Practices Board's Ethical Standards for Auditors.

### **Scope of the audit of the financial statements**

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the Group's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the Directors; and the overall presentation of the financial statements and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by us in the course of performing the audit. In addition, we read all the financial and non-financial information in the annual report to identify material inconsistencies with the audited financial statements. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report.

### **Opinion on financial statements**

In our opinion the financial statements:

- give a true and fair view of the state of the Group's and of the parent Company's affairs as at 31 December 2016 and of its profit for the year then ended;
- for the Group have been properly prepared in accordance with IFRSs as adopted by the European Union;
- for the Company have been properly prepared in accordance with UK Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Companies Act 2006.

# **INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF MORGAN STANLEY & CO. INTERNATIONAL plc**

## **Opinion on other matter prescribed by the Companies Act 2006**

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the Strategic Report and the Directors' Report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the Strategic Report and the Directors' Report have been prepared in accordance with applicable legal requirements.

In light of the knowledge and understanding of the Company and its environment obtained in the course of the audit, we have not identified any material misstatements in the Strategic Report and the Directors' Report.

## **Matters on which we are required to report by exception**

We have nothing to report in respect of the following matters where the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept, or returns adequate for our audit have not been received from branches not visited by us; or
- the financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of Directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.



Manbhinder Rana (Senior Statutory Auditor)  
for and on behalf of Deloitte LLP  
Chartered Accountants and Statutory Auditor  
London  
21 April 2017

**MORGAN STANLEY & CO. INTERNATIONAL plc****CONSOLIDATED INCOME STATEMENT****Year ended 31 December 2016**

	Note	2016 \$millions	2015 \$millions
Net gains on financial instruments classified as held for trading		3,816	3,508
Net gains on financial instruments designated at fair value through profit or loss		94	161
Interest income	4	(88)	130
Interest expense	4	(599)	(690)
Other income	5	1,235	1,342
Other expense	6	(3,723)	(3,741)
<b>PROFIT BEFORE INCOME TAX</b>		<u>735</u>	<u>710</u>
Income tax expense	7	(284)	(309)
<b>PROFIT FOR THE YEAR</b>		<u><u>451</u></u>	<u><u>401</u></u>
Attributable to:			
Owners of the parent		450	400
Non-controlling interests		1	1
<b>PROFIT FOR THE YEAR</b>		<u><u>451</u></u>	<u><u>401</u></u>

All operations were continuing in the current and prior year.

The notes on pages 43 to 134 form an integral part of the consolidated financial statements.

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME**

**Year ended 31 December 2016**

	Note	2016 \$millions	2015 \$millions
<b>PROFIT FOR THE YEAR</b>		451	401
<b>OTHER COMPREHENSIVE INCOME, NET OF TAX</b>			
<b>Items that will not be reclassified subsequently to profit or loss:</b>			
Remeasurement of net defined benefit liability	7	-	(2)
Changes in fair value attributable to own credit risk on financial liabilities designated at fair value	7	(42)	-
<b>Items that may be reclassified subsequently to profit or loss:</b>			
Currency translation reserve:			
Foreign currency translation differences arising on foreign operations	7	(8)	(46)
Available-for-sale reserve:			
Net change in fair value of the available-for-sale financial assets	7	(8)	(3)
<b>OTHER COMPREHENSIVE INCOME AFTER INCOME TAX FOR THE YEAR</b>		(58)	(51)
		<hr/>	<hr/>
<b>TOTAL COMPREHENSIVE INCOME FOR THE YEAR</b>		<u>393</u>	<u>350</u>
Attributable to:			
Owners of the parent		406	356
Non-controlling interest		(13)	(6)
<b>TOTAL COMPREHENSIVE INCOME FOR THE YEAR</b>		<u>393</u>	<u>350</u>

The notes on pages 43 to 134 form an integral part of the consolidated financial statements.

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**CONSOLIDATED STATEMENT OF CHANGES IN EQUITY**  
**Year ended 31 December 2016**

	Equity instruments	Share premium	Currency translation reserve	Available-for-sale reserve	Capital contribution reserve	Capital redemption reserve	Pension reserve	Debt valuation adjustment reserve	Retained earnings	Attributable to owners of the parent	Non-controlling interests	Total equity
Note	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions
<b>Balance at 1 January 2015</b>	12,764	513	27	6	3	1,400	2	-	1,402	16,117	71	16,188
Profit for the year	-	-	-	-	-	-	-	-	400	400	1	401
Other comprehensive income/(loss)	-	-	(39)	(3)	-	-	(2)	-	-	(44)	(7)	(51)
<b>Total comprehensive income/(loss)</b>	-	-	(39)	(3)	-	-	(2)	-	400	356	(6)	350
<b>Transactions with owners:</b>												
Issue of ordinary share capital	22	1	-	-	-	-	-	-	-	1	-	1
Dividends	23	-	-	-	-	-	-	-	(12)	(12)	-	(12)
<b>Balance at 31 December 2015</b>	<b>12,765</b>	<b>513</b>	<b>(12)</b>	<b>3</b>	<b>3</b>	<b>1,400</b>	<b>-</b>	<b>-</b>	<b>1,790</b>	<b>16,462</b>	<b>65</b>	<b>16,527</b>
Restated for adoption of new accounting standard	-	-	-	-	-	-	-	(3)	3	-	-	-
Profit for the year	-	-	-	-	-	-	-	-	450	450	1	451
Other comprehensive income/(loss)	-	-	6	(8)	-	-	-	(42)	-	(44)	(14)	(58)
<b>Total comprehensive income/(loss)</b>	-	-	6	(8)	-	-	-	(42)	450	406	(13)	393
<b>Transactions with owners:</b>												
Dividends	23	-	-	-	-	-	-	-	(117)	(117)	-	(117)
<b>Balance at 31 December 2016</b>	<b>12,765</b>	<b>513</b>	<b>(6)</b>	<b>(5)</b>	<b>3</b>	<b>1,400</b>	<b>-</b>	<b>(45)</b>	<b>2,126</b>	<b>16,751</b>	<b>52</b>	<b>16,803</b>

The notes on pages 43 to 134 form an integral part of the consolidated financial statements.

**MORGAN STANLEY & CO. INTERNATIONAL plc**

Registered number: 2068222

**CONSOLIDATED STATEMENT OF FINANCIAL POSITION****As at 31 December 2016**

	Note	2016 \$millions	2015 \$millions
<b>ASSETS</b>			
Loans and receivables:			
Cash and short term deposits	24	20,346	11,882
Cash collateral on securities borrowed		19,601	22,433
Securities purchased under agreements to resell		77,446	58,644
Trade receivables		51,659	50,940
Other receivables	9	1,480	1,891
		<u>170,532</u>	<u>145,790</u>
Financial assets classified as held for trading (of which \$50,011 million (2015: \$39,718 million) were pledged to various parties)	10	248,180	246,273
Financial assets designated at fair value through profit or loss	12	4,312	1,636
Available-for-sale financial assets	13	29	39
Current tax assets		163	185
Deferred tax assets	20	84	120
Prepayments and accrued income		38	38
Property, plant and equipment	16	6	3
Intangible assets		2	-
<b>TOTAL ASSETS</b>		<u><u>423,346</u></u>	<u><u>394,084</u></u>
<b>LIABILITIES AND EQUITY</b>			
Financial liabilities at amortised cost:			
Bank loans and overdrafts	24	25	-
Cash collateral on securities loaned		21,224	16,268
Securities sold under agreements to repurchase		48,416	38,011
Trade payables		85,634	82,065
Subordinated loans	17	7,906	7,906
Other payables	18	10,789	11,588
		<u>173,994</u>	<u>155,838</u>
Financial liabilities classified as held for trading	10	226,187	216,506
Financial liabilities designated at fair value through profit or loss	12	6,020	4,865
Provisions	19	85	21
Current tax liabilities		80	101
Deferred tax liabilities	20	11	23
Accruals and deferred income		161	197
Post employment benefit obligations	34	5	6
<b>TOTAL LIABILITIES</b>		<u>406,543</u>	<u>377,557</u>
<b>EQUITY</b>			
Equity instruments	22	12,765	12,765
Share premium account	22	513	513
Currency translation reserve	22	(6)	(12)
Available-for-sale reserve	22	(5)	3
Capital contribution reserve	22	3	3
Capital redemption reserve	22	1,400	1,400
Debt valuation adjustment reserve	22	(45)	-
Retained earnings		<u>2,126</u>	<u>1,790</u>
<b>Equity attributable to the owners of the parent</b>		<u>16,751</u>	<u>16,462</u>
<b>Non-controlling interests</b>		<u>52</u>	<u>65</u>
<b>TOTAL EQUITY</b>		<u>16,803</u>	<u>16,527</u>
<b>TOTAL LIABILITIES AND EQUITY</b>		<u><u>423,346</u></u>	<u><u>394,084</u></u>

These consolidated financial statements were approved by the Board and authorised for issue on 20 April 2017.

Signed on behalf of the Board

C Castello, Director



The notes on pages 43 to 134 form an integral part of the consolidated financial statements.

**MORGAN STANLEY & CO. INTERNATIONAL plc****CONSOLIDATED STATEMENT OF CASH FLOWS****Year ended 31 December 2016**

	Note	2016 \$millions	2015 \$millions
<b>NET CASH FLOWS FROM OPERATING ACTIVITIES</b>	24b	8,672	246
<b>INVESTING ACTIVITIES</b>			
Purchase of property, plant and equipment	16	(6)	(1)
Proceeds from sale of property, plant and equipment		1	-
Purchase of intangible assets		(2)	-
Purchase of available-for-sale financial assets	13	(1)	(1)
Proceeds from disposal of available-for-sale financial assets	13	3	1
<b>NET CASH FLOWS USED IN INVESTING ACTIVITIES</b>		<u>(5)</u>	<u>(1)</u>
<b>FINANCING ACTIVITIES</b>			
Issue of ordinary share capital	22	-	1
Dividends paid	23	(117)	(12)
Interest on subordinated loan liabilities		<u>(175)</u>	<u>(138)</u>
<b>NET CASH FLOWS USED IN FINANCING ACTIVITIES</b>		<u>(292)</u>	<u>(149)</u>
<b>NET INCREASE IN CASH AND CASH EQUIVALENTS</b>		8,375	96
Currency translation differences on foreign currency cash balances		64	130
<b>CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE YEAR</b>	24a	<u>11,882</u>	<u>11,656</u>
<b>CASH AND CASH EQUIVALENTS AT THE END OF THE YEAR</b>	24a	<u><u>20,321</u></u>	<u><u>11,882</u></u>

The notes on pages 43 to 134 form an integral part of the consolidated financial statements.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 1. CORPORATE INFORMATION

The Company is incorporated and domiciled in England and Wales, at the following address: 25 Cabot Square, Canary Wharf, London, E14 4QA.

The Group's immediate parent undertaking is Morgan Stanley Investments (UK) which is registered in England and Wales. Copies of its financial statements can be obtained from the Registrar of Companies for England and Wales, Companies House, Crown Way, Cardiff CF14 3UZ.

The Group's ultimate parent undertaking and controlling entity is Morgan Stanley which, together with the Group 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](http://www.morganstanley.com/investorrelations).

### 2. BASIS OF PREPARATION

#### Statement of compliance

The Group has prepared its annual consolidated financial statements in accordance with IFRSs issued by the IASB as adopted by the EU, Interpretations issued by the IFRS Interpretations Committee ("IFRIC") and the Companies Act 2006.

#### New standards and interpretations adopted during the year

The following standard and amendments to standards relevant to the Group's operations were adopted during the year. Except where otherwise stated, these amendments to standards and interpretations did not have a material impact on the Group's consolidated financial statements.

An amendment to IAS 1 '*Presentation of financial statements*' was issued by the IASB in December 2014, as part of the Disclosure Initiative project. The amendment is applicable in annual periods beginning on or after 1 January 2016. The amendment was endorsed by the EU in December 2015.

Amendments to IAS 16 '*Property, plant and equipment*' and IAS 38 '*Acceptable Methods of Depreciation and Amortisation*' were issued by the IASB in May 2014, for prospective application in annual periods beginning on or after 1 January 2016. The amendments were endorsed by the EU in December 2015.

IFRS 9 '*Financial instruments*' ("IFRS 9") was issued by the IASB in November 2009, amended in November 2013, and revised and reissued by the IASB in July 2014. IFRS 9 is applicable retrospectively, except where otherwise prescribed by transitional provisions of the standard, and is effective for annual periods beginning on or after 1 January 2018. IFRS 9 was endorsed by the EU in November 2016. As permitted by IFRS 9, the Group has early adopted in isolation the requirements relating to the presentation of fair value movements due to changes in credit risk on financial liabilities designated at fair value through profit or loss and information on the effect of this is disclosed on page 45. The Group has not early adopted the remaining requirements of IFRS 9 as noted in 'New standards and interpretations not yet adopted' below.

As part of the 2012 – 2014 Annual Improvements Cycle published in September 2014, the IASB made amendments to the following standards that are relevant to the Group's operations: IFRS 7 '*Financial instruments: Disclosures*', IAS 19 '*Employee benefits*' and IAS 34 '*Interim financial reporting*', for application in accounting periods beginning on or after 1 January 2016. The improvements were endorsed by the EU in December 2015.

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

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**2. BASIS OF PREPARATION (CONTINUED)**

**New standards and interpretations not yet adopted**

At the date of authorisation of these consolidated financial statements, the following standards, amendments to standards and interpretations relevant to the Group's operations were issued by the IASB but not yet mandatory. Except where otherwise stated, the Group does not expect that the adoption of the following standards, amendments to standards and interpretations will have a material impact on the Group's consolidated financial statements.

An amendment to IAS 7 '*Statement of Cash Flows*' was issued by the IASB in January 2016, as part of the Disclosure Initiative project. The amendment is applicable for annual periods beginning on or after 1 January 2017. Early application is permitted.

An amendment to IAS 12 '*Income Taxes*' was issued by the IASB in January 2016, for application in annual periods beginning on or after 1 January 2017. Early application is permitted.

An amendment to IFRS 2 '*Share based payments*' was issued by the IASB in June 2016, for application in annual periods beginning on or after 1 January 2018. Early application is permitted.

Amendments to IAS 16 and IAS 38 '*Intangible assets*' were issued by the IASB in May 2014, for prospective application in annual periods beginning on or after 1 January 2016. The amendments were endorsed by the EU in December 2015.

IFRS 9 '*Financial instruments*' ("IFRS 9") was issued by the IASB in November 2009, amended in November 2013, and revised and reissued by the IASB in July 2014. IFRS 9 is applicable retrospectively, except where otherwise prescribed by transitional provisions of the standard, and is effective for annual periods beginning on or after 1 January 2018. IFRS 9 was endorsed by the EU in November 2016. The Group has early adopted in isolation the requirements relating to the presentation of fair value movements due to changes in credit risk on financial liabilities designated at fair value through profit or loss, but has not early adopted the remaining requirements of IFRS 9.

The aspects of IFRS 9 which are expected to have the most significant impact for the Group are its requirements relating to:

- Classification and measurement of financial assets

The classification and measurement of financial assets will depend on how these are managed (the entity's business model) and their contractual cash flow characteristics. Measurement will be at amortised cost, fair value through other comprehensive income ('FVOCI') or fair value through profit or loss ('FVPL').

- Impairment of financial assets

The impairment requirements are based on expected credit losses and apply to financial assets measured at amortised cost and FVOCI, and lease receivables and certain loan commitments and financial guarantee contracts.

The Group is currently undertaking a project to implement IFRS 9. As part of this project the Group is evaluating its business model and reviewing the contractual terms of financial assets measured at amortised cost or FVOCI to ensure that they are compatible with such classifications. The Group is also implementing a revised approach for financial asset impairment, key aspects of which are identifying whether financial assets have experienced a significant increase in credit risk since origination and estimating expected credit losses, taking account of the probability-weighted impact of multiple future economic scenarios.

Under the transitional provisions of the Standard, the Group's opening balance sheet at the date of initial application (1 January 2018) will be restated, with no restatement of comparative periods.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 2. BASIS OF PREPARATION (CONTINUED)

#### **New standards and interpretations not yet adopted (continued)**

IFRS 15 '*Revenue from Contracts with Customers*' ("IFRS 15") was issued by the IASB in May 2014 for retrospective application in annual periods beginning on or after 1 January 2018. In addition, amendments to IFRS 15 were issued by the IASB in April 2016 requiring application in annual periods beginning on or after 1 January 2018. The standard and amendments were endorsed by the EU in October 2016. Early application of IFRS 15 and the amendments is permitted. The Group is currently assessing the impact of IFRS 15 on its consolidated financial statements.

IFRS 16 '*Leases*' was issued by the IASB in January 2016, for retrospective application in annual periods beginning on or after 1 January 2019. Early application is permitted. The Group is currently assessing the impact of IFRS 16 on its consolidated financial statements.

As part of the 2014-2016 Annual Improvements Cycle published in December 2016, the IASB made amendments to the following standards that are relevant to the Group's operations: IFRS 12 '*Disclosures of interest in other entities*' and IAS 28 '*Investments in associates and joint ventures*' (for application in accounting periods beginning on or after 1 January 2017, for IFRS 12, or 1 January 2018, for IAS 28).

#### **Basis of measurement**

The consolidated financial statements of the Group 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.

#### **Change in presentation of gains and losses on financial liabilities designated at fair value through profit or loss**

At 1 January 2016, the Group adopted the provisions within IFRS 9 for the presentation of gains and losses on financial liabilities designated at fair value through profit or loss, without applying the other requirements of IFRS 9, in accordance with the transition provisions therein and IAS 8 '*Accounting Policies, Changes in Accounting Estimates and Errors*'.

From 1 January 2016, the Group presents in other comprehensive income the amount of change in the fair value of financial liabilities designated at fair value through profit or loss that is attributable to changes in the credit risk of those liabilities, including the foreign exchange differences on this change in fair value (together "DVA"), other than those changes that create or enlarge an accounting mismatch. Such amounts are recorded within the 'Debt valuation adjustment reserve'.

Previously, all DVA had been reflected in the consolidated income statement.

Pursuant to the transitional provisions within IFRS 9, any accounting mismatches have been determined at the initial date of application, 1 January 2016, and the specific provisions of IFRS 9 relating to this area have been applied retrospectively on the basis of that determination. Prior periods have not been restated. A cumulative loss, net of tax, of \$3 million was recorded as of 1 January 2016 to move the cumulative net DVA loss on financial liabilities designated at fair value through profit or loss from retained earnings to the 'Debt valuation adjustment reserve'.

#### **Use of estimates and sources of uncertainty**

The preparation of the Group's consolidated financial statements requires management to make judgements, estimates and assumptions regarding the valuation of certain financial instruments, impairment of assets, tax balances, pension obligations, the outcome of litigation, and other matters that affect the consolidated financial statements and related disclosures.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 2. BASIS OF PREPARATION (CONTINUED)

#### Use of estimates and sources of uncertainty (continued)

The Group believes that the estimates utilised in preparing the consolidated financial statements are reasonable, relevant and reliable. Actual results could differ from these estimates.

For further details on the judgements used in determining fair value of certain assets and liabilities, see accounting policy note 3(d) and note 31.

For further details on the estimates used in determining tax balances, see notes 6, 7 and 19.

For further details on the judgement and estimates used in determining provisions, see note 19.

For further details on the judgements used in determining whether the Group should consolidate a structured entity see note 15.

#### Basis of consolidation

The consolidated financial statements of the Group comprise the financial statements of the Company and its subsidiaries as at 31 December 2016. Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. The financial statements for the subsidiaries are prepared for the same reporting year as the Group, using consistent accounting policies. The financial statements of subsidiaries which have a non-US dollar reporting currency are translated into US dollars as described in note 3(b). Subsidiaries are consolidated from the date that the Group gains control until the date that control ceases.

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

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

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

Non-controlling interests represent the portion of profit or loss and total equity not owned, directly or indirectly, by the Group and are presented separately in the consolidated income statement, consolidated statement of comprehensive income and within equity in the consolidated statement of financial position, separately from parent shareholders' equity. The amount of non-controlling interest is measured at the non-controlling interest's proportionate share of the identifiable net assets.

Details of the Group's interests in other entities are given in note 15 to these financial statements.

#### The going concern assumption

The Group's business activities, together with the factors likely to affect its future development, performance and position, and the Group's objectives, policies and processes for managing its capital; its financial risk management objectives; and its exposures to credit risk and liquidity risk, are reflected in the Strategic report on pages 6 to 28. In addition, the notes to the consolidated financial statements include the details of its financial instruments and additional detail, not included in the Strategic Report, on its credit risk and liquidity risk.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 2. BASIS OF PREPARATION (CONTINUED)

#### The going concern assumption (continued)

As set out in the Strategic report, retaining sufficient liquidity and capital to withstand market pressures remains central to the Morgan Stanley Group's and the Group's strategy.

Taking all of these factors into consideration, the Directors believe it is reasonable to assume that the Group will have access to adequate resources to continue in operational existence for the foreseeable future. Accordingly, they continue to adopt the going concern basis in preparing the annual reports and consolidated financial statements.

### 3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### a. Functional currency

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

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

#### b. Foreign currencies

All monetary assets and liabilities denominated in currencies other than US dollars are translated into US dollars at the rates ruling at the reporting date. Transactions and non-monetary assets and liabilities denominated in currencies other than US dollars are recorded at the rates prevailing at the dates of the transactions. Foreign exchange differences on available-for-sale financial assets are recorded in the 'Available-for-sale reserve' in equity, with the exception of translation differences on the amortised cost of monetary available-for-sale assets, which are recognised through the income statement. Assets and liabilities of foreign operations are translated into US dollars using the closing rate method. Translation differences arising from the net investment(s) in the foreign operations are taken to the 'currency translation reserve'.

From 1 January 2016, DVA includes foreign exchange differences thereon. All other translation differences are taken through the consolidated income statement. Exchange differences recognised in the consolidated income statement are presented in 'Other income' or 'Other expense', except where noted in 3(c) below.

On disposal of a foreign operation, the related cumulative gain or loss in the 'currency translation reserve' attributable to the owners of the parent is reclassified to the consolidated income statement and recorded within 'Net currency translation gain / (loss) on disposal of subsidiary'.

#### c. Financial instruments

The Group classifies its financial assets into the following categories on initial recognition: financial assets classified as held for trading; financial assets designated at fair value through profit or loss; available-for-sale financial assets; and loans and receivables.

The Group classifies its financial liabilities into the following categories on initial recognition: financial liabilities classified as held for trading; financial liabilities designated at fair value through profit or loss; and financial liabilities at amortised cost.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**c. Financial instruments (continued)**

More information regarding these classifications is included below:

**i) Financial instruments classified as held for trading**

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

Derivatives are initially recognised on trade date at fair value. All subsequent changes in fair value are reflected in the consolidated income statement in 'Net gains/ (losses) on financial instruments classified as held for trading'.

All changes in fair value, foreign exchange differences, interest and dividends are reflected in the consolidated income statement in 'Net gains/ (losses) on financial instruments classified as held for trading'. When interest is included as a component of instruments' fair value, interest is also reflected in the income statement in 'Net gains/ (losses) on financial instruments classified as held for trading', otherwise, it is included within 'Interest income' or 'Interest expense'

For all financial instruments classified as held for trading, transaction costs are excluded from the initial fair value measurement of the financial instrument. These costs are recognised in the consolidated income statement in 'Other expense'.

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

The Group has designated certain financial instruments at fair value through profit or loss when:

- the financial instruments are managed, evaluated and reported internally on a fair value basis;
- the designation at fair value eliminates or significantly reduces an accounting mismatch which would otherwise arise; or
- the financial instrument contains an embedded derivative that significantly modifies the cash flows that would otherwise be required under the contract.

From the date the transaction in a financial instrument designated at fair value through profit or loss is entered into (trade date) until settlement date, the Group recognises any unrealised fair value changes in the contract as financial instruments designated at fair value through profit or loss 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 fair value through profit or loss (see note 3(d) below).

All subsequent changes in fair value, foreign exchange differences, interest and dividends are reflected in the consolidated income statement in 'Net gains/ (losses) on financial instruments designated at fair value through profit or loss' other than DVA on financial liabilities designated at fair value through profit or loss which is recognised in the Debt valuation adjustment reserve where those changes do not create or enlarge an accounting mismatch.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**c. Financial instruments (continued)**

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

See Note 2 'Changes in presentation of gains and losses on financial liabilities designated at fair value through profit or loss' above for further information on the adoption on 1 January 2016 the provisions within IFRS 9 for the presentation of gains and losses on financial liabilities designated at fair value through profit or loss.

DVA presented within other comprehensive income are not subject to reclassification to the income statement, but are transferred to retained earnings when realised.

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

**iii) Available-for-sale financial assets**

Financial assets classified as available-for-sale are non-derivative financial assets that are either designated in this category or not classified in any of the other categories of financial instruments. Financial assets classified as available-for-sale are recorded on trade date and are initially recognised and subsequently measured at fair value (see note 3(d) below).

Transaction costs that are directly attributable to the acquisition of an available-for-sale financial asset are added to the fair value on initial recognition.

For equity instruments, dividend income and impairment losses are recognised in the consolidated income statement in 'Net gains/ (losses) on available-for-sale financial assets'. All other gains and losses on equity instruments classified as available-for-sale are recognised in the 'Available-for-sale reserve' within equity.

On disposal or impairment of an available-for-sale financial asset, the cumulative gain or loss in the 'Available-for-sale reserve' is reclassified to the consolidated income statement and reported in 'Net gains/ (losses) on available-for-sale financial assets'.

**iv) Loans and receivables and financial liabilities at amortised cost**

Financial assets classified as loans and receivables are recognised when the Group becomes a party to the contractual provisions of the instrument. They are initially measured at fair value (see note 3(d) below) and subsequently measured at amortised cost less allowance for impairment. Interest is recognised in the consolidated income statement in 'Interest income', using the effective interest rate method as described below. Transaction costs that are directly attributable to the acquisition of the financial asset are added to or deducted from the fair value on initial recognition. Impairment losses and reversals of impairment losses on financial assets classified as loans and receivables are recognised in the consolidated income statement in 'Other expense'.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**c. Financial instruments (continued)**

**iv) Loans and receivables and financial liabilities at amortised cost (continued)**

Financial liabilities at amortised cost are recognised when the Group becomes a party to the contractual provisions of the instrument. They are initially measured at fair value (see note 3(d) below) and subsequently measured at amortised cost. Interest is recognised in the consolidated income statement in 'Interest expense' using the effective interest rate method as described below. Transaction costs that are directly attributable to the issue of the financial liability are added to or deducted from the fair value on initial recognition.

The effective interest rate 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 effective interest rate 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 effective interest rate is established on initial recognition of the financial instrument. The calculation of the effective interest rate includes all fees and commissions paid or received, transaction costs, and discounts or premiums that are an integral part of the effective interest rate. Transaction costs are incremental costs that are directly attributable to the acquisition, issue or disposal of a financial instrument.

In the course of financing its business and as part of its trading activities, the Group enters into arrangements which involve the sale of securities with agreements to repurchase, the purchase of securities with resale agreements, the lending of securities with collateral received and the borrowing of securities with collateral given. Cash collateral balances repayable and accrued interest arising under repurchase agreements and securities lending arrangements are classified as 'Financial liabilities at amortised cost' and the related securities, where owned by the Group, are included in 'Financial assets classified as held for trading'. Cash collateral balances receivable and accrued interest arising under resale agreements and securities borrowing arrangements are classified as 'Loans and receivables'. Securities received by the Group under resale arrangements and securities borrowing arrangements are generally not recognised on the consolidated statement of financial position.

**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.

In determining fair value, the Group uses various valuation approaches and establishes a hierarchy for inputs used in measuring fair value that maximises the use of relevant observable inputs and minimises the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing the asset or liability that were developed based on market data obtained from sources independent of the Group. Unobservable inputs are inputs that reflect assumptions the Group 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 hierarchy is broken down into three levels based on the observability of inputs as follows:

- Level 1 - Quoted prices (unadjusted) in an active market for identical assets or liabilities

Valuations based on quoted prices in active markets that the Group has the ability to access for identical assets or liabilities. Valuation adjustments and block discounts are not applied to Level 1 instruments. Since valuations are based on quoted prices that are readily and regularly available in an active market, valuation of these products does not entail a significant degree of judgement.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**d. Fair value (continued)**

*Fair value measurement (continued)*

- Level 2 - Valuation techniques using observable inputs

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

- Level 3 - Valuation techniques with significant unobservable inputs

Valuations based on inputs that are unobservable and significant to the overall fair value measurement.

The availability of observable inputs can vary from product to product and is affected by a wide variety of factors, including, for example, the type of product, whether the product is new and not yet established in the marketplace, the liquidity of markets and other characteristics particular to the product. To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgement. Accordingly, the degree of judgement exercised by the Group in determining fair value is greatest for instruments categorised in Level 3 of the fair value hierarchy.

The Group 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 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, for disclosure purposes, the level in the fair value hierarchy within which the fair value measurement falls in its entirety is determined based on the lowest level input that is significant to the fair value measurement in its entirety.

The Group applies funding valuation adjustments (“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, FVA reflects a market funding risk premium inherent in the noted derivative instruments. The methodology for measuring FVA leverages the Group’s existing credit-related valuation adjustment calculation methodologies, which apply to both assets and liabilities.

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

*Valuation techniques*

Many cash instruments and OTC derivative contracts have bid and ask prices that can be observed in the marketplace. Bid prices reflect the highest price that a party is willing to pay for an asset. Ask prices represent the lowest price that a party is willing to accept for an asset. The Group carries positions at the point within the bid-ask range that meets the Group’s best estimate of fair value. For offsetting positions in the same financial instrument, the same price within the bid-ask spread is used to measure both the long and short positions.

Fair value for many cash instruments and OTC derivative contracts is derived using pricing models. Pricing models take into account the contract terms, as well as multiple inputs including, where applicable, commodity prices, equity prices, interest rate yield curves, credit curves, correlation, creditworthiness of the counterparty, creditworthiness of the Group, 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.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**d. Fair value (continued)**

*Valuation techniques (continued)*

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

Credit valuation adjustments are applied to short-term and long-term borrowings (primarily structured notes) which are designated at fair value through profit or loss and to OTC derivatives. The impact of changes in own credit spreads based upon observations of the secondary bond market spreads is considered when measuring the fair value for short-term and long-term borrowings. For OTC derivatives, the impact of changes in both the Group's and the counterparty's credit rating is considered when measuring fair value. In determining the expected exposure the Group 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 Group also considers collateral held and legally enforceable master netting agreements that mitigate the Group's exposure to each counterparty.

Adjustments for model uncertainty are taken for positions whose underlying models are reliant on significant inputs that are neither directly nor indirectly observable, hence requiring reliance on established theoretical concepts in their derivation. These adjustments are derived by making assessments of the possible degree of variability using statistical approaches and market-based information where possible.

The Group may apply a concentration adjustment to certain of its OTC derivatives 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.

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, the Group's own assumptions are set to reflect those that the Group believes market participants would use in pricing the asset or liability at the measurement date.

Where the Group manages a group of financial assets and financial liabilities on the basis of its net exposure to either market risks or credit risk, the Group 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.

*Valuation process*

The Valuation Review Group ("VRG") within the Financial Control Group ("FCG") is responsible for the Group's fair value valuation policies, processes and procedures. VRG is independent of the business units and reports to the Chief Financial Officer of the Morgan Stanley Group ("CFO"), who has final authority over the valuation of the Group's financial instruments. VRG implements valuation control processes designed to validate the fair value of the Group's financial instruments measured at fair value including those derived from pricing models.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**d. Fair value (continued)**

*Valuation process (continued)*

- *Model Review.* VRG, in conjunction with the Model Risk Management Department (“MRM”) which reports to the Chief Risk Officer of the Morgan Stanley Group (“CRO”), independently review 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, VRG 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, VRG develops a methodology to independently verify the fair value generated by the business unit’s valuation models. The Group 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, VRG 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 VRG 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.

VRG 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. VRG 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, VRG 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.

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

- *Level 3 Transactions.* VRG reviews the business unit’s valuation techniques to assess whether these are consistent with market participant assumptions.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**d. Fair value (continued)**

*Gains and losses on inception*

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

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

*Assets and liabilities measured at fair value on a non-recurring basis*

Certain of the Group's assets and liabilities are measured at fair value on a non-recurring basis. The Group incurs losses or gains for any adjustments of these assets or liabilities to fair value.

For assets and liabilities measured at fair value on a non-recurring basis, fair value is determined by using various valuation approaches. The same hierarchy for inputs as described above, which maximises the use of observable inputs and minimises the use of unobservable inputs by generally requiring that the observable inputs be used when available, is used in measuring fair value for these items.

**e. Derecognition of financial assets and liabilities**

The Group 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.

The Group derecognises financial liabilities when the Group's obligations are discharged, cancelled or they expire. Upon derecognition, those realised changes in the fair value of certain financial liabilities designated at fair value through profit or loss that are attributable to changes in the credit risk of those liabilities and are presented in other comprehensive income, are transferred from the 'Debt valuation adjustment reserve' to 'Retained earnings'.

**f. Impairment of financial assets**

At each reporting date, an assessment is made as to whether there is any objective evidence of impairment in the value of a financial asset classified as either available-for-sale or loans and receivables. Impairment losses are recognised if an event has occurred which will have an adverse impact on the expected future cash flows of an asset and the expected impact can be reliably estimated.

Impairment losses on available-for-sale financial assets are measured as the difference between cost (net of any principal repayment and amortisation) and the current fair value (see note 3(d) above). Where there is evidence that an available-for-sale financial asset is impaired, the cumulative loss that had been previously recognised in other comprehensive income is reclassified from the 'Available-for-sale reserve' and recognised in the consolidated income statement within 'Net gains/ (losses) on available-for-sale financial assets'.

Impairment losses on loans and receivables are measured as the difference between the carrying amount of the loans and receivables and the present value of estimated cash flows discounted at the asset's original effective interest rate. Such impairment losses are recognised in the consolidated income statement within 'Other expense' and are recognised against the carrying amount of the impaired asset on the consolidated statement of financial position. Interest on the impaired asset continues to be accrued on the reduced carrying amount based on the original effective interest rate of the asset.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**f. Impairment of financial assets (continued)**

Subsequent increases in fair value of previously impaired equity available-for-sale financial assets are reported as fair value gains in the 'Available-for-sale reserve' through other comprehensive income and not separately identified as an impairment reversal. For all other financial assets, if in a subsequent year, the amount of the estimated impairment loss decreases because of an event occurring after the impairment was recognised, the previously recognised impairment loss is reversed as described for the relevant categories of financial asset in note 3(c)(iii) and (iv). Any reversal is limited to the extent that the value of the asset may not exceed the original amortised cost of the asset had no impairment occurred.

**g. Impairment of non-financial assets**

Non-financial assets that are subject to 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). 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. Such impairment losses are recognised in the consolidated income statement within 'Other expense' and are recognised against the carrying amount of the impaired asset on the consolidated statement of financial position.

**h. Fees and commissions**

Fees and commissions classified within 'Other income' in the consolidated income statement include account servicing fees, investment management fees, sales commissions, placement fees, advisory fees and syndication fees. Fees and commissions classified within 'Other expense' in the consolidated income statement include transaction and service fees. These amounts are recognised as the related services are performed or received.

**i. Property, plant and equipment**

Property, plant and equipment are stated at cost net of depreciation and any provision for impairment in value, which are included within 'Other expense' in the consolidated income statement.

For premises held under operating 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 consolidated statement of financial position, an equivalent asset is recognised and included in the cost of leasehold improvements at the initial present value of any 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 consolidated income statement. 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 consolidated income statement.

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 25 years
Fixtures, fittings and equipment	- 3 to 8 years

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**j. Business combinations and disposals**

**i) Combination of businesses**

Business combinations are accounted for using the acquisition method of accounting.

Consideration for each acquisition is measured at the date at which a business combination occurs (the “acquisition date”) at the fair value of the assets transferred, liabilities incurred (including any asset or liability resulting from a contingent consideration arrangement) and equity instruments issued by the Group in exchange for control of the acquiree.

Acquisition related costs are recognised in the consolidated income statement as incurred.

Identifiable assets acquired and liabilities (including contingent liabilities) assumed, which meet the conditions for recognition under IFRS 3, are recognised initially at acquisition-date fair values, with the exception that:

- deferred tax assets and liabilities are recognised and measured in accordance with IAS 12;
- assets related to employee benefit arrangements are recognised and measured in accordance with IAS 19;
- liabilities or equity instruments related to the replacement of an acquiree’s share-based payment award are measured in accordance with IFRS 2, and
- acquired non-current assets or disposal groups that are classified as held for sale at the acquisition date in accordance with IFRS 5 ‘*Non-current assets held for sale and discontinued operations*’ are reported at their fair value less cost to sell.

A contingent liability assumed is recognised where there is a present obligation that arises from past events and its fair value can be measured reliably, regardless of whether it is probable that an outflow of resources will be required to settle the obligation.

A non-controlling interest in the acquiree is recognised (in respect of any portion of the total assets less total liabilities of an acquired entity that is not owned by the Group) at fair value.

Any excess of the sum of the consideration and the amount of any non-controlling interest in the acquiree over the fair value of the identifiable assets acquired less liabilities assumed is recognised as goodwill. If the sum of the consideration and the amount of any non-controlling interest in the acquiree is less than the fair value of the identifiable assets acquired less liabilities assumed, the gain on acquisition is recognised in the consolidated income statement in the year of acquisition.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurred, the Group reports provisional amounts for the items for which the accounting is incomplete. The measurement period (which may not exceed one year) is the period from the date of acquisition to the date the Group obtains complete information about the facts and circumstances that existed as of the acquisition date. Provisional amounts may be adjusted during the measurement period, or additional assets or liabilities recognised, to reflect any new information obtained about the facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognised at that date.

Subsequent changes to the fair value of any asset or liability resulting from a contingent consideration arrangement during the measurement period are adjusted against the cost of acquisition. Changes in the fair value of contingent consideration classified as equity are not recognised.

Post-acquisition, income received and expenses incurred by the entity or entities acquired are included in the consolidated income statement on a line-by-line basis in accordance with the accounting policies set out herein.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**j. Business combinations and disposals (continued)**

**i) Combination of businesses (continued)**

*Disposal of subsidiaries*

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

**ii) Combination of businesses under common control**

Business combinations involving entities under common control, where all combining entities are ultimately controlled by the same entity before and after the business combination, are accounted for using the predecessor values method of accounting. This involves recognising assets and liabilities of the acquired business at the predecessors' book value, without any change to reflect fair value of those assets and liabilities. Any difference between the cost of acquisition and the aggregate book value of the assets and liabilities as of the date of the transfer of the acquired entity is recorded as an adjustment to equity within the 'Capital contribution reserve'. No additional goodwill is created by the business combination.

Post-acquisition, income received and expenses incurred by the entity or entities acquired are included in the consolidated income statement on a line-by-line basis in accordance with the accounting policies set out herein.

A non-controlling interest is recognised by the Group in respect of any portion of the total assets less total liabilities of an acquired entity or entities that is not owned by the Group.

When subsidiaries are sold or transferred to another entity under common control, any difference between the consideration received and the aggregate book value of the assets and liabilities of the disposed of business is recorded as an adjustment to equity within the 'Capital contribution reserve'. Where the consideration for the transfer is received in the form of shares, these are recorded at the aggregate book value of the assets and liabilities disposed of.

**k. Intangible assets**

Intangible assets are not amortised when their useful lives are assessed to be indefinite. Intangible assets are assessed to have an indefinite useful life when there are no contractual, economic or other factors that limit the useful lives. Intangible assets with indefinite useful lives owned by the Group are stated at cost less accumulated impairment losses (see note 3(g) above).

**l. Cash and cash equivalents**

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

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**m. 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 income tax as reported in the consolidated income statement because it excludes items of income or expense that are taxable or deductible in other years and it further excludes items that are never taxable or deductible. The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the reporting date. Current tax is charged or credited in the consolidated income statement, except when it relates to items charged or credited directly to other comprehensive income or equity, in which case the current tax is also recorded within other comprehensive income or equity respectively.

Deferred tax is the tax expected to be payable or recoverable on differences between the carrying amounts of assets and liabilities in the consolidated 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.

Deferred tax liabilities are recognised for taxable temporary differences arising on investments in subsidiaries, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

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

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

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

**n. Operating leases**

Rentals payable under operating leases are charged to 'Other expense' in the consolidated income statement on a straight line basis over the lease term. Lease incentives are allocated on a straight line basis over the lease term as a reduction to rental expense.

Rentals receivable under operating leases are credited to 'Other income' in the consolidated income statement on a straight line basis over the lease term. Initial direct costs incurred in negotiating and arranging the lease are added to the carrying amount of the leased asset and recognised in the consolidated income statement on a straight line basis over the lease term. Lease incentives are allocated on a straight line basis over the lease term.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

#### **o. Provisions**

Provisions are recognised when the Group has a 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 the 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. Where a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows.

#### **p. Employee compensation plans**

##### **i) Equity-settled share-based compensation plans**

Morgan Stanley issues awards in the form of restricted stock units (“RSUs”) and stock options to employees of the Morgan Stanley Group for services rendered to the Group. Awards are classified as equity-settled and the cost of 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 shares and the fair value of stock option awards is estimated using the Black-Scholes valuation model, which takes into account the option’s exercise price, its expected term, the risk free interest rate and the expected volatility of the market price of Morgan Stanley shares. Awards are amortised over the future service period.

The Group pays Morgan Stanley in consideration of the procurement of the transfer of shares to employees via a chargeback agreement under which it is committed to pay to Morgan Stanley the grant date fair value as well as subsequent movements in the fair value of those awards at the time of deliver to the employees.

Share-based compensation expense is recorded within ‘Other expense’ in the consolidated income statement.

##### **ii) Other deferred compensation plans**

Morgan Stanley also maintains deferred compensation plans on behalf of the Group for the benefit of certain current and former employees that provide a return to the participating employees based upon the performance of various referenced investments. Liabilities for these awards, which are included within ‘Accruals and deferred income’ in the consolidated statement of financial position, are measured at fair value and recognised over time in accordance with the awards’ vesting conditions. The related expense is recorded within ‘Other expense’. The Group economically hedges the exposure created by these deferred compensation schemes by entering into derivative transactions with other Morgan Stanley Group undertakings. The derivatives are recognised within ‘Financial instruments classified as held for trading’ in the consolidated statement of financial position and the related gains and losses are recorded within ‘Net gains/ (losses) on financial instruments classified as held for trading’ in the consolidated income statement.

#### **q. Post-employment benefits**

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

Contributions due in relation to the Group’s defined contribution post-employment plan are recognised in ‘Other expense’ in the consolidated income statement when payable.

For the Group’s defined benefit post-employment plan, the plan obligations are measured on an actuarial basis in accordance with the advice of an independent qualified actuary using the projected unit credit method and discounted at a rate that reflects the current rate of return on a high quality corporate bond of equivalent term and currency to the plan liabilities. Plan assets are measured at their fair value at the reporting date.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**q. Post-employment benefits (continued)**

A surplus or deficit of plan assets over liabilities is recognised in the consolidated statement of financial position as an asset or a liability respectively. If the fair value of the plan assets is higher than the present value of the defined benefit obligation, the measurement of the resulting defined benefit asset is limited to the present value of economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan. The current service cost and any past service costs together with the net interest on the net defined benefit obligation/ asset is charged to 'Staff costs' within 'Other expense' in the consolidated income statement. Remeasurements that arise in calculating the Group's obligation in respect of a plan are recognised in other comprehensive income, in the period in which they occur.

Details of the plans are given in note 34 to these consolidated financial statements.

**r. 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 consolidated statement of financial position. In the absence of such conditions, financial assets and financial liabilities are presented on a gross basis.

**4. INTEREST INCOME AND INTEREST EXPENSE**

'Interest income' represents total interest generated from financial assets whilst 'interest expense' represents total interest generated from financial liabilities with the exception that:

- (a) when interest is included as a component of the financial instruments fair value, interest is reflected in 'net gains/(losses) on financial instruments classified as held for trading'; and
- (b) interest expense otherwise generated from financial liabilities classified as held for trading is reported as a reduction in 'interest income'.

'Interest income' also includes fees paid on securities borrowed transactions and 'interest expense' includes fees received on securities loaned balances and from prime brokerage customers for stock loan transactions incurred to cover customers' short positions.

Certain currencies, in which the Group's trades are denominated, may at times have negative interest rates, of which a current example is the Euro. When financial assets and financial liabilities are denominated in such currencies with negative interest rates, this results in negative 'Interest income' and positive 'Interest expense' being recognised. For 2016, this has resulted in overall 'Interest income' in the consolidated income statement for the Group being negative.

No other gains or losses have been recognised in respect of loans and receivables other than as disclosed as 'Interest income' and foreign exchange differences and impairment losses and reversals of impairment losses disclosed in 'Other expense' (note 6).

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 5. OTHER INCOME

	<b>2016</b>	<b>2015</b>
	<b>\$millions</b>	<b>\$millions</b>
Fee and commission income:		
Advisory fees	542	507
Underwriting fees	494	701
Trust and other fiduciary activities	81	53
Management charges to other Morgan Stanley Group undertakings	99	48
Non-UK capital gains tax recoverable	1	18
Other	18	15
	<u>1,235</u>	<u>1,342</u>

### 6. OTHER EXPENSE

	<b>2016</b>	<b>2015</b>
	<b>\$millions</b>	<b>\$millions</b>
Direct staff costs	135	158
Management charges from other Morgan Stanley Group undertakings relating to staff costs	1,519	1,616
Management charges from other Morgan Stanley Group undertakings relating to other services	554	392
Brokerage fees	523	548
Administration and corporate services	351	341
Professional services	295	371
UK Bank levy	78	78
Operating lease rentals	6	6
Depreciation on property, plant and equipment	2	2
Impairment losses on loans and receivables (see note 8)	26	17
Reversal of impairment losses on loans and receivables (see note 8)	(12)	(10)
Net foreign exchange losses	30	10
Auditor's remuneration:		
Fees payable to the Company's auditor and its associates for the audit of the Company's annual financial statements	4	5
Fees payable to the Company's auditor and its associates for other services to the Group <sup>(1)</sup>	1	1
Other	211	206
	<u>3,723</u>	<u>3,741</u>

<sup>(1)</sup> Fees payable to the Company's auditor for other services in 2016 comprise \$229,000 for the audit of the Company's subsidiaries (2015: \$274,000) and \$808,000 for other assurance services (2015: \$1,106,000).

The Group employs staff directly and also utilises the services of staff who are employed by other Morgan Stanley Group undertakings. Included within 'Direct staff costs' and 'Management charges from other Morgan Stanley Group undertakings relating to staff costs' are amounts totalling \$234 million (2015: \$203 million) in relation to equity-settled share-based compensation plans, granted to employees of both the Group and the Morgan Stanley Group. These costs reflect the amortisation of equity-based awards in relation to current and previous years' awards and are therefore not directly aligned with other staff costs in the current year.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Year ended 31 December 2016

### 6. OTHER EXPENSE (CONTINUED)

Similarly, included within 'Direct Staff costs' and 'Management charges from other Morgan Stanley Group undertakings relating to staff costs' is an amount of \$123 million (2015: \$111 million) in relation to current and previous years' awards of deferred cash-based compensation plans, granted to employees of the Group.

Also included within 'Direct staff costs' and 'Management charges from other Morgan Stanley Group undertakings relating to staff costs' are amounts totalling \$45 million (2015: \$60 million) in relation to post employment benefits (see note 34).

Included in the 2015 'Management charges from other Morgan Stanley Group undertakings relating to other services' was a \$222 million credit related to a reimbursement following the implementation of the new UK accounting framework of net costs which were previously recharged from certain UK incorporated Morgan Stanley Group undertakings.

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

	Number	
	Year ended 31 December 2016	Year ended 31 December 2015
Company and institutional securities infrastructure	146	145
Business units and other	180	191
	<u>326</u>	<u>336</u>
	<b>2016</b>	<b>2015</b>
	<b>\$millions</b>	<b>\$millions</b>
Wages and salaries	115	140
Social security costs	17	14
Pension costs	3	4
	<u>135</u>	<u>158</u>

The Group paid no remuneration to its Directors during the current or prior year but incurred management recharges in respect of Directors' qualifying services provided to the Group which are included within 'Management charges from other Morgan Stanley Group undertakings relating to staff costs' within 'Other expense'. The amount of remuneration received by Directors in respect of their qualifying services to the Group is disclosed in note 35.

The UK Bank Levy (the "Levy") is an annual charge on a bank's balance sheet. It is applied to chargeable liabilities and equity of the Group and other MS UK tax-resident entities and their overseas subsidiaries. The Levy is non-deductible for UK corporation tax purposes and will impact the effective tax rate for the year (see Note 7 for further details). Since it was first implemented in 2011, there remains uncertainty around the application of the Levy as the available guidance is limited. The level of provisions held by the Group in association with this uncertainty is subject to management review and judgment. Finally, during his 2016 UK Budget speech, the Chancellor of the Exchequer announced that the rate at which the Levy is applied will reduce from 0.21% to 0.10% over the course of the period 2016-2021. This change is expected to reduce the future impact of the Levy on the Group's net income and effective tax rate.

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**7. INCOME TAX EXPENSE**

	<b>2016</b>	<b>2015</b>
	<b>\$millions</b>	<b>\$millions</b>
<b>Current tax expense</b>		
United Kingdom corporation tax charge		
- current year	162	126
- adjustments in respect of prior years	(5)	44
Double taxation relief		
- current year	(53)	(93)
- adjustments in respect of prior years	8	(37)
Overseas tax		
- current year	128	166
- adjustments in respect of prior years	5	114
	<u>245</u>	<u>320</u>
<b>Deferred tax expense/ (benefit)</b>		
Origination and reversal of temporary differences	33	37
Adjustment in respect of prior years	4	(20)
Effect of changes in tax rates	2	(28)
	<u>39</u>	<u>(11)</u>
<b>Income tax expense</b>	<u><u>284</u></u>	<u><u>309</u></u>

**Reconciliation of effective tax rate**

The Group's tax rate is sensitive to the geographic mix of profits and tax rates in non UK jurisdictions, the additional 8% UK banking surcharge, as well as the non deductibility of certain expenses for tax purposes. As noted below, the UK statutory rate, excluding the banking surcharge, will fall to 19% with effect from 1 April 2017 and 17% with effect from 1 April 2020. The main differences between the Group's tax charge and the tax charge that would have been calculated from applying the average standard rate of corporation tax for banking companies in the UK for the year of 28.00% (2015: 20.25%) are explained below:

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 7. INCOME TAX EXPENSE (CONTINUED)

#### Reconciliation of effective tax rate (continued)

	2016 \$millions	2015 \$millions
Profit before income tax	735	710
Income tax expense using the average standard rate of corporation tax for banking companies in the UK of 28.00% (2015: 20.25%)	206	144
Impact on tax of:		
Expenses not deductible for tax purposes:		
UK bank levy	22	16
Other expenses	(7)	4
Carry forward of prior years' tax losses	-	2
Group relief surrendered for no cash consideration	1	8
Effect of tax rates in foreign jurisdictions	37	58
Impact of change in deferred tax rate	2	(28)
Prior year impact of withholding tax reclaims	7	71
Other prior year adjustments	6	30
Reversal of tax reserves in respect of prior years	4	(2)
Other	6	6
<b>Total income tax expense in the consolidated income statement</b>	<b>284</b>	<b>309</b>

The Group has a policy of surrendering tax-deductible losses ('group relief') for no cash consideration to other members of the Morgan Stanley UK tax group, which consists of entities within the Group and the wider Morgan Stanley Group. Within the Group, a number of subsidiary companies generate tax-deductible losses which are surrendered to Morgan Stanley companies outside the Group.

Finance Act 2013 enacted a reduction to the UK corporation tax rate to 20% with effect from 1 April 2015. This reduction in the tax rate impacted the current and deferred tax charge in 2015 and 2016.

Finance (No. 2) Act 2015 enacted reductions in the UK corporation tax main rate to 19% with effect from 1 April 2017. Finance Act 2016 enacted reductions in the UK corporation tax main rate to 17% with effect from 1 April 2020. These reductions will impact the current tax charge in future periods. In addition, Finance (No. 2) Act 2015 introduced an 8% corporation tax surcharge on the profits of banking companies with effect from 1 January 2016 which impacts the current tax charge in the current period.

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

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**7. INCOME TAX EXPENSE (CONTINUED)**

**Reconciliation of effective tax rate (continued)**

	2016			2015		
	Before tax \$millions	Tax (expense)/ benefit \$millions	Net of tax \$millions	Before tax \$millions	Tax expense \$millions	Net of tax \$millions
Remeasurement of net defined benefit liability	-	-	-	(2)	-	(2)
Foreign currency translation reserve:						
Foreign currency translation differences on foreign operations	(8)	-	(8)	(43)	(3)	(46)
Changes in fair value of liabilities designated at fair value through profit or loss due to changes in the Company's own credit risk	(58)	16	(42)	-	-	-
Available-for-sale reserve:						
Net change in fair value of available-for-sale financial assets	(8)	-	(8)	(3)	-	(3)
Other comprehensive income	(74)	16	(58)	(48)	(3)	(51)

**8. LOANS AND RECEIVABLES**

	2016 \$millions	2015 \$millions
Loans and receivables	170,572	145,818
Less impairment losses	(40)	(28)
	<u>170,532</u>	<u>145,790</u>

A reconciliation of impairment losses for loans and advances is as follows:

At 1 January	28	46
Charge for the year (see note 6)	26	17
Reversal of impairment losses (see note 6)	(12)	(10)
Amounts written off	(1)	(2)
Net foreign exchange gains	(1)	-
Reclassification of provision	-	(23)
At 31 December	<u>40</u>	<u>28</u>

During the year impairment losses of \$nil (2015: \$23 million) related to certain withholding tax reclaim balances were reclassified from loans and receivables to current tax assets.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 9. OTHER RECEIVABLES

	2016	2015
	\$millions	\$millions
Amounts held at exchanges	532	592
Amounts due from other Morgan Stanley Group undertakings	858	1,209
Other amounts receivable	90	90
	<u>1,480</u>	<u>1,891</u>

### 10. FINANCIAL ASSETS AND FINANCIAL LIABILITIES CLASSIFIED AS HELD FOR TRADING

Financial assets and financial liabilities classified as held for trading are summarised as follows:

	2016		2015	
	Assets	Liabilities	Assets	Liabilities
	\$millions	\$millions	\$millions	\$millions
Government debt securities	10,052	19,476	11,365	10,747
Corporate and other debt	8,550	2,853	6,969	1,284
Corporate equities	46,025	23,278	40,828	23,424
Derivatives (see note 11)	183,553	180,580	187,111	181,051
	<u>248,180</u>	<u>226,187</u>	<u>246,273</u>	<u>216,506</u>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 11. DERIVATIVES CLASSIFIED AS HELD FOR TRADING

The fair value of derivative assets and liabilities classified as held for trading, split by instrument type, is summarised as follows:

	2016			
	Bilateral OTC \$millions	Cleared OTC \$millions	Listed derivative contracts \$millions	Total \$millions
Derivative assets:				
Interest rate contracts	77,183	3,260	9	80,452
Credit contracts	6,152	6	-	6,158
Foreign exchange and gold contracts	65,687	1,039	-	66,726
Equity contracts	23,330	-	4,518	27,848
Commodity contracts	2,279	-	90	2,369
	174,631	4,305	4,617	183,553
Derivative liabilities:				
Interest rate contracts	72,785	3,202	4	75,991
Credit contracts	6,332	16	-	6,348
Foreign exchange and gold contracts	65,522	975	-	66,497
Equity contracts	24,949	-	4,473	29,422
Commodity contracts	2,285	-	37	2,322
	171,873	4,193	4,514	180,580
2015				
	Bilateral OTC \$millions	Cleared OTC \$millions	Listed derivative contracts \$millions	Total \$millions
Derivative assets:				
Interest rate contracts	77,298	2,761	1	80,060
Credit contracts	10,154	4	-	10,158
Foreign exchange and gold contracts	62,171	295	-	62,466
Equity contracts	24,665	-	5,253	29,918
Commodity contracts	4,438	-	71	4,509
	178,726	3,060	5,325	187,111
Derivative liabilities:				
Interest rate contracts	71,645	2,854	2	74,501
Credit contracts	10,391	7	-	10,398
Foreign exchange and gold contracts	61,021	238	-	61,259
Equity contracts	26,458	-	5,241	31,699
Commodity contracts	2,811	-	383	3,194
	172,326	3,099	5,626	181,051

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Year ended 31 December 2016

### 12. FINANCIAL ASSETS AND FINANCIAL LIABILITIES DESIGNATED AT FAIR VALUE THROUGH PROFIT OR LOSS

	2016		2015	
	Assets \$millions	Liabilities \$millions	Assets \$millions	Liabilities \$millions
Prepaid OTC contracts	757	1,397	491	1,060
Corporate loans	305	-	436	-
Issued structured notes	-	1,958	-	1,371
Other financial assets and liabilities	3,250	2,665	709	2,434
	<u>4,312</u>	<u>6,020</u>	<u>1,636</u>	<u>4,865</u>

Financial instruments designated at fair value through profit or loss consist primarily of the following financial assets and financial liabilities:

*Prepaid OTC contracts:* The risk on these financial instruments, both financial assets and financial liabilities, is primarily hedged using financial instruments classified as held for trading including equity securities and interest rate swaps. These prepaid OTC contracts are designated at fair value through profit or loss as such contracts, as well as the financial instruments with which they are hedged, are risk managed on a fair value basis as part of the Group's trading portfolio and the risk is reported to key management personnel on this basis.

*Issued structured notes:* These are financial liabilities which arise from selling structured products, generally in the form of notes or certificates. These structured notes are designated at fair value through profit or loss as the risks to which the Group is a contractual party are risk managed on a fair value basis as part of the Group's trading portfolio and the risk is reported to key management personnel on this basis.

*Corporate loans:* Certain loans to customers are designated at fair value through profit or loss either because the risks of the loans have been matched with other financial instrument contracts accounted for at fair value and such a designation reduces an accounting mismatch; or as part of a documented risk management strategy the risks of the loan are managed on a fair value basis as part of the Group's trading portfolio and the risk is reported to key management personnel on this basis; or because the loan contract itself contains an embedded derivative that must otherwise be separated and measured at fair value.

*Other financial assets and liabilities:* These include financial assets and liabilities such as those that arise upon the consolidation of certain special purpose entities and those that arise as a result of continuing recognition of certain financial assets and the simultaneous recognition of an associated financial liability. These financial assets and liabilities are designated at fair value as the risks to which the Group is a contractual party are risk managed on a fair value basis as part of the Group's trading portfolio and the risk is reported to key management personnel on this basis.

The maximum exposure to credit risk of corporate loans designated at fair value through profit or loss as at 31 December 2016 is \$305 million (2015: \$436 million). The cumulative change in fair value of such corporate loans attributable to changes in credit risk amounts to \$nil (2015: \$nil) and the change for the current year is \$nil (2015: loss of \$1 million). Corporate loans are fully collateralised with securities received by the Group. The cumulative change in fair value recognised through other comprehensive income attributable to own credit risk for financial liabilities designated at fair value at 31 December 2016 is a loss of \$62 million. During the year, a loss of \$nil million was realised as a result of the derecognition of such financial liabilities and was transferred from the 'Debt valuation adjustment reserve' to 'Retained earnings'. See Note 2 'Changes in presentation of gains and losses on financial liabilities designated at fair value through profit or loss' above for further information on the adoption on 1 January 2016 the provisions within IFRS 9 for the presentation of gains and losses on financial liabilities designated at fair value through profit or loss.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Year ended 31 December 2016

### 12. FINANCIAL ASSETS AND FINANCIAL LIABILITIES DESIGNATED AT FAIR VALUE THROUGH PROFIT OR LOSS (CONTINUED)

The Group determines the amount of changes in fair value attributable to changes in counterparty credit risk or own credit risk, as relating to loans and receivables and financial liabilities designated at fair value, 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 Group 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 Group considers that this approach most faithfully represents the amount of change in fair value due to both counterparty credit risk and the Group's own credit risk.

The carrying amount of financial liabilities designated at fair value, for which the effect of changes in those liabilities' credit risk is presented within other comprehensive income was \$49 million lower than the contractual amount due at maturity (2015: \$14 million lower).

### 13. AVAILABLE-FOR-SALE FINANCIAL ASSETS

Financial assets that are classified as available-for-sale consist of corporate equities, of which \$nil are listed investments (2015: \$1 million).

#### Movement in available-for-sale financial assets

	2016 \$millions	2015 \$millions
<b>Fair value</b>		
At 1 January	39	42
Additions	1	1
Changes in fair value recognised in the available-for-sale reserve	(8)	(3)
Disposals and other settlements	(3)	(1)
At 31 December	<u>29</u>	<u>39</u>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**14. INTERESTS IN SUBSIDIARIES**

**Composition of the Group**

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

During the year, the Group disposed of no (2015: two) wholly owned subsidiaries. See “Disposal of subsidiaries” below.

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

Information regarding interests in structured entities is included in note 15.

The Group has not provided financial support to, or otherwise agreed to be responsible for supporting any subsidiary of the Group financially.

**Disposal of subsidiaries**

During 2015, the Group disposed of two wholly owned subsidiaries, Rolympus (UK) Commodities Group Ltd and Norwegian Energy Limited as part of the sale of the global oil merchanting unit of the commodities division to Castleton Commodities International LLC. The subsidiaries were sold for consideration equal to their net book value which equalled \$0.02 million resulting in no gain or loss being recognised in the consolidated income statement as a result of these sales. The group recognised a \$42 million charge relating to the cost to sell the global oil merchanting business. This was recognised in the consolidated income statement within ‘Other expense’.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**15. INTERESTS IN STRUCTURED ENTITIES**

The Group is involved with various special purpose entities in the normal course of business. In most cases, these entities are deemed to be structured entities.

A structured entity is an entity that has been designed such that voting or similar rights are not the dominant factor in deciding who controls the entity. The party that consolidates the structured entity is the investor that controls the structured entity. An investor controls a structured entity when it is exposed, or has the rights, to variable returns from its involvement with the structured entity and has the ability to affect those returns through its power over the structured entity. The Group consolidates structured entities it controls.

The Group's interests in structured entities include certain debt and equity interests, commitments, guarantees, derivative instruments and certain fees arrangements. The Group's involvement with structured entities arises primarily from:

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

The Group determines whether it controls, and therefore should consolidate, a structured entity upon its initial involvement with the structured entity and reassesses whether it should continue to consolidate on an ongoing basis as long as it has any continuing involvement with the structured entity. This determination is based upon an analysis of the design of the structured entity, including the structured entity's structure and activities; assessment of the significance of the powers to make economic decisions which are held by the Group and its related parties and whether such powers may be used to affect its investor returns; and consideration of the significance of direct and indirect interests in the structured entity which are held by the Group and its related parties.

The power to make the most significant economic decisions may take a number of different forms. The Group considers servicing or collateral management decisions as generally representing the power to make the most significant economic decisions in transactions such as securitisations or collateralised debt obligations ("CDOs"). As a result, the Group does not consolidate securitisations or CDOs for which it does not act as the servicer or collateral manager unless it holds certain other rights to replace the servicer or collateral manager or to require the liquidation of the entity. In fund structures, the power to appoint or direct the fund manager is generally the most significant power.

For certain structured entities, such as entities which issued Credit Linked Notes ("CLNs") and other asset-repackaged notes, there are no significant economic decisions made on an ongoing basis. In these cases, the Group focuses its analysis on decision making powers relating to liquidation of the entity or unwinding or termination of the transaction structure. Based upon factors, which include an analysis of the nature of the assets, including whether the assets were issued in a transaction sponsored by the Group and the extent of the information available to the Group and to investors, the number, nature and involvement of investors, other rights held by the Group and investors, the standardisation of the legal documentation and the level of the continuing involvement by the Group, including the amount and type of interests owned by the Group and by other investors, the Group concluded in some of these transactions that decisions made prior to the initial closing were shared between the Group and the initial investors. The Group focused its control decision on any right held by the Group or investors related to the termination of the structured entity. Many CLNs and other asset repackaged notes have no such termination rights.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**15. INTERESTS IN STRUCTURED ENTITIES (CONTINUED)**

The assets owned by many consolidated structured entities cannot be removed unilaterally by the Group and are not generally available to the Group. The related liabilities issued by many consolidated structured entities are non-recourse to the Group. In certain other consolidated structured entities, the Group has the unilateral right to remove assets or provide additional recourse through derivatives such as total return swaps, guarantees or other forms of involvement.

The Group accounts for the assets held by structured entities primarily in 'Financial assets classified as held for trading – corporate and other debt' and the liabilities of the structured entities as 'Financial liabilities designated at fair value' in the consolidated statement of financial position.

The usage of structured entities is described below.

*Securitisation Activities.* In a securitisation transaction, the Group transfers assets (generally commercial or residential mortgage loans) to a structured entity, sells to investors most of the beneficial interests, such as notes or certificates, issued by the structured entity, and in many cases, retains other beneficial interests. The purchase of the transferred assets by the structured entity is financed through the sale of these interests. In many securitisations, particularly those involving residential mortgage loans, the Group also enters into derivative transactions, primarily interest rate swaps or interest rate caps with a senior payment priority, with the structured entity.

*Collateralised Loan and Debt Obligations.* Securitization transactions generally involve structured entities. Primarily as a result of its secondary market-making activities, the Group owns structured entity assets. These assets were either retained in connection with transfer of assets by the Group or acquired in connection with secondary market making activities.

*Fund Investments.* In a fund investment structure the Group provides clients with indirect access to specified underlying investments through total return swaps. The investments are purchased and held by a structured entity in which the Group holds an interest. The structured entity is financed through the sale of notes to investors.

**Consolidated structured entities**

As at 31 December 2016 the Group did not have any structured entities that it consolidated (2015: nil).

**Unconsolidated structured entities**

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

The Group's transactions with unconsolidated structured entities primarily include securitisations, credit protection purchased through CLNs, other structured financings and collateralised loan and debt obligations. The Group's interests in structured entities that it does not consolidate can include ownership of retained interests in Group-sponsored transactions, interests purchased in the secondary market (both for Group-sponsored transactions and transactions sponsored by third parties), and certain derivatives with securitisation structured entities. The risks associated with derivatives entered into with structured entities are essentially the same as similar derivatives with non-structured entity counterparties and are managed as part of the Group's overall exposure.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 15. INTERESTS IN STRUCTURED ENTITIES (CONTINUED)

#### Unconsolidated structured entities (continued)

The table below shows certain non-consolidated structured entities in which the Group had an interest at 31 December 2016 and at 31 December 2015. The tables include all structured entities in which the Group has determined that its maximum exposure to loss is greater than specific thresholds or meets certain other criteria. Most of the structured entities included in the tables below are sponsored by unrelated parties; the Group's involvement generally is the result of the Group's secondary market-making activities.

	Mortgage and asset-backed securitisations \$millions	Collateralised debt and loan obligations \$millions	Fund investments \$millions	Other \$millions	Total \$millions
<b>31 December 2016</b>					
Structured entity assets that the Group does not consolidate (unpaid principal balance)	3,174	4,503	3,412	5	11,094
Maximum exposure to loss:					
Debt and equity interests	252	150	-	-	402
Derivative and other contracts	-	-	3,412	5	3,417
<b>Total maximum exposure to loss</b>	<b>252</b>	<b>150</b>	<b>3,412</b>	<b>5</b>	<b>3,819</b>
Carrying value of exposure to loss - assets <sup>(1)</sup> :					
Debt and equity interests	252	150	-	-	402
Derivative and other contracts	-	-	12	5	17
<b>Total carrying value of exposure to loss - assets</b>	<b>252</b>	<b>150</b>	<b>12</b>	<b>5</b>	<b>419</b>
Carrying value of exposure to loss - liabilities <sup>(1)</sup> :					
Derivative and other contracts	-	-	20	-	20
<b>Total carrying value of exposure to loss - liabilities</b>	<b>-</b>	<b>-</b>	<b>20</b>	<b>-</b>	<b>20</b>

<sup>(1)</sup> Amounts are recognised in the consolidated statement of financial position in financial assets or liabilities classified as held for trading – derivatives or financial assets or liabilities classified as held for trading – corporate and other debt.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 15. INTERESTS IN STRUCTURED ENTITIES (CONTINUED)

#### Unconsolidated structured entities (continued)

	Mortgage and asset-back securitisations \$millions	Collateralised debt obligations \$millions	Fund investments \$millions	Other \$millions	Total \$millions
<b>31 December 2015</b>					
Structured entity assets that the Group does not consolidate (unpaid principal balance)	10,351	4,637	2,791	74	17,853
Maximum exposure to loss:					
Debt and equity interests	488	116	-	28	632
Derivative and other contracts	-	-	2,791	39	2,830
<b>Total maximum exposure to loss</b>	<b>488</b>	<b>116</b>	<b>2,791</b>	<b>67</b>	<b>3,462</b>
Carrying value of exposure to loss - assets <sup>(1)</sup> :					
Debt and equity interests	488	116	-	28	632
Derivative and other contracts	-	-	8	5	13
<b>Total carrying value of exposure to loss - assets</b>	<b>488</b>	<b>116</b>	<b>8</b>	<b>33</b>	<b>645</b>
Carrying value of exposure to loss - liabilities <sup>(1)</sup> :					
Derivative and other contracts	-	-	12	-	12
<b>Total carrying value of exposure to loss - liabilities</b>	<b>-</b>	<b>-</b>	<b>12</b>	<b>-</b>	<b>12</b>

<sup>(1)</sup> Amounts are recognised in the consolidated statement of financial position in financial assets or liabilities classified as held for trading – derivatives or financial assets or liabilities classified as held for trading – corporate and other debt.

The Group's maximum exposure to loss often differs from the carrying value of the interests held by the Group. The maximum exposure to loss is dependent on the nature of the Group's interest in the structured entities and is limited to the notional amounts of certain liquidity facilities, other credit support, total return swaps, written put options, and the fair value of certain other derivatives and investments the Group has made in the structured entities. Liabilities issued by structured entities generally are non-recourse to the Group. Where notional amounts are utilised in quantifying maximum exposure related to derivatives, such amounts do not reflect fair value write downs already recorded by the Group.

The Group's maximum exposure to loss does not include the offsetting benefit of any financial instruments that the Group may utilise to hedge these risks associated with the Group's interests. In addition, the Group's maximum exposure to loss is not reduced by the amount of collateral held as part of a transaction with the structured entity or any party to the structured entity directly against a specific exposure to loss.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 15. INTERESTS IN STRUCTURED ENTITIES (CONTINUED)

#### Unconsolidated structured entities (continued)

Securitisation transactions generally involve structured entities. Primarily as a result of its secondary market-making activities, the Group owned additional securities issued by securitisation structured entities for which the maximum exposure to loss is less than specific thresholds. These additional securities which were retained in connection with transfers of assets by the Group totalled \$365 million at 31 December 2016 (2015: \$527 million). Details of the type of securities retained are shown in the table below.

	2016	2015
	\$millions	\$millions
<i>Securities backed by:</i>		
Residential mortgage loans	159	275
Commercial mortgage loans	35	41
CDOs or other CLOs	133	142
Other consumer loans	38	69
	<u>365</u>	<u>527</u>

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

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

#### Sponsored unconsolidated structured entities

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

In some sponsored entities, the Group has been involved with the structured entity through establishing the structured entity, marketing of products associated with the structured entity in its own name, and/ or through involvement in the design of the structured entity. The Group has an interest at 31 December 2016 of \$15 million (2015: \$nil).

The loss related to sponsored entities during 2016 was \$1.5 million (2015: gain of \$2 million). Gains/ (losses) are reported under 'Net gains on financial instruments classified as held for trading' in the consolidated income statement. \$120 million of assets were transferred to sponsored structured entities during 2016 (2015: \$nil).

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**16. PROPERTY, PLANT AND EQUIPMENT**

**2016**

	<b>Leasehold improvements \$millions</b>	<b>Fixtures, fittings and equipment \$millions</b>	<b>Total \$millions</b>
<b>Cost</b>			
At 1 January 2016	20	19	39
Additions	3	3	6
Foreign exchange revaluation	(1)	-	(1)
Disposals	-	(1)	(1)
At 31 December 2016	<u>22</u>	<u>21</u>	<u>43</u>
<b>Depreciation</b>			
At 1 January 2016	19	17	36
Charge for the year	1	2	3
Foreign exchange revaluation	(1)	-	(1)
Disposals	-	(1)	(1)
At 31 December 2016	<u>19</u>	<u>18</u>	<u>37</u>
<b>Carrying amount</b>			
At 31 December 2016	<u>3</u>	<u>3</u>	<u>6</u>

**2015**

	<b>Leasehold improvements \$millions</b>	<b>Fixtures, fittings and equipment \$millions</b>	<b>Total \$millions</b>
<b>Cost</b>			
At 1 January 2015	21	21	42
Additions	-	1	1
Foreign exchange revaluation	(1)	(2)	(3)
Disposals	-	(1)	(1)
At 31 December 2015	<u>20</u>	<u>19</u>	<u>39</u>
<b>Depreciation</b>			
At 1 January 2015	20	18	38
Charge for the year	1	1	2
Foreign exchange revaluation	(2)	(3)	(5)
Disposals	-	1	1
At 31 December 2015	<u>19</u>	<u>17</u>	<u>36</u>
<b>Carrying amount</b>			
At 31 December 2015	<u>1</u>	<u>2</u>	<u>3</u>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 17. SUBORDINATED LOANS

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

Counterparty	Repayment Date	Interest Rate	2016 \$millions	2015 \$millions
Morgan Stanley UK Financing I LP	31 October 2025	LIBOR <sup>(1)</sup> plus 1.475%	7,906	7,906

(1) London Interbank Offered Rate ("LIBOR")

The amount outstanding under the subordinated loan agreement is repayable at any time at the Group's option, subject to appropriate notice to the lender and at least three months' notice to the PRA.

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

On 3 January 2017, the subordinated loan of \$7,906 million was reassigned from Morgan Stanley UK Financing I LP to Morgan Stanley International Finance S.A., another Morgan Stanley Group undertaking. On 8 February 2017 a new \$5,000 million subordinated loan was issued by the Group to its immediate parent undertaking, Morgan Stanley Investments (UK). \$5,906 million of the existing subordinated loan with Morgan Stanley International Finance S.A. was repaid.

### 18. OTHER PAYABLES

	2016 \$millions	2015 \$millions
Amounts due to other Morgan Stanley Group undertakings	10,602	11,397
Other amounts payable	187	191
	<u>10,789</u>	<u>11,588</u>

### 19. PROVISIONS

	Property \$millions	Litigation \$millions	Taxes and levies \$millions	Total \$millions
At 1 January 2016	4	1	16	21
Additional provisions	-	11	76	87
Provisions utilised	-	(2)	(1)	(3)
Unused provisions reversed	-	(1)	(19)	(20)
Foreign exchange revaluation	-	-	(2)	(2)
Reclassifications	-	-	2	2
<b>At 31 December 2016</b>	<u>4</u>	<u>9</u>	<u>72</u>	<u>85</u>

The increase in taxes and levies is due to an increase in tax related provisions.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 19. PROVISIONS (CONTINUED)

#### Property

Property provisions represent the net present value of expected future costs of excess office space (net of sublease income) and 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 16).

#### Litigation matters

In addition to the matters described below, in the normal course of business, the Group has been named, from time to time, as a defendant in various legal actions, including arbitrations, class actions and other litigation, arising in connection with its activities as a global diversified financial services institution. Certain of the actual or threatened legal actions include claims for substantial compensatory and/or punitive damages or claims for indeterminate amounts of damages. In some cases, the entities that would otherwise be the primary defendants in such cases are bankrupt or are in financial distress.

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

The Group contests liability and/or the amount of damages as appropriate in each pending matter. Where available information indicates that it is probable a liability had been incurred at the date of the consolidated financial statements and the Group can reasonably estimate the amount of that loss, the Group accrues the estimated loss by a charge to income. The Group's future legal expenses may fluctuate from period to period, given the current environment regarding government investigations and private litigation affecting global financial services firms, including the Group.

In many proceedings and investigations, however, it is inherently difficult to determine whether any loss is probable or even possible, or to estimate the amount of any loss. The Group cannot predict with certainty if, how or when such proceedings or investigations will be resolved or what the eventual settlement, fine, penalty or other relief, if any, may be, particularly for proceedings and investigations where the factual record is being developed or contested or where plaintiffs or government entities seek substantial or indeterminate damages, restitution, disgorgement or penalties. Numerous issues may need to be resolved, including through potentially lengthy discovery and determination of important factual matters, determination of issues related to class certification and the calculation of damages or other relief, and by addressing novel or unsettled legal questions relevant to the proceedings or investigations in question, before a loss or additional loss or range of loss or additional loss can be reasonably estimated for a proceeding or investigation. Subject to the foregoing, the Group believes, based on current knowledge and after consultation with counsel, that the outcome of such proceedings and investigations will not have a material adverse effect on the consolidated financial condition of the Group, although the outcome of such proceedings or investigations could be material to the Group's operating results and cash flows for a particular period depending on, among other things, the level of the Group's revenues or income for such period.

Over the last several years, the level of litigation and investigatory activity (both formal and informal) by government and self-regulatory agencies has increased materially in the financial services industry. As a result, the Group expects that it will continue to be the subject of elevated claims for damages and other relief and, while the Group has identified below certain proceedings that the Group believes to be material, individually or collectively, there can be no assurance that additional material losses will not be incurred from claims that have not yet been asserted or are not yet determined to be material.

## MORGAN STANLEY & CO. INTERNATIONAL plc

### NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

#### 19. PROVISIONS (CONTINUED)

##### Litigation matters (continued)

On 15 July 2010, China Development Industrial Bank (“CDIB”) filed a complaint against the Group and another Morgan Stanley Group affiliate, styled *China Development Industrial Bank v. Morgan Stanley & Co. Incorporated et al.*, which is pending in the Supreme Court of the State of New York, New York County (“Supreme Court of NY”). The complaint relates to a \$275 million credit default swap referencing the super senior portion of the STACK 2006-1 CDO. The complaint asserts claims for common law fraud, fraudulent inducement and fraudulent concealment and alleges that the Group and another Morgan Stanley Group affiliate misrepresented the risks of the STACK 2006-1 CDO to CDIB, and that the Group and another Morgan Stanley Group affiliate knew that the assets backing the CDO were of poor quality when it entered into the credit default swap with CDIB. The complaint seeks compensatory damages related to the approximately \$228 million that CDIB alleges it has already lost under the credit default swap, rescission of CDIB’s obligation to pay an additional \$12 million, punitive damages, equitable relief, fees and costs. On 28 February 2011, the court denied the Group’s and another Morgan Stanley Group affiliate’s motion to dismiss the complaint.

On 1 April 2016, the California Attorney General’s Office filed an action against certain Morgan Stanley Group affiliates in California state court styled *California v. Morgan Stanley, et al.*, on behalf of California investors, including the California Public Employees’ Retirement System and the California Teachers’ Retirement System. The complaint alleges that the Morgan Stanley Group affiliates made misrepresentations and omissions regarding residential mortgage backed securities and notes issued by the Cheyne SIV, and asserts violations of the California False Claims Act and other state laws and seeks treble damages, civil penalties, disgorgement, and injunctive relief. On 30 September 2016, the court granted the Morgan Stanley Group affiliates’ demurrer, with leave to replead. On 21 October 2016, the California Attorney General filed an amended complaint. On 25 January 2017, the court denied the Morgan Stanley Group affiliates’ demurrer with respect to the amended complaint.

On 26 June 2006, the public prosecutor in Parma, Italy brought criminal charges against certain present and former employees of the Morgan Stanley Group related to the bankruptcy of Parmalat in 2003. The trial commenced in September 2009 and the evidence phase concluded in January 2017. A verdict is expected during the course of 2017. While the Morgan Stanley Group is not a defendant in the criminal proceeding, certain investors have asserted civil claims against the Group and another Morgan Stanley Group affiliate related to the proceedings. These claims seek, among other relief, moral damages and loss of opportunity damages related to their purchase of approximately €327 million in bonds issued by Parmalat. In addition, on 11 October 2011, an Italian financial institution, Banco Popolare Società Cooperativa (“Banco Popolare”), filed a civil claim against the Group and another Morgan Stanley Group affiliate in the Milan courts, styled *Banco Popolare Società Cooperativa v Morgan Stanley & Co. International plc & others* (File number 63671/2011), related to its purchase of €100 million of bonds issued by Parmalat. The claim asserted by Banco Popolare alleges, among other things, that the Group and another Morgan Stanley Group affiliate was aware of Parmalat’s impending insolvency and conspired with others to deceive Banco Popolare into buying bonds by concealing both Parmalat’s true financial condition and certain features of the bonds from the market and Banco Popolare. Banco Popolare seeks damages of €76 million (approximately \$80 million) plus damages for loss of opportunity and moral damages. The Group and another Morgan Stanley Group affiliate filed its answer on 20 April 2012, and the hearing on the parties’ final submissions is scheduled for 20 March 2018.

On 12 May 2016, the Austrian state of Land Salzburg filed a claim against the Group in the Regional Court in Frankfurt, Germany, styled *Land Salzburg v. Morgan Stanley & Co. International plc* (the “German Proceedings”) seeking €209 million (approximately \$220 million) plus interest, attorneys’ fees and other relief relating to certain fixed income and commodities derivative transactions which Land Salzburg entered into with the Group and another Morgan Stanley Group affiliate between 2005 and 2012.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**19. PROVISIONS (CONTINUED)**

**Litigation matters (continued)**

Land Salzburg has alleged that it had neither the capacity nor authority to enter into such transactions, which should be set aside, and that the Group breached certain advisory and other duties which the Group had owed to it. On 28 April 2016, the Group and another Morgan Stanley Group affiliate filed an action against Land Salzburg in the High Court in London, England styled *Morgan Stanley Capital Services LLC and Morgan Stanley & Co. International plc v. Land Salzburg* (the “English Proceedings”) in which the Group and another Morgan Stanley Group affiliate is seeking declarations that Land Salzburg had both the capacity and authority to enter into the transactions, and that the Group and another Morgan Stanley Group affiliate have no liability to Land Salzburg arising from them. On 25 July 2016, the Group filed an application with the Regional Court in Frankfurt to stay the German Proceedings on the basis that the High Court in London was first seized of the dispute between the parties and, pending determination of that application, filed its statement of defence on 23 December 2016. On 8 December 2016, Land Salzburg filed an application with the High Court in London challenging its jurisdiction to determine the English Proceedings. On 22 March 2017, the Group and another Morgan Stanley Group affiliate reached an agreement in principle with Land Salzburg to resolve all claims in the German Proceedings and English Proceedings. After it is finalised by the parties, that settlement will be subject to Land Salzburg parliamentary approval.

On 11 July 2016, the Group received an invitation to respond to a proposed claim (“Proposed Claim”) by the public prosecutor for Court of Accounts for the Republic of Italy. The Proposed Claim relates to certain derivative transactions between the Republic of Italy and the Group and another Morgan Stanley Group affiliate. The transactions were originally entered into between 1999 and 2005, and were terminated in December 2011 and January 2012. The Proposed Claim alleges, inter alia, that the Group was acting as an agent of the Republic of Italy, that some or all of the derivative transactions were improper and that the termination of the transactions was also improper. The Proposed Claim indicates that, if a proceeding is initiated against the Group, the public prosecutor would be asserting administrative claims against the Group for €2.879 billion (approximately \$3 billion). The Group does not agree with the Proposed Claim and presented its defences to the public prosecutor.

The Group is responding to a number of regulatory and governmental inquiries both in the United States and abroad related to its foreign exchange business.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 19. PROVISIONS (CONTINUED)

#### Tax related provisions

The Group is subject to income tax laws which are complex and subject to different interpretations by the taxpayer and the relevant governmental taxing authorities. Management makes judgments and interpretations about the application of these inherently complex tax laws when determining the provision for income taxes. Disputes over interpretations of the tax laws may be settled with the taxing authority upon examination or audit. The Group periodically evaluates the likelihood of assessments in each taxing jurisdiction resulting from current and subsequent years' examinations. Provisions related to potential losses that may arise from tax audits are established in accordance with the guidance on accounting for uncertain tax items. The Group has established provisions that it believes are adequate in relation to the potential for additional assessments. Whilst a range of outcomes is foreseeable, management considers the amount of the provision to be a reasonable estimate of expected future liabilities after consideration of all pertinent facts, based on the status of inquiries at the balance sheet date.

### 20. DEFERRED TAX ASSETS AND LIABILITIES

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

	2016		2015	
	Deferred tax asset \$millions	Deferred tax liability \$millions	Deferred tax asset \$millions	Deferred tax liability \$millions
At 1 January	120	(23)	86	(1)
Amount recognised in the consolidated income statement	(50)	13	10	(22)
Amount recognised in other comprehensive income	17	(1)	(1)	-
Impact of changes in tax rates recognised in the consolidated income statement	(2)	-	28	-
Impact of changes in tax rates recognised in other comprehensive income	(1)	-	-	-
Foreign exchange adjustment	-	-	(3)	-
At 31 December	<u>84</u>	<u>(11)</u>	<u>120</u>	<u>(23)</u>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 20. DEFERRED TAX ASSETS AND LIABILITIES (CONTINUED)

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

	Deferred tax asset 2016 \$millions	Deferred tax liability 2016 \$millions	Consolidated income statement 2016 \$millions	Deferred tax asset 2015 \$millions	Deferred tax liability 2015 \$millions	Consolidated income statement 2015 \$millions
Accelerated capital allowances	2	-	(2)	4	-	1
Deferred compensation	14	(2)	(3)	15	-	1
IFRS 9 transitional adjustment	-	(1)	-	-	-	-
Temporary differences arising in respect of changes in the Group's own credit risk	16	-	-	-	-	-
Forecast currency hedges	-	-	1	-	(1)	-
Amounts not recognised due to unobservable market data	-	-	(2)	2	-	-
Deferred interest	51	-	(44)	95	-	(41)
Unrealised gains/ (losses)	-	(8)	14	-	(22)	22
Other temporary differences	1	-	(3)	4	-	(3)
	<u>84</u>	<u>(11)</u>	<u>(39)</u>	<u>120</u>	<u>(23)</u>	<u>(20)</u>

Finance (No. 2) Act 2015 enacted reductions in the UK corporation tax main rate to 19% with effect from 1 April 2017. Finance Act 2016 enacted reductions in the UK corporation tax main rate to 17% with effect from 1 April 2020. These changes to UK corporation tax rates impacted the deferred tax charge and closing deferred tax position for 2015 and 2016.

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

Deferred tax assets have not been recognised in respect of the following items (amounts shown are as at the end of the reporting period):

	2016 \$millions	2015 \$millions
Unused tax losses	<u>33</u>	<u>15</u>

The aggregate amount of temporary differences associated with investments in subsidiaries and branches for which deferred tax liabilities have not been recognised is \$nil (2015: \$nil).

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 21. COMMITMENTS AND CONTINGENCIES

#### Leases

The Group has entered into non-cancellable commercial leases on premises and equipment. These leases have lives ranging from one to seven years. The leases on the premises include renewal options and escalation clauses in line with general rental market conditions and rent adjustments based on price indices. The lease agreements do not contain contingent rent payment clauses or purchase options and they do not impose any restrictions on the Group's ability to pay dividends, engage in debt financing transactions or enter into further lease agreements.

	2016 \$millions	2015 \$millions
Lease payments under non-cancellable operating leases recognised as an expense in the year		
- Minimum lease payments	<u>6</u>	<u>6</u>

Future minimum lease payments under non-cancellable operating leases at 31 December are due as follows:

	2016 \$millions	2015 \$millions
Within one year	10	10
In the second to fifth years inclusive	26	35
After five years	3	4
	<u>39</u>	<u>49</u>

Future minimum sub-lease receivables under non-cancellable operating leases at 31 December are due as follows:

	2016 \$millions	2015 \$millions
Within one year	3	3
In the second to fifth years inclusive	10	12
	<u>13</u>	<u>15</u>

#### Contingent liability relating to tax

The tax position of a subsidiary undertaking of the Group is currently under review by the Dutch tax authorities. The review has not progressed sufficiently to determine the timings of resolution or the amount of any outflow. The current estimate of the maximum amount payable, if any, arising from this review is \$135 million, plus potential interest of \$40 million.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 21. COMMITMENTS AND CONTINGENCIES (CONTINUED)

#### Other commitments and contingent liabilities

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

<i>Contingent liabilities</i>	<b>2016</b>	<b>2015</b>
	<b>\$millions</b>	<b>\$millions</b>
Guarantees	1,135	982
Letters of credit	1	1
	<u>1,136</u>	<u>983</u>

<i>Commitments</i>	<b>2016</b>	<b>2015</b>
	<b>\$millions</b>	<b>\$millions</b>
Loan commitments	2,662	1,983
Underwriting commitments	1,309	-
Unsettled securities purchased under agreements to resell <sup>(1)</sup>	30,121	18,391
Unsettled securities sold under agreements to repurchase <sup>(2)</sup>	17,604	11,630
	<u>51,696</u>	<u>32,004</u>

(1) Unsettled securities purchased under agreements to resell have a trade date at or prior to 31 December 2016 and settle subsequent to period end.

(2) Unsettled securities sold under agreements to repurchase have a trade date at or prior to 31 December 2016 and settle subsequent to period end.

### 22. EQUITY INSTRUMENTS

	<b>Ordinary shares of \$1 each \$millions</b>	<b>Ordinary shares of £1 each \$millions</b>	<b>Class A ordinary shares of \$1 each \$millions</b>	<b>Additional Tier 1 capital \$millions</b>	<b>Total equity instruments \$millions</b>
<b>Issued and fully paid:</b>					
At 1 January 2015	9,934	30	1,500	1,300	12,764
Issued in the year:					
Ordinary shares of \$1 each issued	1	-	-	-	1
At 31 December 2015	<u>9,935</u>	<u>30</u>	<u>1,500</u>	<u>1,300</u>	<u>12,765</u>
At 1 January 2016 and 31 December 2016	<u>9,935</u>	<u>30</u>	<u>1,500</u>	<u>1,300</u>	<u>12,765</u>
<b>Voting rights at 31 December 2016</b>	<u>99.7% <sup>(1)</sup></u>	<u>0.3% <sup>(1)</sup></u>	<u>Non-voting</u>	<u>Non-voting</u>	<u>100%</u>

(1) Ordinary shares are pari passu with each other regardless of currency and together carry 100% of the voting rights (2015: 100%)

#### Equity instruments

On 20 January 2015 1,000,000 ordinary shares of \$1 each were issued at par, to the Company's immediate parent undertaking for cash consideration.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 22. EQUITY INSTRUMENTS (CONTINUED)

#### Equity instruments (continued)

At 31 December 2015 and 31 December 2016 the total equity instruments in issue of the Company equated to \$12,765 million comprising 9,935,105,148 ordinary shares of \$1 each, 17,615,107 ordinary shares of £1 each, 1,500,000,000 Class A Non-voting ordinary shares of \$1 each and Additional Tier 1 capital instruments of \$1,300,000,000. All equity instruments are fully paid.

#### Ordinary shares

The holders of the ordinary shares are entitled to receive dividends as declared from time to time and are entitled, on a show of hands, to one vote and, on a poll, one vote per share at meetings of the shareholders of the Company. All shares rank equally with regard to the Company's residual net assets.

All ordinary shares are recorded at the rates of exchange ruling at the date the shares were paid up.

#### Additional Tier 1 capital

The Additional Tier 1 capital instruments (the "Instruments") include a trigger mechanism whereby, if the Common Equity Tier 1 capital ratio of the Company falls below a pre-determined level, the Group will write-down the outstanding principal amount of the Instruments, together with any accrued interest coupon. In this situation, Morgan Stanley UK Group, the purchaser of the Instruments, would have no further rights against the Group in respect of the Instruments. The Instruments have no defined maturity, are callable at the Group's discretion after five years from their date of issuance and are subordinated to senior creditors and subordinated loan creditors of the Group. The Instruments are not entitled to any participation in the residual net assets of the Group. Coupons on the Instruments are non-cumulative and payable at a fixed rate of 9% per annum. Payment of the coupon is wholly at the discretion of the Group.

A payment of coupon interest was approved by the Board of Directors on 15 December 2016 and paid on 20 December 2016 (see note 23).

#### Reserves

##### *Share premium*

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

##### *Currency translation reserve*

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

The Group hedges foreign exchange exposure arising from its investments in foreign branch operations by utilising forward foreign currency exchange contracts effected through intercompany accounts with another Morgan Stanley Group undertaking.

##### *Available-for-sale reserve*

The 'Available-for-sale reserve' includes the cumulative net change in the fair value of available-for-sale financial assets held at the reporting date. The tax effect of these movements is also included in the 'Available-for-sale reserve'.

##### *Capital contribution reserve*

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

##### *Capital redemption reserve*

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

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 22. EQUITY INSTRUMENTS (CONTINUED)

#### Reserves (continued)

##### *Pension reserve*

The 'Pension reserve' comprises cumulative actuarial gains or losses on scheme assets and obligations net of current tax and the impact of the asset surplus ceiling (see note 34).

##### *Debt valuation adjustment reserve*

The 'Debt valuation adjustment reserve' of \$45 million, net of tax (2015: \$nil) reflects the cumulative change in fair value of certain financial liabilities designated at fair value through profit or loss that is attributable to changes in the credit risk of those liabilities, which are presented in other comprehensive income (refer to note 2 for further information on the New standards and interpretations adopted during the year).

### 23. DIVIDENDS

On 15 December 2016, the Directors approved a coupon payment on the Additional Tier 1 capital instruments of \$157,625,000 (2015: \$14,850,694) out of reserves available for distribution at 31 December 2015. The coupon was paid on 20 December 2016, and has a related tax benefit of \$40,253,052 (2015: \$3,103,649).

The Directors have not proposed the payment of a final dividend out of reserves available at 31 December 2016 (2015: \$nil).

### 24. ADDITIONAL CASH FLOW INFORMATION

#### a. Cash and cash equivalents

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

	<b>2016</b>	<b>2015</b>
	<b>\$millions</b>	<b>\$millions</b>
Cash and short term deposits	20,346	11,882
Bank loans and overdrafts	(25)	-
	<u>20,321</u>	<u>11,882</u>

Included within 'Cash and short term deposits' is \$9,446 million (2015: \$9,497 million) of segregated client money, held in accordance with the FCA's Client Money Rules, and an amount of \$99 million (2015: \$534 million) which represents other client money, that is not available for use by the Group. The corresponding payable is recognised and included in 'Trade payables' within 'Financial liabilities at amortised cost'.

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**24. ADDITIONAL CASH FLOW INFORMATION (CONTINUED)**

**b. Reconciliation of cash flows from operating activities**

	Note	2016 \$millions	2015 \$millions
Profit for the year		451	401
<i>Adjustments for:</i>			
Net impairment movement on financial assets	6	14	7
Depreciation on property, plant and equipment	16	3	2
Interest income		88	(130)
Interest expense		599	690
Income tax expense	7	284	309
Operating cash flows before changes in operating assets and liabilities		<u>1,439</u>	<u>1,279</u>
Changes in operating assets			
(Increase) / decrease in loans and receivables, excluding cash and short term deposits		(16,294)	3,531
(Increase) / decrease in financial assets classified as held for trading		(1,907)	49,125
(Increase) / decrease in financial assets designated at fair value through profit or loss		<u>(2,676)</u>	<u>1,724</u>
		<u>(20,877)</u>	<u>54,380</u>
Changes in operating liabilities			
Increase / (decrease) in financial liabilities at amortised cost, excluding bank loans and overdrafts		17,942	(13,154)
Increase / (decrease) in financial liabilities classified as held for trading		9,681	(41,322)
Increase / (decrease) in financial liabilities designated at fair value through profit or loss		1,113	(266)
Increase / (decrease) in provisions		<u>64</u>	<u>(22)</u>
		<u>28,800</u>	<u>(54,764)</u>
Interest received		(195)	203
Interest paid		(304)	(555)
Income taxes paid		(113)	(120)
Effect of foreign exchange movements		<u>(78)</u>	<u>(177)</u>
<b>Net cash flows from operating activities</b>		<u><u>8,672</u></u>	<u><u>246</u></u>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 25. 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 2016

	Less than or equal to twelve months \$millions	More than twelve months \$millions	Total \$millions
<b>ASSETS</b>			
Loans and receivables:			
Cash and short term deposits	20,346	-	20,346
Cash collateral on securities borrowed	19,601	-	19,601
Securities purchased under agreements to resell	77,099	347	77,446
Trade receivables	51,659	-	51,659
Other receivables	860	620	1,480
	169,565	967	170,532
Financial assets classified as held for trading	248,180	-	248,180
Financial assets designated at fair value through profit or loss	3,340	972	4,312
Available-for-sale financial assets	-	29	29
Current tax assets	163	-	163
Deferred tax assets	51	33	84
Prepayments and accrued income	38	-	38
Property, plant and equipment	-	6	6
Intangible assets	-	2	2
	421,337	2,009	423,346
<b>LIABILITIES</b>			
Financial liabilities at amortised cost:			
Bank loans and overdrafts	25	-	25
Cash collateral on securities loaned	21,119	105	21,224
Securities sold under agreements to repurchase	44,033	4,383	48,416
Trade payables	85,634	-	85,634
Subordinated loans	-	7,906	7,906
Other payables	3,548	7,241	10,789
	154,359	19,635	173,994
Financial liabilities classified as held for trading	226,187	-	226,187
Financial liabilities designated at fair value through profit or loss	3,262	2,758	6,020
Provisions	-	85	85
Current tax liabilities	80	-	80
Deferred tax liabilities	-	11	11
Accruals and deferred income	161	-	161
Post-employment benefit obligations	-	5	5
	384,049	22,494	406,543

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**25. EXPECTED MATURITY OF ASSETS AND LIABILITIES (CONTINUED)**

<b>At 31 December 2015</b>	<b>Less than or equal to twelve months \$millions</b>	<b>More than twelve months \$millions</b>	<b>Total \$millions</b>
<b>ASSETS</b>			
Loans and receivables:			
Cash and short term deposits	11,882	-	11,882
Cash collateral on securities borrowed	22,433	-	22,433
Securities purchased under agreements to resell	58,609	35	58,644
Trade receivables	50,940	-	50,940
Other receivables	1,299	592	1,891
	<u>145,163</u>	<u>627</u>	<u>145,790</u>
Financial assets classified as held for trading	246,273	-	246,273
Financial assets designated at fair value through profit or loss	1,091	545	1,636
Available-for-sale financial assets	-	39	39
Current tax assets	185	-	185
Deferred tax assets	-	120	120
Prepayments and accrued income	38	-	38
Property, plant and equipment	-	3	3
	<u>392,750</u>	<u>1,334</u>	<u>394,084</u>
<b>LIABILITIES</b>			
Financial liabilities at amortised cost:			
Cash collateral on securities loaned	14,875	1,393	16,268
Securities sold under agreements to repurchase	34,558	3,453	38,011
Trade payables	82,065	-	82,065
Subordinated loans	-	7,906	7,906
Other payables	4,570	7,018	11,588
	<u>136,068</u>	<u>19,770</u>	<u>155,838</u>
Financial liabilities classified as held for trading	216,506	-	216,506
Financial liabilities designated at fair value through profit or loss	3,376	1,489	4,865
Provisions	-	21	21
Current tax liabilities	101	-	101
Deferred tax liabilities	-	23	23
Accruals and deferred income	197	-	197
Post-employment benefit obligations	-	6	6
	<u>356,248</u>	<u>21,309</u>	<u>377,557</u>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 26. SEGMENT REPORTING

Segment information is presented in respect of the Group's business and geographical segments. The business segments and geographical segments are based on the Group's management and internal reporting structure. Transactions between business segments are on normal commercial terms and conditions.

#### Business segment

Morgan Stanley structures its business segments primarily based upon the nature of the financial products and services provided to customers and Morgan Stanley's internal management structure. The Group's own business segments are consistent with those of Morgan Stanley.

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

#### Geographical segments

The Group operates in three geographic regions being Europe, Middle East and Africa ("EMEA"), the Americas and Asia.

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

	EMEA		Americas		Asia		Total	
	2016	2015	2016	2015	2016	2015	2016	2015
	\$millions							
External revenues net of interest	4,354	4,284	19	57	85	110	4,458	4,451
Profit / (loss) before income tax	730	633	(14)	42	19	35	735	710
Total assets	296,942	284,119	58,324	59,102	68,080	50,863	423,346	394,084

### 27. FINANCIAL RISK MANAGEMENT

#### Risk management procedures

Risk is an inherent part of the Group's business activity. The Group seeks to identify, assess, monitor and manage each of the various types of risk involved in its business activities in accordance with defined policies and procedures. The Group 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 Group's Board of Directors and to appropriate senior management personnel of the Group.

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

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 27. FINANCIAL RISK MANAGEMENT (CONTINUED)

#### Market risk

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

Additional information on primary market risk exposures, market risk management as well as VaR methodology, assumptions and limitations is presented in the Strategic Report and forms part of the audited financial statements.

*VaR for the year ended 31 December 2016*

The table below presents the Management VaR for the Group's trading portfolio on a year-end, average and annual high and low basis for 31 December 2016 and 31 December 2015.

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

	95%/ one-day VaR for the year ended 31 December 2016				95%/ one-day VaR for the year ended 31 December 2015			
	Period end \$millions	Average \$millions	High \$millions	Low \$millions	Period end \$millions	Average \$millions	High \$millions	Low \$millions
<i>Market risk category:</i>								
Interest rate and credit spread	12	12	20	9	10	14	20	10
Equity price	11	11	15	9	12	14	38	10
Foreign exchange rate	3	3	6	2	2	6	12	2
Commodity price	-	1	3	-	2	2	3	-
Less diversification benefit <sup>(1)(2)</sup>	(10)	(10)	N/A	N/A	(8)	(14)	N/A	N/A
Primary Risk Categories	16	17	24	14	18	22	42	16
Credit Portfolio <sup>(3)</sup>	7	8	10	6	6	6	8	5
Less diversification benefit <sup>(1)(2)</sup>	(6)	(5)	N/A	N/A	(4)	(5)	N/A	N/A
<b>Total Management VaR</b>	<b>17</b>	<b>20</b>	<b>27</b>	<b>15</b>	<b>20</b>	<b>23</b>	<b>43</b>	<b>17</b>

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

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

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

The Group's average VaR for Primary Risk Categories for 2016 was \$17 million compared with \$22 million for 2015. The decrease in average VaR for Primary Risk Categories is due to risk reduction across interest rate, equity and foreign exchange.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 27. FINANCIAL RISK MANAGEMENT (CONTINUED)

#### Market risk (continued)

*VaR for the year ended 31 December 2016 (continued)*

The average Credit Portfolio VaR for 2016 was \$8 million compared with \$6 million for 2015. The increase in the average VaR over the year was driven by a combination of market moves (credit spread and volatility) and exposure changes during 2016.

The average total VaR for 2016 was \$20 million compared with \$23 million for 2015.

*Non-trading risks for the year ended 31 December 2016*

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

#### *Interest rate risk*

The Group's VaR excludes certain funding liabilities and money market transactions. The application of a parallel shift in interest rates of 50 basis points increase or decrease to these positions would result in a net gain or loss, respectively, of approximately \$2.0 million as at 31 December 2016, compared to a net loss or gain of \$1.8 million as at 31 December 2015.

#### *Funding liabilities*

The credit spread risk sensitivity of the Group's mark-to-market funding liabilities corresponds to an increase in value of approximately \$0.8 million and \$0.3 million for each 1 basis point widening in the Group's credit spread level at 31 December 2016 and 31 December 2015 respectively.

#### *Equity investments price risk*

The Group is exposed to equity price risk as a result of changes in the fair value of its investments in listed and private equities classified as available-for-sale financial assets. These investments are predominantly equity positions with long investment horizons, the majority of which are for business facilitation purposes. The market risk related to these investments is measured by estimating the potential reduction in net revenues associated with a 10% decline in asset values as shown in the table below.

	<b>31 December 2016</b>	<b>31 December 2015</b>
	<b>10% sensitivity</b>	<b>10% sensitivity</b>
	<b>\$millions</b>	<b>\$millions</b>
Available-for-sale financial assets	<u>3</u>	<u>4</u>

#### *Currency risk*

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

The Group also has foreign currency exposure arising from its trading activities in currencies other than US dollars. It actively manages this exposure by hedging with other Morgan Stanley Group undertakings.

The analysis below details the foreign currency exposure for the Group, by foreign currency, relating to the retranslation of its non-US dollar denominated branches and subsidiaries.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 27. FINANCIAL RISK MANAGEMENT (CONTINUED)

#### Market risk (continued)

##### *Currency risk (continued)*

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.

	2016			2015		
	Sensitivity to applied percentage change in currency (+/-)			Sensitivity to applied percentage change in currency (+/-)		
	Foreign currency exposure \$millions	Percentage change applied %	Other comprehensive income \$millions	Foreign currency exposure \$millions	Percentage change applied %	Other comprehensive income \$millions
Australian Dollar	-	14%	-	(35)	14%	(5)
British Pound	-	16%	-	(85)	6%	(5)
Euro	282	12%	34	248	12%	30
Taiwan New Dollar	73	6%	4	68	6%	4
Polish Zloty	3	17%	1	2	17%	-
South Korean Won	177	8%	14	191	8%	15
Swedish Krona	12	21%	3	13	21%	3
Swiss Franc	13	12%	2	11	12%	1
	<u>560</u>		<u>58</u>	<u>413</u>		<u>43</u>

The reasonably possible percentage change in the currency rate in relation to US dollars has been calculated based on the greatest annual percentage change over the 5 year period from 1 January 2012 to 31 December 2016 (2015: 1 January 2011 to 31 December 2015). Thus, the percentage change applied may not be the same percentage as the actual change in the currency rate for the relevant year.

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

#### **Credit risk**

Credit risk refers to the risk of loss arising when a borrower, counterparty or issuer does not meet its financial obligations to the Group. Credit risk includes country risk, which is further described below.

Additional information on credit risk monitoring, control and mitigation is presented in the Strategic report and forms part of the audited financial statements.

##### *Exposure to credit risk*

The maximum exposure to credit risk (“gross credit exposure”) of the Group as at 31 December 2016 is disclosed below, based on the carrying amounts of the financial assets the Group believes are subject to credit risk. Exposure arising from financial instruments not recognised in the consolidated statement of financial position is measured as the maximum amount that the Group could have to pay, which may be significantly greater than the amount that would be recognised as a liability. Where the Group 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.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 27. FINANCIAL RISK MANAGEMENT (CONTINUED)

#### Credit risk (continued)

##### Exposure to credit risk (continued)

The net credit exposure represents the credit exposure remaining after the effect of the credit enhancements. The “unrated” balance in the ‘Maximum exposure to credit risk by credit rating’ represents the pool of counterparties that either do not require a rating or are under review in accordance with the Group’s rating policies. These counterparties individually generate no material credit exposure and this pool is highly diversified, monitored and subject to limits.

Financial assets classified as held for trading, excluding derivatives, are subject to traded credit risk through exposure to the issuer of the financial asset; the Group manages this issuer credit risk through its market risk management infrastructure and this traded credit risk is incorporated within the VaR based risk measures included in the market risk disclosure.

##### Exposure to credit risk by class:

Class	2016			2015		
	Gross credit exposure <sup>(1)</sup>	Credit enhancements	Net credit exposure <sup>(2)</sup>	Gross credit exposure <sup>(1)</sup>	Credit enhancements	Net credit exposure <sup>(2)</sup>
	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions
Loans and receivables:						
Cash and short term deposits	20,346	-	20,346	11,882	-	11,882
Cash collateral on securities borrowed	19,601	(18,900)	701	22,433	(21,116)	1,317
Securities purchased under agreements to resell	77,446	(75,053)	2,393	58,644	(57,951)	693
Trade receivables <sup>(3)</sup>	51,659	-	51,659	50,940	-	50,940
Other receivables	858	-	858	1,209	-	1,209
Financial assets classified as held for trading:						
Derivatives	183,553	(175,809)	7,744	187,111	(178,730)	8,381
Financial assets designated at fair value through profit or loss	4,312	(3,697)	615	1,636	(958)	678
	<b>357,775</b>	<b>(273,459)</b>	<b>84,316</b>	<b>333,855</b>	<b>(258,755)</b>	<b>75,100</b>
<b>Unrecognised financial instruments</b>						
Guarantees	1,135	-	1,135	982	-	982
Letters of credit	1	-	1	1	-	1
Loan commitments	2,662	(777)	1,885	1,983	-	1,983
Underwriting commitments	1,309	-	1,309	-	-	-
Unsettled securities purchased under agreements to resell <sup>(4)</sup>	30,121	-	30,121	18,391	-	18,391
	<b>393,003</b>	<b>(274,236)</b>	<b>118,767</b>	<b>355,212</b>	<b>(258,755)</b>	<b>96,457</b>

(1) The carrying amount recognised in the consolidated statement of financial position best represents the Group'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 \$3,696 million (2015: \$2,716 million) to be offset in the event of default by certain Morgan Stanley counterparties.

(3) Trade receivables primarily include cash collateral pledged against the payable on OTC derivative positions. These derivative liabilities are included within financial liabilities classified as held for trading in the consolidated statement of financial position.

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

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 27. FINANCIAL RISK MANAGEMENT (CONTINUED)

#### Credit risk (continued)

##### *Exposure to credit risk (continued)*

The impact of master netting arrangements and similar agreements on the Group's ability to offset financial assets and financial liabilities is further disclosed in note 30.

*Maximum exposure to credit risk by credit rating<sup>(1)</sup>:*

	Gross credit exposure	
	2016	2015
	\$millions	\$millions
AAA	16,728	12,013
AA	75,018	62,608
A	213,176	203,875
BBB	67,212	52,808
BB	11,556	13,923
B	5,179	5,164
CCC	1,387	2,448
D	9	12
Unrated	2,738	2,361
	<u>393,003</u>	<u>355,212</u>

(1) Internal credit rating derived using methodologies generally consistent with those used by external agencies

##### *Financial assets past due but not impaired*

At 31 December 2016, \$1,414 million of financial assets included in loans and receivables in the consolidated statement of financial position were past due but not impaired (31 December 2015: \$1,180 million).

The main considerations for the impairment assessment include whether there are any known difficulties in the cash flows of counterparties, credit rating downgrades, or infringement of the original terms of the contract. The Group determines the allowance appropriate for each individually significant asset on an individual basis. Items considered when determining the allowance amount include the sustainability of the counterparty's business plan, the counterparty's ability to improve performance once a financial difficulty has arisen, the realisable value of collateral, and the timing of expected cash flows. The impairment losses are evaluated at least at each reporting date.

##### *Financial assets individually impaired*

Class	2016	2015
	\$millions	\$millions
Loans and receivables:		
Trade receivables	<u>40</u>	<u>28</u>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**27. FINANCIAL RISK MANAGEMENT (CONTINUED)**

**Liquidity and funding risk**

Liquidity and funding risk refers to the risk that the Group will be unable to finance its operations due to a loss of access to the capital markets or difficulty in liquidating its assets. Liquidity and funding risk also encompasses the Group's ability to meet its financial obligations without experiencing significant business disruption or reputational damage that may threaten its viability as a going concern.

Additional information on liquidity and funding risk management is presented in the Strategic Report and forms part of the audited financial statements.

*Maturity analysis*

In the following maturity analysis of financial liabilities, derivative contracts and other financial liabilities held as part of the Group's trading activities are presented at fair value, consistent with how these financial liabilities are managed, and disclosed as on demand. Derivatives not held as part of the Group's trading activities and financial liabilities designated at fair value through profit or loss are disclosed according to their earliest contractual maturity; all such amounts are presented at their fair value, consistent with how these financial liabilities are managed. All other amounts represent undiscounted cash flows payable by the Group arising from its financial liabilities to their earliest contractual maturities as at 31 December 2016 and 31 December 2015. 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 Group to appropriately reflect the liquidity risk arising from those financial liabilities, and is consistent with how the liquidity risk on these financial liabilities is managed by the Group.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 27. FINANCIAL RISK MANAGEMENT (CONTINUED)

#### Liquidity and funding risk (continued)

	On demand \$millions	Less than 1 month \$millions	Equal to or more than 1 month but less than 3 months \$millions	Equal to or more than 3 months but less than 1 year \$millions	Equal to or more than 1 year but less than 5 years \$millions	Equal to or more than 5 years \$millions	Total \$millions
<b>31 December 2016</b>							
<b>Financial liabilities</b>							
Financial liabilities at amortised cost:							
Bank loans and overdrafts	25	-	-	-	-	-	25
Cash collateral on securities loaned	15,911	678	2,224	2,306	105	-	21,224
Securities sold under agreements to repurchase	22,188	9,549	5,683	6,614	4,379	52	48,465
Trade payables	85,634	-	4	22	-	-	85,660
Subordinated loans	-	48	-	156	1,105	9,099	10,408
Other payables	3,188	12	118	141	5,145	2,841	11,445
Financial liabilities classified as held for trading:							
Derivatives	180,580	-	-	-	-	-	180,580
Other	45,607	-	-	-	-	-	45,607
Financial liabilities designated at fair value through profit or loss	2,651	38	89	484	965	1,793	6,020
<b>Total financial liabilities</b>	<b>355,784</b>	<b>10,325</b>	<b>8,118</b>	<b>9,723</b>	<b>11,699</b>	<b>13,785</b>	<b>409,434</b>
<b>Unrecognised financial instruments</b>							
Guarantees	1,135	-	-	-	-	-	1,135
Letters of credit	-	-	-	-	1	-	1
Loan commitments	2,662	-	-	-	-	-	2,662
Underwriting commitments	-	-	-	1,309	-	-	1,309
Unsettled securities purchased under agreements to resell <sup>(1)</sup>	30,121	-	-	-	-	-	30,121
<b>Total unrecognised financial instruments</b>	<b>33,918</b>	<b>-</b>	<b>-</b>	<b>1,309</b>	<b>1</b>	<b>-</b>	<b>35,228</b>

(1) The Group enters into forward starting reverse repurchase agreements (agreements which have a trade date at or prior to 31 December 2016 and settle subsequent to period end). These agreements primarily settle within three business days and of the total amount at 31 December 2016, \$30,121 million settled within three business days.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 27. FINANCIAL RISK MANAGEMENT (CONTINUED)

#### Liquidity and funding risk (continued)

##### Maturity analysis (continued)

	On demand \$millions	Less than 1 month \$millions	Equal to or more than 1 month but less than 3 months \$millions	Equal to or more than 3 months but less than 1 year \$millions	Equal to or more than 1 year but less than 5 years \$millions	Equal to or more than 5 years \$millions	Total \$millions
<b>31 December 2015</b>							
<b>Financial liabilities</b>							
Financial liabilities at amortised cost:							
Cash collateral on securities loaned	12,571	216	706	1,382	1,393	-	16,268
Securities sold under agreements to repurchase	20,642	5,739	2,614	5,581	3,474	-	38,050
Trade payables	82,065	-	1	8	31	-	82,105
Subordinated loans	-	-	-	178	1,016	9,357	10,551
Other payables	4,426	14	29	244	4,976	2,760	12,449
Financial liabilities classified as held for trading:							
Derivatives	181,051	-	-	-	-	-	181,051
Other	35,455	-	-	-	-	-	35,455
Financial liabilities designated at fair value through profit or loss	2,571	148	86	571	561	928	4,865
<b>Total financial liabilities</b>	<b>338,781</b>	<b>6,117</b>	<b>3,436</b>	<b>7,964</b>	<b>11,451</b>	<b>13,045</b>	<b>380,794</b>
<b>Unrecognised financial instruments</b>							
Guarantees	982	-	-	-	-	-	982
Letters of credit	-	-	-	-	-	1	1
Loan commitments	1,983	-	-	-	-	-	1,983
Unsettled securities purchased under agreements to resell <sup>(1)</sup>	18,228	163	-	-	-	-	18,391
<b>Total unrecognised financial instruments</b>	<b>21,193</b>	<b>163</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>21,357</b>

(1) The Group enters into forward starting reverse repurchase agreements (agreements which have a trade date at or prior to 31 December 2015 and settle subsequent to period end). These agreements primarily settle within three business days and of the total amount at 31 December 2015, \$18,228 million settled within three business days.

The Group does not expect that all of the cash flows associated with financial guarantees, letters of credits and loan commitments will be required.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Year ended 31 December 2016

### 28. TRANSFERS OF FINANCIAL ASSETS, INCLUDING PLEDGES OF COLLATERAL

#### Transferred financial assets that are not derecognised in their entirety

In the ordinary course of business, the Group enters into various arrangements including selling securities under agreements to repurchase, purchasing securities under agreements to resell, securities borrowed and securities loaned to, amongst other things, acquire securities to cover short positions and settle other securities obligations, to accommodate customers' needs and to finance the Group's inventory positions.

The Group pledges certain financial instruments to collateralise repurchase agreements and other securities financings. Pledged financial instruments that can be sold or repledged by the secured party are identified as financial instruments classified as held for trading (pledged to various parties) in the consolidated statement of financial position. The Group has determined that it retains substantially all the risks and rewards of these financial instruments including credit risk, settlement risk, country risk and market risk, and therefore has not derecognised them. In addition, it recognises a financial liability in respect of the consideration received.

Other financial assets transferred that continue to be recognised for accounting purposes include pledges of securities as collateral for derivative transactions or otherwise, as well as certain sales of securities with related transactions, such as derivatives, that result in the Group retaining substantially all the risks and rewards of the financial assets transferred. In such cases the Group recognises a financial liability in respect of the consideration received.

These transactions are mostly conducted under standard agreements used by financial market participants and are undertaken with counterparties subject to the Group's normal credit risk control processes. The resulting credit exposures are controlled by daily monitoring and collateralisation of the positions. The carrying amount of the associated financial liabilities related to financial assets transferred that continue to be recognised is \$47,077 million (2015: \$41,269 million).

The following table presents those financial assets which have been sold or otherwise transferred, but which for accounting purposes remain recognised on the consolidated statement of financial position. Positions presented below are shown prior to the impact of offsetting asset and liabilities of the same type, whilst the consolidated statement of financial position is presented after the impact of offsetting such positions.

	<b>2016</b>	<b>2015</b>
	<b>\$millions</b>	<b>\$millions</b>
<b>Financial assets classified as held for trading</b>		
Government debt securities	10,753	13,088
Corporate and other debt	5,114	1,657
Corporate equities	40,359	32,044
	<u>56,226</u>	<u>46,789</u>

# **MORGAN STANLEY & CO. INTERNATIONAL plc**

## **NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016**

### **29. FINANCIAL ASSETS ACCEPTED AS COLLATERAL**

The Group's policy is generally to take possession of securities received as collateral, securities purchased under agreements to resell and securities borrowed. The Group monitors the fair value of the underlying securities as compared with the related receivable or payable, including accrued interest, and, as necessary, requests additional collateral to ensure such transactions are adequately collateralised. Where deemed appropriate, the Group's agreements with third parties specify its rights to request additional collateral. These transactions are mostly conducted under standard documentation used by financial market participants.

The fair value of collateral accepted under these arrangements as at 31 December 2016 was \$205,103 million (2015: \$182,810 million). Of this amount \$179,524 million (2015: \$151,318 million) has been sold or repledged to third parties in connection with financing activities, or to comply with commitments under short sale transactions.

### **30. FINANCIAL ASSETS AND FINANCIAL LIABILITIES SUBJECT TO OFFSETTING**

In order to manage credit exposure arising from its business activities, the Group applies various credit risk management policies and procedures, see note 27 for further details. Primarily in connection with securities purchased under agreements to resell and securities sold under agreements to repurchase, securities borrowed and securities loaned transactions and derivative transactions, the Group enters into master netting arrangements and collateral arrangements with its counterparties. These agreements provide the Group 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 Group against the net amount owed by the counterparty. However, in certain circumstances, the Group 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 Group may not have sought legal advice to support the enforceability of the agreement. In cases where the Group has not determined an agreement to be enforceable, the related amounts are not offset in the tabular disclosures. The Group's policy is generally to take possession of securities purchased under agreements to resell and securities borrowed, and to receive securities and cash posted as collateral (with rights of rehypothecation), although in certain cases the Group may agree for such collateral to be posted to a third party custodian under a tri-party arrangement that enables the Group to take control of such collateral in the event of a counterparty default. The enforceability of the master netting agreement is taken into account in the Group's risk management practices and application of counterparty credit limits. The Group also monitors the fair value of the underlying securities as compared with the related receivable or payable, including accrued interest, and, as necessary, requests additional collateral as provided under the applicable agreement to ensure such transactions are adequately collateralised.

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

The following tables present information about the offsetting of financial instruments and related collateral amounts. The tables do 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 Group's exposure to credit risk is disclosed in note 27.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 30. FINANCIAL ASSETS AND FINANCIAL LIABILITIES SUBJECT TO OFFSETTING (CONTINUED)

	Gross amounts <sup>(1)</sup>	Amounts offset in the consolidated statement of financial position <sup>(2) (3)</sup>	Net amounts presented in the consolidated statement of financial position	Amounts not offset in the consolidated statement of financial position <sup>(4) (5) (6)</sup>		Net exposure <sup>(7)</sup>
				Financial instruments	Cash collateral	
	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions
<b>31 December 2016</b>						
<b>Assets</b>						
Loans and receivables:						
Cash collateral on securities borrowed	32,385	(12,784)	19,601	(18,900)	-	701
Securities purchased under agreement to resell	107,120	(29,674)	77,446	(75,053)	-	2,393
Financial assets classified as held for trading:						
Derivatives	236,829	(53,276)	183,553	(149,865)	(25,944)	7,744
<b>TOTAL</b>	<b>376,334</b>	<b>(95,734)</b>	<b>280,600</b>	<b>(243,818)</b>	<b>(25,944)</b>	<b>10,838</b>
<b>Liabilities</b>						
Financial liabilities at amortised cost:						
Cash collateral on securities loaned	34,008	(12,784)	21,224	(20,228)	-	996
Securities sold under agreement to repurchase	78,091	(29,675)	48,416	(46,876)	-	1,540
Financial liabilities classified as held for trading:						
Derivatives	230,135	(49,555)	180,580	(149,813)	(19,764)	11,003
<b>TOTAL</b>	<b>342,234</b>	<b>(92,014)</b>	<b>250,220</b>	<b>(216,917)</b>	<b>(19,764)</b>	<b>13,539</b>

(1) Amounts include \$427 million of cash collateral on securities borrowed, \$2,319 million of securities purchased under agreements to resell, \$2,299 million of financial assets classified as held for trading - derivatives, \$995 million of cash collateral on securities loaned, \$1,535 million of securities sold under agreements to repurchase and \$2,435 million of financial liabilities classified as held for trading - derivatives which are either not subject to master netting agreements or collateral agreements or are subject to such agreements but the Group has not determined the agreements to be legally enforceable.

(2) Amounts are reported on a net basis in the consolidated statements of financial position when there is a legally enforceable master netting arrangement that provides for a current right of offset and there is an intention to either settle on a net basis or to realise the asset and liability simultaneously.

(3) Amounts include \$5,821 million and \$2,099 million of cash collateral related to financial assets classified as held for trading - derivatives recognised in amounts offset in the consolidated statement of financial positions for assets and liabilities respectively.

(4) Amounts relate to master netting arrangements and collateral arrangements which have been determined by the Group to be legally enforceable but do not meet all criteria required for net presentation within the consolidated statement of financial position.

(5) The cash collateral not offset is recognised in the consolidated statement of financial position within trade receivables and payables respectively.

(6) In addition to the balances disclosed in the table certain financial assets and financial liabilities designated at fair value through profit or loss have legally enforceable master netting arrangements in place; however, these are not eligible for netting within the consolidated statement of financial position. \$408 million not presented net within the consolidated statement of financial position have legally enforceable netting arrangements in place and can be offset in the ordinary course of business and/ or in the event of default.

(7) Intercompany cross-product legally enforceable netting arrangements are in place which would allow for an additional \$3,696 million of the total consolidated statement of financial position, to be offset in the ordinary course of business and/ or in the event of default. The additional amounts for offset would include a portion of the residual net exposure.

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**30. FINANCIAL ASSETS AND FINANCIAL LIABILITIES SUBJECT TO OFFSETTING**  
**(CONTINUED)**

	Gross amounts <sup>(1)</sup>	Amounts offset in the consolidated statement of financial position <sup>(2) (3)</sup>	Net amounts presented in the consolidated statement of financial position	Amounts not offset in the consolidated statement of financial position <sup>(4) (5) (6)</sup>		Net exposure <sup>(7)</sup>
	\$millions	\$millions	\$millions	Financial instruments	Cash collateral	\$millions
<b>31 December 2015</b>						
<b>Assets</b>						
Loans and receivables:						
Cash collateral on securities borrowed	37,141	(14,708)	22,433	(21,116)	-	1,317
Securities purchased under agreement to resell	78,218	(19,574)	58,644	(57,951)	-	693
Financial assets classified as held for trading:						
Derivatives	232,096	(44,985)	187,111	(151,591)	(27,139)	8,381
<b>TOTAL</b>	<b>347,455</b>	<b>(79,267)</b>	<b>268,188</b>	<b>(230,658)</b>	<b>(27,139)</b>	<b>10,391</b>
<b>Liabilities</b>						
Financial liabilities at amortised cost:						
Cash collateral on securities loaned	30,976	(14,708)	16,268	(16,234)	-	34
Securities sold under agreement to repurchase	57,585	(19,574)	38,011	(35,808)	-	2,203
Financial liabilities classified as held for trading:						
Derivatives	223,016	(41,965)	181,051	(147,725)	(23,139)	10,187
<b>TOTAL</b>	<b>311,577</b>	<b>(76,247)</b>	<b>235,330</b>	<b>(199,767)</b>	<b>(23,139)</b>	<b>12,424</b>

(1) Amounts include \$773 million of cash collateral on securities borrowed, \$450 million of securities purchased under agreements to resell, \$2,786 million of financial assets classified as held for trading - derivatives, \$10 million of cash collateral on securities loaned, \$2,038 million of securities sold under agreements to repurchase and \$2,908 million of financial liabilities classified as held for trading - derivatives which are either not subject to master netting agreements or collateral agreements or are subject to such agreements but the Group has not determined the agreements to be legally enforceable.

(2) Amounts are reported on a net basis in the consolidated statements of financial position when there is a legally enforceable master netting arrangement that provides for a current right of offset and there is an intention to either settle on a net basis or to realise the asset and liability simultaneously.

(3) Amounts include \$4,351 million of cash collateral related to financial assets classified as held for trading - derivatives and \$1,258 million of cash collateral related to financial liabilities classified as held for trading - derivatives, recognised in amounts offset in the consolidated statement of financial positions for assets and liabilities respectively.

(4) Amounts relate to master netting arrangements and collateral arrangements which have been determined by the Group to be legally enforceable but do not meet all criteria required for net presentation within the consolidated statement of financial position.

(5) The cash collateral not offset is recognised in the consolidated statement of financial position within trade receivables and payables respectively.

(6) Of the residual net exposure, intercompany cross-product legally enforceable netting arrangements are in place which would allow for an additional \$2,716 million to be offset in the ordinary course of business and/ or in the event of default.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 31. FINANCIAL INSTRUMENTS 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 Group's financial assets and financial liabilities recognised at fair value on a recurring basis, classified according to the fair value hierarchy.

2016	Quoted prices in active market (Level 1) \$millions	Valuation techniques using observable inputs (Level 2) \$millions	Valuation techniques with significant unobservable inputs (Level 3) \$millions	Total \$millions
Financial assets classified as held for trading:				
Government debt securities	7,185	2,863	4	10,052
Corporate and other debt	-	8,332	218	8,550
Corporate equities	45,746	218	61	46,025
Derivatives:				
Interest rate contracts	9	79,664	779	80,452
Credit contracts	-	6,047	111	6,158
Foreign exchange and gold contracts	-	66,658	68	66,726
Equity contracts	329	26,350	1,169	27,848
Commodity contracts	75	2,275	19	2,369
Total financial assets classified as held for trading	53,344	192,407	2,429	248,180
Financial assets designated at fair value through profit or loss	-	4,134	178	4,312
Available-for-sale financial assets:				
Corporate equities	-	-	29	29
<b>Total financial assets measured at fair value</b>	<b>53,344</b>	<b>196,541</b>	<b>2,636</b>	<b>252,521</b>
Financial liabilities classified as held for trading:				
Government debt securities	17,171	2,305	-	19,476
Corporate and other debt	-	2,848	5	2,853
Corporate equities	23,217	33	28	23,278
Derivatives:				
Interest rate contracts	4	75,031	956	75,991
Credit contracts	-	6,232	116	6,348
Foreign exchange and gold contracts	-	66,443	54	66,497
Equity contracts	470	27,150	1,802	29,422
Commodity contracts	32	2,268	22	2,322
Total financial liabilities classified as held for trading	40,894	182,310	2,983	226,187
Financial liabilities designated at fair value through profit or loss	-	5,752	268	6,020
<b>Total financial liabilities measured at fair value</b>	<b>40,894</b>	<b>188,062</b>	<b>3,251</b>	<b>232,207</b>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 31. FINANCIAL INSTRUMENTS MEASURED AT FAIR VALUE (CONTINUED)

#### a. Financial assets and liabilities recognised at fair value on a recurring basis (continued)

2015	Quoted prices in active market (Level 1) \$millions	Valuation techniques using observable inputs (Level 2) \$millions	Valuation techniques with significant unobservable inputs (Level 3) \$millions	Total \$millions
Financial assets classified as held for trading:				
Government debt securities	7,282	4,079	4	11,365
Corporate and other debt	-	6,393	576	6,969
Corporate equities	40,364	236	228	40,828
Derivatives:				
Interest rate contracts	-	79,813	247	80,060
Credit contracts	-	9,890	268	10,158
Foreign exchange and gold contracts	-	62,014	452	62,466
Equity contracts	566	27,450	1,902	29,918
Commodity contracts	8	4,495	6	4,509
<b>Total financial assets classified as held for trading</b>	<b>48,220</b>	<b>194,370</b>	<b>3,683</b>	<b>246,273</b>
Financial assets designated at fair value through profit or loss	-	1,255	381	1,636
Available-for-sale financial assets:				
Corporate equities	1	-	38	39
<b>Total financial assets measured at fair value</b>	<b>48,221</b>	<b>195,625</b>	<b>4,102</b>	<b>247,948</b>
Financial liabilities classified as held for trading:				
Government debt securities	8,451	2,296	-	10,747
Corporate and other debt	-	1,279	5	1,284
Corporate equities	23,372	37	15	23,424
Derivatives:				
Interest rate contracts	-	73,572	929	74,501
Credit contracts	-	10,119	279	10,398
Foreign exchange and gold contracts	-	61,047	212	61,259
Equity contracts	183	29,061	2,455	31,699
Commodity contracts	14	3,174	6	3,194
<b>Total financial liabilities classified as held for trading</b>	<b>32,020</b>	<b>180,585</b>	<b>3,901</b>	<b>216,506</b>
Financial liabilities designated at fair value through profit or loss	-	4,705	160	4,865
<b>Total financial liabilities measured at fair value</b>	<b>32,020</b>	<b>185,290</b>	<b>4,061</b>	<b>221,371</b>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 31. FINANCIAL INSTRUMENTS MEASURED AT FAIR VALUE (CONTINUED)

#### a. Financial assets and liabilities recognised at fair value on a recurring basis (continued)

The Group'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:

#### Financial assets and financial liabilities classified as held for trading and available for sale financial assets

Asset and Liability / Valuation Technique	Valuation Hierarchy Classification
<b>Government Debt Securities</b>	
<i>U.S. Treasury Securities</i> <ul style="list-style-type: none"> <li>Fair value is determined using quoted market prices; valuation adjustments are not applied.</li> </ul>	<ul style="list-style-type: none"> <li>Generally Level 1</li> </ul>
<i>Non-US Sovereign Government Obligations</i> <ul style="list-style-type: none"> <li>Fair value is determined using quoted prices in active markets when available.</li> </ul>	<ul style="list-style-type: none"> <li>Generally Level 1</li> <li>Level 2—if the market is less active or prices are dispersed</li> <li>Level 3—in instances where the inputs are unobservable</li> </ul>
<b>Corporate and Other Debt</b>	
<i>Residential Mortgage-Backed Securities ("RMBS"), Commercial Mortgage-Backed Securities ("CMBS") and other Asset-Backed Securities ("ABS")</i> <ul style="list-style-type: none"> <li>RMBS, CMBS and other ABS may be valued based on price or spread data obtained from observed transactions or independent external parties such as vendors or brokers.</li> <li>When position-specific external price data are not observable, the fair value determination may require benchmarking to comparable instruments, and/or analysing expected credit losses, default and recovery rates, and/or applying discounted cash flow techniques. When evaluating the comparable instruments for use in the valuation of each security, security collateral-specific attributes, including payment priority, credit enhancement levels, type of collateral, delinquency rates and loss severity, are considered. In addition, for RMBS borrowers, Fair Isaac Corporation scores and the level of documentation for the loan are considered.</li> <li>Market standard models, such as Intex, Trepp or others, may be deployed to model the specific collateral composition and cash flow structure of each transaction. Key inputs to these models are market spreads, forecasted credit losses, and default and prepayment rates for each asset category.</li> <li>Valuation levels of RMBS and CMBS indices are used as an additional data point for benchmarking purposes or to price outright index positions.</li> </ul>	<ul style="list-style-type: none"> <li>Generally Level 2—if value based on observable market data for comparable instruments</li> <li>Level 3—if external prices or significant spread inputs are unobservable or if the comparability assessment involves significant subjectivity related to property type differences, cash flows, performance and other inputs</li> </ul>
<i>Corporate Bonds</i> <ul style="list-style-type: none"> <li>Fair value is determined using recently executed transactions, market price quotations, bond spreads, CDS spreads, or at the money volatility and/or volatility skew obtained from independent external parties, such as vendors and brokers, adjusted for any basis difference between cash and derivative instruments.</li> <li>The spread data used are for the same maturity as the bond. If the spread data do not reference the issuer, then data that reference a comparable issuer are used. When position-specific external price data are not observable, fair value is determined based on either benchmarking to comparable instruments or cash flow models with yield curves, bond or single name CDS spreads and recovery rates as significant inputs.</li> </ul>	<ul style="list-style-type: none"> <li>Level 2—if value based on observable market data for comparable instruments</li> <li>Level 3—in instances where prices or significant spread inputs are unobservable</li> </ul>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 31. FINANCIAL INSTRUMENTS MEASURED AT FAIR VALUE (CONTINUED)

#### a. Financial assets and liabilities recognised at fair value on a recurring basis (continued)

Asset and Liability / Valuation Technique	Valuation Hierarchy Classification
<p><i>Collateralised Debt Obligations (“CDO”) and Collateralised Loan Obligations (“CLO”)</i></p> <ul style="list-style-type: none"> <li>The Group holds cash CDOs/CLOs that typically reference a tranche of an underlying synthetic portfolio of single name CDS spreads collateralised by corporate bonds (“credit-linked notes”) or cash portfolio of asset-backed securities/loans (“asset-backed CDOs/CLOs”).</li> <li>Credit correlation, a primary input used to determine the fair value of credit-linked notes, is usually unobservable and derived using a benchmarking technique. Other model inputs such as credit spreads, including collateral spreads, and interest rates are typically observable.</li> <li>Asset-backed CDOs/CLOs are valued based on an evaluation of the market and model input parameters sourced from comparable instruments as indicated by market activity. Each asset-backed CDO/CLO position is evaluated independently taking into consideration available comparable market levels, underlying collateral performance and pricing, deal structures and liquidity.</li> </ul>	<ul style="list-style-type: none"> <li>Level 2—when either comparable market transactions are observable or credit correlation input is insignificant</li> <li>Level 3—when either comparable market transactions are unobservable or the credit correlation input is significant</li> </ul>
<p><i>Corporate loans and Lending Commitments</i></p> <ul style="list-style-type: none"> <li>Fair value of corporate loans is determined using recently executed transactions, market price quotations (where observable), implied yields from comparable debt, market observable CDS spread levels obtained from independent external parties adjusted for any basis difference between cash and derivative instruments, along with proprietary valuation models and default recovery analysis where such transactions and quotations are unobservable.</li> <li>Fair value of contingent corporate lending commitments is determined by using executed transactions on comparable loans and the anticipated market price based on pricing indications from syndicate banks and customers. The valuation of loans and lending commitments also takes into account fee income that is considered an attribute of the contract.</li> </ul>	<ul style="list-style-type: none"> <li>Level 2—if value based on observable market data for comparable instruments</li> <li>Level 3—in instances where prices or significant spread inputs are unobservable</li> </ul>
<p><i>Corporate Equities</i></p> <p><i>Corporate Equities</i></p> <ul style="list-style-type: none"> <li>Exchange-traded equity securities are generally valued based on quoted prices from the exchange. To the extent these securities are actively traded, valuation adjustments are not applied.</li> <li>Unlisted equity securities are generally valued based on an assessment of each underlying security, considering rounds of financing and third-party transactions, discounted cash flow analyses and market-based information, including comparable Group transactions, trading multiples and changes in market outlook, among other factors.</li> <li>Listed fund units are generally marked to the exchange-traded price, while listed fund units if not actively traded and unlisted fund units are generally marked to Net Asset Value (“NAV”).</li> </ul>	<ul style="list-style-type: none"> <li>Level 1—exchange-traded securities and fund units if actively traded</li> <li>Level 2—exchange-traded securities (including direct equity investments) if not actively traded or if undergoing a recent mergers and acquisitions event or corporate action; non-exchange-traded direct equity investments and investments in various investment management funds if valued based on rounds of financing or third-party transactions</li> <li>Level 3—unlisted equity securities, fund units, and exchange-traded securities if not actively traded or if marked to an aged mergers and acquisitions event or corporate action, and non-exchange-traded direct equity investments and investments in various investment management funds where rounds of financing or third-party transactions are not available</li> </ul>

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**31. FINANCIAL INSTRUMENTS MEASURED AT FAIR VALUE (CONTINUED)**

**a. Financial assets and liabilities recognised at fair value on a recurring basis (continued)**

Asset and Liability / Valuation Technique	Valuation Hierarchy Classification
<i>Derivatives and Other Contracts</i>	
<p><i>Listed Derivative Contracts</i></p> <ul style="list-style-type: none"> <li>• Listed derivatives that are actively traded are valued based on quoted prices from the exchange.</li> <li>• Listed derivatives that are not actively traded are valued using the same approaches as those applied to OTC derivatives.</li> </ul>	<ul style="list-style-type: none"> <li>• Level 1—listed derivatives that are actively traded</li> <li>• Level 2—listed derivatives that are not actively traded</li> </ul>
<p><i>OTC Derivative Contracts</i></p> <ul style="list-style-type: none"> <li>• OTC derivative contracts include forward, swap and option contracts related to interest rates, foreign currencies, credit standing of reference entities, equity prices or commodity prices.</li> <li>• Depending on the product and the terms of the transaction, the fair value of OTC derivative products can be modeled using a series of techniques, including closed-form analytic formulas, such as the Black-Scholes option-pricing model, simulation models or a combination thereof. Many pricing models do not entail material subjectivity as the methodologies employed do not necessitate significant judgment, since model inputs may be observed from actively quoted markets, as is the case for generic interest rate swaps, many equity, commodity and foreign currency option contracts, and certain CDS. In the case of more established derivative products, the pricing models used by the Group are widely accepted by the financial services industry.</li> <li>• More complex OTC derivative products are typically less liquid and require more judgment in the implementation of the valuation technique since direct trading activity or quotes are unobservable. This includes certain types of interest rate derivatives with both volatility and correlation exposure, equity, commodity or foreign currency derivatives which are either longer-dated or include exposure to multiple underlyings, and credit derivatives, including CDS on certain mortgage- or asset-backed securities and basket CDS. Where 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Generally Level 2—OTC derivative products valued using observable inputs, or where the unobservable input is not deemed significant.</li> <li>• Level 3—OTC derivative products for which the unobservable input is deemed significant</li> </ul>
<b>Financial assets and financial liabilities designated at fair value through profit and loss</b>	
<p><i>Prepaid OTC contracts and issued structured notes designated at fair value through profit or loss</i></p> <ul style="list-style-type: none"> <li>• The Group issues structured notes and trades prepaid OTC contracts that have coupon or repayment terms linked to the performance of debt or equity securities, indices, currencies or commodities.</li> <li>• Fair value of structured notes and traded prepaid OTC contract is determined using valuation models for the derivative and debt portions of the notes and traded prepaid OTC contracts. These models incorporate observable inputs referencing identical or comparable securities, including prices to which the notes are linked, interest rate yield curves, option volatility and currency rates, and commodity or equity prices.</li> <li>• Independent, external and traded prices for the notes are considered as well. The impact of the Group's own credit spreads is also included based on observed secondary bond market spreads.</li> </ul>	<ul style="list-style-type: none"> <li>• Generally Level 2</li> <li>• Level 3—in instances where the unobservable inputs are deemed significant</li> </ul>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 31. FINANCIAL INSTRUMENTS MEASURED AT FAIR VALUE (CONTINUED)

#### a. Financial assets and liabilities recognised at fair value on a recurring basis (continued)

Asset and Liability / Valuation Technique	Valuation Hierarchy Classification
<p><i>Corporate loans and lending commitments</i></p> <ul style="list-style-type: none"> <li>Fair value of corporate loans is determined using recently executed transactions, market price quotations (where observable), implied yields from comparable debt, market observable CDS spread levels obtained from independent external parties adjusted for any basis difference between cash and derivative instruments, along with proprietary valuation models and default recovery analysis where such transactions and quotations are unobservable.</li> <li>Fair value of contingent corporate lending commitments is determined by using executed transactions on comparable loans and the anticipated market price based on pricing indications from syndicate banks and customers. The valuation of loans and lending commitments also takes into account fee income that is considered an attribute of the contract.</li> <li>Fair value of equity margin loans is determined by discounting future interest cash flows, net of estimated credit losses. The estimated credit losses are derived by benchmarking to market observable CDS spreads, implied debt yields or volatility metrics of the loan collateral company.</li> </ul>	<ul style="list-style-type: none"> <li>Level 2—if value based on observable market data for comparable instruments</li> <li>Level 3—in instances where prices or significant spread inputs are unobservable</li> </ul>

#### 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

During the year the Group reclassified approximately \$910 million (2015: \$nil) of European government debt securities assets and \$602 million (2015: \$nil) of European government debt securities liabilities from Level 2 to Level 1 as certain European government bonds traded with sufficient frequency to constitute an active market.

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

The following tables present the changes in the fair value of the Group's Level 3 financial assets and financial liabilities for the year ended 31 December 2016. Level 3 instruments may be hedged with instruments classified in Level 1 and Level 2. As a result, the realised and unrealised gains/ (losses) for assets and liabilities within the Level 3 category presented in the tables below do not reflect the related realised and unrealised gains/ (losses) on hedging instruments that have been classified by the Group within the Level 1 and/or Level 2 categories.

Additionally, both observable and unobservable inputs may be used to determine the fair value of positions that the Group has classified within the Level 3 category. As a result, the unrealised gains/ (losses) during the period for assets and liabilities within the Level 3 category presented in the following tables herein may include changes in fair value during the period that were attributable to both observable and unobservable inputs.

The Morgan Stanley Group operates a number of intra-group policies to ensure that, where possible, revenues and related costs are matched. Where the trading positions included in the below table are risk managed using financial instruments held by other Morgan Stanley Group undertakings, these policies potentially result in the recognition of offsetting gains or losses in the Group.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 31. FINANCIAL INSTRUMENTS MEASURED AT FAIR VALUE (CONTINUED)

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

2016

	Balance at 1 January 2016 \$millions	Total gains/ (losses) recognised in consolidated income statement (1) \$millions	Total gains/ (losses) recognised in consolidated statement of comprehen- sive income (1) \$millions	Purchases \$millions	Sales \$millions	Issuances \$millions	Settlements \$millions	Net transfers in and/or (out) of Level 3 (2) \$millions	Balance at December 2016 \$millions	Unrealised gains/ (losses) for Level 3 assets/ liabilities outstanding as at 31 December 2016 (3) \$millions
Financial assets classified as held for trading:										
Government debt securities	4	-	-	2	(4)	-	-	2	4	-
Corporate and other debt	576	8	-	71	(409)	-	-	(28)	218	(5)
Corporate equities	228	(13)	-	32	(24)	-	-	(162)	61	-
<b>Total financial assets classified as held for trading</b>	<b>808</b>	<b>(5)</b>	<b>-</b>	<b>105</b>	<b>(437)</b>	<b>-</b>	<b>-</b>	<b>(188)</b>	<b>283</b>	<b>(5)</b>
Financial assets designated at fair value through profit or loss										
	381	7	-	15	(236)	-	-	11	178	7
Available-for-sale financial assets:										
Corporate equities	38	-	(8)	1	(2)	-	-	-	29	(8)
<b>Total financial assets measured at fair value</b>	<b>1,227</b>	<b>2</b>	<b>(8)</b>	<b>121</b>	<b>(675)</b>	<b>-</b>	<b>-</b>	<b>(177)</b>	<b>490</b>	<b>(6)</b>
Financial liabilities classified as held for trading:										
Corporate and other debt	5	-	-	(1)	1	-	-	-	5	-
Corporate equities	15	12	-	(3)	24	-	-	4	28	-
Net derivative contracts <sup>(4)</sup>	1,006	212	-	(355)	-	543	301	(479)	804	13
<b>Total financial liabilities classified as held for trading</b>	<b>1,026</b>	<b>224</b>	<b>-</b>	<b>(359)</b>	<b>25</b>	<b>543</b>	<b>301</b>	<b>(475)</b>	<b>837</b>	<b>13</b>
Financial liabilities designated at fair value through profit or loss										
	160	8	-	-	-	223	(89)	(18)	268	8
<b>Total financial liabilities measured at fair value</b>	<b>1,186</b>	<b>232</b>	<b>-</b>	<b>(359)</b>	<b>25</b>	<b>766</b>	<b>212</b>	<b>(493)</b>	<b>1,105</b>	<b>21</b>

(1) The total gains or (losses) are recognised in the consolidated income statement and the consolidated statement of comprehensive income as detailed in the financial instruments accounting policy (note 3c).

(2) For financial assets and financial liabilities that were transferred into and out of Level 3 during the year, gains or (losses) are presented as if the assets or liabilities had been transferred into or out of Level 3 as at the beginning of the year.

(3) Amounts represent unrealised gains or (losses) for the year ended 31 December 2016 related to assets and liabilities still outstanding at 31 December 2016. The unrealised gains or (losses) are recognised in the consolidated income statement or consolidated statement of comprehensive income as detailed in the financial instruments accounting policy (note 3c).

(4) Net derivative contracts represent Financial liabilities classified as held for trading – derivative contracts net of Financial assets classified as held for trading – derivative contracts.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 31. FINANCIAL INSTRUMENTS MEASURED AT FAIR VALUE (CONTINUED)

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

2015

	Balance at 1 January 2015	Total gains/ (losses) recognised in consolidated income statement (1)	Total gains/ (losses) recognised in consolidated statement of comprehensive income (1)	Purchases	Sales	Issuances	Settlements	Net transfers in and/or (out) of Level 3 (2)	Balance at 31 December 2015	Unrealised gains/ (losses) for Level 3 assets/ liabilities outstanding as at 31 December 2015 (3)
	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions
Financial assets classified as held for trading:										
Government debt securities	39	(1)	-	1	(30)	-	-	(5)	4	-
Corporate and other debt	496	16	-	376	(303)	-	(2)	(7)	576	5
Corporate equities	119	12	-	128	(193)	-	-	162	228	20
<b>Total financial assets classified as held for trading</b>	<b>654</b>	<b>27</b>	<b>-</b>	<b>505</b>	<b>(526)</b>	<b>-</b>	<b>(2)</b>	<b>150</b>	<b>808</b>	<b>25</b>
Financial assets designated at fair value through profit or loss	1,316	(14)	-	93	(737)	-	(263)	(14)	381	(14)
Available-for-sale financial assets:										
Corporate equities	40	-	(3)	1	-	-	-	-	38	-
<b>Total financial assets measured at fair value</b>	<b>2,010</b>	<b>13</b>	<b>(3)</b>	<b>599</b>	<b>(1,263)</b>	<b>-</b>	<b>(265)</b>	<b>136</b>	<b>1,227</b>	<b>11</b>
Financial liabilities classified as held for trading:										
Corporate and other debt	6	2	-	(6)	7	-	-	-	5	-
Corporate equities	3	79	-	(145)	103	-	-	133	15	79
Net derivative contracts(4)	834	250	-	(2,534)	-	2,667	(83)	372	1,006	101
<b>Total financial liabilities classified as held for trading</b>	<b>843</b>	<b>331</b>	<b>-</b>	<b>(2,685)</b>	<b>110</b>	<b>2,667</b>	<b>(83)</b>	<b>505</b>	<b>1,026</b>	<b>180</b>
Financial liabilities designated at fair value through profit or loss	69	2	-	-	-	141	(43)	(5)	160	2
<b>Total financial liabilities measured at fair value</b>	<b>912</b>	<b>333</b>	<b>-</b>	<b>(2,685)</b>	<b>110</b>	<b>2,808</b>	<b>(126)</b>	<b>500</b>	<b>1,186</b>	<b>182</b>

(1) The total gains or (losses) are recognised in the consolidated income statement and the consolidated statement of comprehensive income as detailed in the financial instruments accounting policy (note 3c).

(2) For financial assets and financial liabilities that were transferred into and out of Level 3 during the year, gains or (losses) are presented as if the assets or liabilities had been transferred into or out of Level 3 as at the beginning of the year.

(3) Amounts represent unrealised gains or (losses) for the year ended 31 December 2015 related to assets and liabilities still outstanding at 31 December 2015. The unrealised gains or (losses) are recognised in the consolidated income statement or consolidated statement of comprehensive income as detailed in the financial instruments accounting policy (note 3c).

(4) Net derivative contracts represent Financial liabilities classified as held for trading – derivative contracts net of Financial assets classified as held for trading – derivative contracts.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 31. FINANCIAL INSTRUMENTS MEASURED AT FAIR VALUE (CONTINUED)

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

There were no material transfers from Level 2 to Level 3 or from Level 3 to Level 2 of the fair value hierarchy during the year (2015: \$nil).

#### d. Valuation of Level 3 financial assets and liabilities recognised at fair value on a recurring basis

The following disclosures provide information on the sensitivity of fair value measurements to key inputs and assumptions.

##### i. Quantitative information about and qualitative sensitivity if significant unobservable inputs

The following table provides information on the valuation techniques, significant unobservable inputs and their ranges and averages for each material category of assets and liabilities measured at fair value on a recurring basis.

The level of aggregation and breadth of products cause the range of inputs to be wide and not evenly distributed across the inventory. Further, the range of unobservable inputs may differ across group's in the financial services industry because of diversity in the types of products included in each group's inventory. The following disclosures also include qualitative information on the sensitivity of the fair value measurements to changes in the significant unobservable inputs. There are no predictable relationships between multiple significant unobservable inputs attributable to a given valuation technique. A single amount is disclosed when there is no significant difference between the minimum, maximum and average (weighted average or similar average / median).

31 December 2016	Fair value \$millions	Predominant valuation techniques/ Significant unobservable inputs	Range <sup>(2)</sup> (Weighted averages or simple averages/median) <sup>(3)</sup>
<b>ASSETS</b>			
<b>Financial assets classified as held for trading:</b>			
- Corporate and other debt:			
- Residential mortgage-backed securities	61	Comparable pricing Comparable bond price	2 to 14 pts (7 pts)
- Asset-backed securities	43	Comparable pricing Comparable bond price	28 to 100 pts (88 pts)
- Corporate bonds	91	Comparable pricing Comparable bond price	5 to 130 pts (99 pts)
- Corporate equities	61	Comparable pricing Comparable equity price	100% (100%)
<b>Financial assets designated at fair value through profit or loss:</b>			
- Customer loans	152	Margin loan model Discount rate Option model Volatility skew	9% (9%) -1% (-1%)
<b>Available-for-sale financial assets:</b>			
- Corporate equities	29	Comparable pricing Comparable equity price	100% (100%)
<b>LIABILITIES</b>			
<b>Financial liabilities classified as held for trading:</b>			
- Corporate equities	(28)	Comparable pricing Comparable equity price	100% (100%)

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**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**31. FINANCIAL INSTRUMENTS MEASURED AT FAIR VALUE (CONTINUED)**

**d. Valuation of Level 3 financial assets and liabilities recognised at fair value on a recurring basis (continued)**

**i. Quantitative information about and qualitative sensitivity if significant unobservable inputs (continued)**

31 December 2016	Fair value \$millions	Predominant valuation techniques/ Significant unobservable inputs	Range <sup>(2)</sup> (Weighted averages or simple averages/median) <sup>(3)</sup>
<b>LIABILITIES</b>			
<b>Financial liabilities classified as held for trading:</b>			
- Net derivatives contracts: <sup>(1)(4)(5)</sup>			
- Interest rate	(177)	Option model	
		Inflation volatility	24% to 55% (40%/39%)
		Interest rate-foreign exchange correlation	28% to 58% (44%/43%)
		Interest rate curve correlation	28% to 98% (67%/69%)
		Interest rate quanto correlation	-8% to 37% (6%/-7%)
		Interest rate curve	1.5% to 1.6% (1.5%/1.5%)
		Interest rate volatility skew	31% to 116% (47%/50%)
- Credit	(5)	Correlation model	
		Credit correlation	35% to 59% (44%)
		Comparable pricing	
		Comparable bond price	2 to 100 pts (39 pts)
- Foreign exchange and gold	14	Option model	
		Interest rate-foreign exchange correlation	28% to 58% (44%/43%)
		Interest rate volatility skew	31% to 116% (47%/50%)
		Credit-foreign exchange correlation	0% (0%)
- Equity	(633)	Option model	
		At the money volatility	16% to 66% (32%)
		Volatility skew	-2% to 0% (-1%)
		Equity-equity correlation	35% to 99% (74%)
		Equity-foreign exchange correlation	-63% to -5% (-41%)
- Commodity	(3)	Comparable pricing	
		Comparable price	\$508 to \$1,626 (\$829)
<b>Financial liabilities designated at fair value through profit or loss:</b>			
- Issued structured notes	(242)	Option model	
		At the money volatility	7% to 34% (29%)
		Volatility skew	-1% to 0% (-1%)
		Equity-equity correlation	46% to 98% (82%)
		Equity-foreign exchange correlation	-55% to -6% (-41%)

(1) Net derivative contracts represent financial liabilities classified as held for trading – derivative contracts net of financial assets classified as held for trading – derivative contracts.

(2) The ranges of significant unobservable inputs are represented in points, percentages or basis points. Points are a percentage of par; for example, 100 points would be 100% of par. A basis point equals 1/100th of 1%; for example, 353 basis points would equal 3.53%.

(3) Amounts represent weighted averages except where simple averages and the median of the inputs are provided when more relevant.

(4) CVA and FVA are included in fair value, but excluded from the valuation techniques and significant unobservable inputs in the previous table. CVA is a Level 3 input when the underlying counterparty credit curve is unobservable. FVA is a Level 3 input in its entirety given the lack of observability of funding spreads in the principal market.

(5) Includes derivative contracts with multiple risks (i.e. hybrid products).

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 31. FINANCIAL INSTRUMENTS MEASURED AT FAIR VALUE (CONTINUED)

#### d. Valuation of Level 3 financial assets and liabilities recognised at fair value on a recurring basis (continued)

##### i. Quantitative information about and qualitative sensitivity if significant unobservable inputs (continued)

31 December 2015			
	Fair value \$millions	Predominant valuation techniques/ Significant unobservable inputs	Range <sup>(2)</sup> (Weighted averages or simple averages/median) <sup>(3)</sup>
<b>ASSETS</b>			
<b>Financial assets classified as held for trading:</b>			
- Corporate and other debt:			
- Residential mortgage-backed securities	76	Comparable pricing Comparable bond price	4 to 85 pts (32 pts)
- Commercial mortgage-backed securities	58	Comparable pricing Comparable bond price	3 to 90 pts (9 pts)
- Asset-backed securities	96	Comparable pricing Comparable bond price	9 to 100 pts (65 pts)
- Corporate bonds	176	Comparable pricing Comparable bond price Option model	3 to 100 pts (83 pts)
		At the money volatility	6% to 38% (25%)
		Volatility skew	-1% to 0% (0%)
- Collateralised debt obligations	154	Comparable pricing Comparable loan price	67 to 102 pts (87 pts)
- Corporate equities	228	Comparable pricing Comparable equity price Market approach	100% (100%)
		EBITDA multiple	9 times (9 times)
<b>Financial assets designated at fair value through profit or loss:</b>			
- Prepaid OTC contracts	93	Option model	
		At the money volatility	21% to 36% (29%)
		Volatility skew	0% (0%)
- Customer loans	288	Margin loan model	
		Credit spread	499 bps (499bps)
		Volatility skew	13% to 29% (20%)
		Option model	
		Volatility skew	-1% (-1%)
<b>Available-for-sale financial assets:</b>			
- Corporate equities	38	Comparable pricing Comparable equity price	100% (100%)
<b>LIABILITIES</b>			
<b>Financial liabilities classified as held for trading:</b>			
- Net derivatives contracts:(1)(4)			
- Interest rate	(682)	Option model	
		Inflation volatility	58% (58%/58%)
		Interest rate curve	0% (0%/0%)
		Interest rate-foreign exchange correlation	25% to 62% (43%/43%)
		Interest rate-inflation correlation	-41% to -39% (-41%/-41%)
		Interest rate curve correlation	24% to 95% (60%/69%)
		Interest rate quanto correlation	-8% to 36% (5%/-6%)
		Interest rate volatility skew	29% to 82% (43%/40%)

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 31. FINANCIAL INSTRUMENTS MEASURED AT FAIR VALUE (CONTINUED)

#### d. Valuation of Level 3 financial assets and liabilities recognised at fair value on a recurring basis (continued)

##### i. Quantitative information about and qualitative sensitivity if significant unobservable inputs (continued)

31 December 2015

	Fair value \$millions	Predominant valuation techniques/ Significant unobservable inputs	Range <sup>(2)</sup> (Weighted averages or simple averages/median) <sup>(3)</sup>
<b>LIABILITIES</b>			
<b>Financial liabilities classified as held for trading:</b>			
- Credit	(11)	Correlation model	
		Credit correlation	39% to 87% (57%)
		Comparable pricing	
		Comparable bond price	3 to 100 pts (37 pts)
- Foreign exchange and gold	240	Option model	
		Interest rate curve	0% (0%/0%)
		Interest rate-foreign exchange correlation	25% to 62% (43%/43%)
		Interest rate volatility skew	29% to 82% (43%/40%)
- Equity	(553)	Option model	
		At the money volatility	18% to 65% (36%)
		Volatility skew	-3% to 0% (0%)
		Equity-equity correlation	40% to 99% (69%)
		Equity-foreign exchange correlation	-60% to -10% (-39%)
<b>Financial liabilities designated at fair value through profit or loss:</b>			
- Issued structured notes	(147)	Option model	
		At the money volatility	26% to 38% (31%)
		Volatility skew	-1% to 0% (0%)
		Equity-equity correlation	42% to 97% (67%)
		Equity-foreign exchange correlation	-54% to -6% (-44%)

(1) Net derivative contracts represent financial liabilities classified as held for trading – derivative contracts net of financial assets classified as held for trading – derivative contracts.

(2) The ranges of significant unobservable inputs are represented in points, percentages or basis points. Points are a percentage of par; for example, 100 points would be 100% of par. A basis point equals 1/100th of 1%; for example, 353 basis points (bps) would equal 3.53%.

(3) Amounts represent weighted averages except where simple averages and the median of the inputs are provided.

(4) CVA and FVA are included in fair value, but excluded from the valuation techniques and significant unobservable inputs in the table above. CVA is a Level 3 input when the underlying counterparty credit curve is unobservable. FVA is a Level 3 input in its entirety given the lack of observability of funding spreads in the principal market.

(5) Includes derivative contracts with multiple risks (i.e. hybrid products).

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 31. FINANCIAL INSTRUMENTS MEASURED AT FAIR VALUE (CONTINUED)

#### d. Valuation of Level 3 financial assets and liabilities recognised at fair value on a recurring basis (continued)

##### i. Quantitative information about and qualitative sensitivity if significant unobservable inputs (continued)

Significant Unobservable Inputs — Description	Sensitivity
<p><i>Comparable bond price</i>—A pricing input used when prices for the identical instrument are not available. Significant subjectivity may be involved when fair value is determined using pricing data available for comparable instruments. Valuation using comparable instruments can be done by calculating an implied yield (or spread over a liquid benchmark) from the price of a comparable bond, then adjusting that yield (or spread) to derive a value for the bond. The adjustment to yield (or spread) should account for relevant differences in the bonds such as maturity or credit quality.</p> <p>Alternatively, a price-to-price basis can be assumed between the comparable instrument and the bond being valued in order to establish the value of the bond. Additionally, as the probability of default increases for a given bond (<i>i.e.</i>, as the bond becomes more distressed), the valuation of that bond will increasingly reflect its expected recovery level assuming default. The decision to use price-to-price or yield/spread comparisons largely reflects trading market convention for the financial instruments in question. Price-to-price comparisons are primarily employed for RMBS, CMBS, ABS, CDOs, CLOs, Other debt, interest rate contracts, foreign exchange contracts, Other secured financings and distressed corporate bonds. Implied yield (or spread over a liquid benchmark) is utilised predominately for non-distressed corporate bonds, loans and credit contracts.</p>	<p>In general, an increase (decrease) to the comparable bond price for an asset would result in a higher (lower) fair value.</p>
<p><i>Comparable equity price</i>—A price derived from equity raises, share buybacks and external bid levels, etc. A discount or premium may be included in the fair value estimate.</p>	<p>In general, an increase (decrease) to the comparable equity price of an asset would result in a higher (lower) fair value.</p>
<p><i>Correlation</i>—A pricing input where the payoff is driven by more than one underlying risk. Correlation is a measure of the relationship between the movements of two variables (<i>i.e.</i>, how the change in one variable influences a change in the other variable). Credit correlation, for example, is the factor that describes the relationship between the probability of individual entities to default on obligations and the joint probability of multiple entities to default on obligations.</p>	<p>In general, an increase (decrease) to the correlation would result in an impact to the fair value, but the magnitude and direction of the impact would depend on whether the Group is long or short the exposure.</p>
<p><i>Credit spread</i>—The difference in yield between different securities due to differences in credit quality. The credit spread reflects the additional net yield an investor can earn from a security with more credit risk relative to one with less credit risk. The credit spread of a particular security is often quoted in relation to the yield on a credit risk-free benchmark security or reference rate, typically either U.S. Treasury or London Interbank Offered Rate (“LIBOR”).</p>	<p>In general, an increase (decrease) to the credit spread of an asset would result in a lower (higher) fair value.</p>
<p><i>EBITDA multiple / Exit multiple</i>—The ratio of the Enterprise Value to EBITDA, where the Enterprise Value is the aggregate value of equity and debt minus cash and cash equivalents. The EBITDA multiple reflects the value of the company in terms of its full-year EBITDA, whereas the exit multiple reflects the value of the company in terms of its full-year expected EBITDA at exit. Either multiple allows comparison between companies from an operational perspective as the effect of capital structure, taxation and depreciation/amortisation is excluded.</p>	<p>In general, an increase (decrease) to the EBITDA or Exit multiple of an asset would result in a higher (lower) fair value.</p>
<p><i>Interest rate curve</i>—The term structure of interest rates (relationship between interest rates and the time to maturity) and a market’s measure of future interest rates at the time of observation. An interest rate curve is used to set interest rate and foreign exchange derivative cash flows and is a pricing input used in the discounting of any OTC derivative cash flow.</p>	<p>In general, an increase (decrease) to the interest rate curve would result in an impact to the fair value, but the magnitude and direction of the impact would depend on whether the Group is long or short the exposure.</p>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**31. FINANCIAL INSTRUMENTS MEASURED AT FAIR VALUE (CONTINUED)**

**d. Valuation of Level 3 financial assets and liabilities recognised at fair value on a recurring basis (continued)**

i. Quantitative information about and qualitative sensitivity if significant unobservable inputs (continued)

Significant Unobservable Inputs — Description	Sensitivity
<i>Volatility</i> —The measure of the variability in possible returns for an instrument given how much that instrument changes in value over time. Volatility is a pricing input for options, and, generally, the lower the volatility, the less risky the option. The level of volatility used in the valuation of a particular option depends on a number of factors, including the nature of the risk underlying that option (e.g., the volatility of a particular underlying equity security may be significantly different from that of a particular underlying commodity index), the tenor and the strike price of the option.	In general, an increase (decrease) to the volatility would result in an impact to the fair value, but the magnitude and direction of the impact would depend on whether the Group is long or short the exposure.
<i>Volatility skew</i> —The measure of the difference in implied volatility for options with identical underliers and expiry dates but with different strikes. The implied volatility for an option with a strike price that is above or below the current price of an underlying asset will typically deviate from the implied volatility for an option with a strike price equal to the current price of that same underlying asset.	In general, an increase (decrease) to the volatility skew would result in an impact to the fair value, but the magnitude and direction of the impact would depend on whether the Group is long or short the exposure.

ii. Sensitivity of fair values to changing significant assumptions to reasonably possible alternatives

All financial instruments are valued in accordance with the techniques outlined in the fair value hierarchy. Some of these techniques, including those used to value instruments categorised in Level 3 of the fair value hierarchy, are dependent on unobservable parameters and the fair value for these financial instruments has been determined using parameters appropriate for the valuation methodology based on prevailing market evidence. It is recognised that the unobservable parameters could have a range of reasonably possible alternative values.

In estimating the change in fair value, to provide information about the variability of the fair value measurement, the unobservable parameters were varied to the extremes of the ranges of reasonably possible alternatives using statistical techniques, such as dispersion in comparable observable external inputs for similar asset classes, historic data or judgement if a statistical technique is not appropriate. Where a financial instrument has more than one unobservable parameter, the sensitivity analysis reflects the greatest reasonably possible increase or decrease to fair value by varying the assumptions individually. It is unlikely that all unobservable parameters would be concurrently at the extreme range of possible alternative assumptions and therefore the sensitivity shown below is likely to be greater than the actual uncertainty relating to the financial instruments.

The following tables present the sensitivity of the fair value of material Level 3 financial assets and financial liabilities to reasonably possible alternative assumptions, providing quantitative information on the potential variability of the fair value measurement.

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**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
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**31. FINANCIAL INSTRUMENTS MEASURED AT FAIR VALUE (CONTINUED)**

- d. Valuation of Level 3 financial assets and liabilities recognised at fair value on a recurring basis (continued)
- ii. Sensitivity of fair values to changing significant assumptions to reasonably possible alternatives (continued)

2016	Fair value \$millions	Effect of reasonably possible alternative assumptions	
		Increase in fair value \$millions	Decrease in fair value \$millions
Financial assets classified as held for trading:			
Corporate and other debt	218	10	(10)
Corporate equities	61	10	(13)
Financial assets designated at fair value through profit or loss:			
Customer loans	152	1	(1)
Available-for-sale financial assets:			
Corporate equities	29	6	(10)
Financial liabilities classified as held for trading:			
Corporate equities	28	-	(4)
Net derivatives contracts <sup>(1)(2)</sup>	804	37	(57)
Financial liabilities designated at fair value through profit or loss:			
Issued structured notes	242	2	(2)

(1) Net derivative contracts represent financial liabilities classified as held for trading – derivative contracts net of financial assets classified as held for trading – derivative contracts.

(2) CVA and FVA are included in the fair value, but excluded from the effect of reasonably possible alternative assumptions in the table above. CVA is deemed to be a Level 3 input when the underlying counterparty credit curve is unobservable. FVA is deemed to be a Level 3 input in its entirety given the lack of observability of funding spreads in the principal market.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 31. FINANCIAL INSTRUMENTS MEASURED AT FAIR VALUE (CONTINUED)

#### d. Valuation of Level 3 financial assets and liabilities recognised at fair value on a recurring basis (continued)

#### ii. Sensitivity of fair values to changing significant assumptions to reasonably possible alternatives (continued)

2015	Fair value \$millions	Effect of reasonably possible alternative assumptions	
		Increase in fair value \$millions	Decrease in fair value \$millions
Financial assets classified as held for trading:			
Corporate and other debt	576	19	(35)
Corporate equities	228	2	(41)
Financial assets designated at fair value through profit or loss:			
Customer loans	288	1	-
Prepaid OTC contracts	93	3	(3)
Available-for-sale financial assets:			
Corporate equities	38	9	(2)
Financial liabilities classified as held for trading:			
Net derivative contracts <sup>(1)(2)</sup>	1,006	37	(52)
Financial liabilities designated at fair value through profit or loss:			
Issued structured notes	147	2	(2)

(1) Net derivative contracts represent financial assets classified as held for trading – derivative contracts net of financial liabilities classified as held for trading – derivative contracts.

(2) CVA and FVA are included in the fair value, but excluded from the effect of reasonably possible alternative assumptions in the table above. CVA is deemed to be a level 3 input when the underlying counterparty credit curve is unobservable. FVA is deemed to be a Level 3 input in its entirety given the lack of observability of funding spreads in the principal market.

#### e. Financial instruments valued using unobservable market data

The amounts not recognised in the consolidated income statement relating to the difference between the fair value at initial recognition (the transaction price) and the amounts determined at initial recognition using valuation techniques are as follows:

	2016 \$millions	2015 \$millions
At 1 January	216	234
New transactions	70	43
Amounts recognised in the consolidated income statement during the year	(41)	(61)
<b>At 31 December</b>	<b>245</b>	<b>216</b>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 31. FINANCIAL INSTRUMENTS MEASURED AT FAIR VALUE (CONTINUED)

#### e. Financial instruments valued using unobservable market data (continued)

The balance above predominately relates to derivatives.

The consolidated statement of financial position categories 'Financial assets and financial liabilities classified as held for trading', 'Financial assets and financial liabilities designated at fair value through profit or loss', and 'Available-for-sale financial assets' include financial instruments whose fair value is based on valuation techniques using unobservable market data.

#### f. Assets and liabilities measured at fair value on a non-recurring basis

Non-recurring fair value measurements of assets and liabilities are those which are required or permitted in the consolidated statement of financial position in particular circumstances. There were no assets or liabilities measured at fair value on a non-recurring basis during the year or prior year.

### 32. FINANCIAL INSTRUMENTS NOT MEASURED AT FAIR VALUE

The tables below present the carrying value, fair value and fair value hierarchy category of certain financial assets and financial liabilities that are not measured at fair value in the consolidated statement of financial position.

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

		<u>Fair value measurement using:</u>		
		Quoted prices in active market (Level 1) \$millions	Valuation techniques using observable inputs (Level 2) \$millions	Valuation techniques with significant unobservable inputs (Level 3) \$millions
<b>Financial liabilities</b>	<b>Carrying value \$millions</b>	<b>Fair value \$millions</b>		
Other payables at 31 December 2016	7,240	7,069	-	7,069
Other payables at 31 December 2015	6,814	6,566	-	6,566

The fair value of other payables is determined based on current interest rates and credit spreads for debt instruments with similar terms and maturity. Also included in the consolidated statement of financial position is \$3,616 million (2015: \$4,774 million) of other payables where the carrying value is a reasonable approximation of fair value.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Year ended 31 December 2016

### 33. EMPLOYEE COMPENSATION PLANS

Morgan Stanley maintains various equity-settled share-based and cash-based deferred compensation plans for the benefit of certain current and former employees.

#### Equity-settled share-based compensation plans

- **Restricted stock units**

Morgan Stanley has granted restricted stock unit (“RSU”) awards pursuant to several equity-based compensation plans. The plans provide for the deferral of a portion of certain employees’ incentive compensation with awards made in the form of restricted common stock or in the right to receive unrestricted shares of common stock in the future. Awards under these plans are generally subject to vesting over time, generally three years from the date of grant, and are generally contingent upon continued employment and to restrictions on sale, transfer or assignment until the end of a specified period. All or a portion of an award may be cancelled if employment is terminated before the end of the relevant vesting period and after the vesting period in certain situations. Recipients of stock-based awards may have voting rights, at the Morgan Stanley Group’s discretion, and generally receive dividend equivalents.

During the year, Morgan Stanley granted 477,411 (2015: 417,228) of restricted stock units to employees of the Group with a weighted average fair value per unit of \$25.22 (2015: \$34.59), based on the market value of Morgan Stanley shares at grant date.

Included within ‘Direct Staff costs’ within the ‘Other expenses’ note is an amount of \$19 million (2015: \$17 million) in relation to restricted stock units equity based compensation plans, granted to employees of the Group.

- **Stock options**

Morgan Stanley also grants stock option awards pursuant to several equity-based compensation plans. The plans provide for the deferral of a portion of certain key employees’ incentive compensation with awards made in the form of stock options and generally have an exercise price not less than the fair value of Morgan Stanley’s common stock on the date of grant. Such stock options generally vest and become exercisable over a three year period and expire five to ten years from the date of grant, subject to accelerated expiration upon certain terminations of employment. Stock option awards have vesting, restriction and cancellation provisions that are generally similar to those in RSUs.

Included within ‘Direct staff costs’ within the ‘Other expenses’ note is an amount of \$nil (2015: \$nil) in relation to stock option equity based compensation plans, granted to employees of the Group.

There were no options granted or exercised during the year (2015: none) and no options outstanding as at 31 December 2016 (2015: none).

The following table shows activity relating to the Morgan Stanley stock option awards for employees of the Group:

	2016		2015	
	Number of options '000s	Weighted average exercise price \$	Number of options '000s	Weighted average exercise price \$
Options outstanding at 1 January	58	66.73	61	65.73
Expired during the year	(58)	66.73	(3)	43.15
Options outstanding and exercisable at 31 December	-	-	58	66.73

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**33. EMPLOYEE COMPENSATION PLANS (CONTINUED)**

**Equity-settled share-based compensation plans (continued)**

Range of exercise prices	Number of options '000s	2016		Number of options '000s	2015	
		Weighted average exercise price \$	Weighted average remaining life in years		Weighted average exercise price \$	Weighted average remaining life in years
\$60.00 - \$69.99	-	-	-	58	66.73	1.0
Total	-	-	-	58	66.73	1.0

**Deferred cash-based compensation plans**

The Group has granted deferred cash-based compensation awards to certain current and former 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 six months to three years from the date of grant. All or a portion of an award may be cancelled if employment is terminated before the end of the relevant vesting period. The awards are settled in cash at the end of the relevant vesting period.

Awards with a value of \$9 million (2015: \$8 million) have been granted to employees of the Group during the year and an expense of \$8 million (2015: \$4 million) has been recognised within 'Direct staff costs' in 'Other expense' in the consolidated income statement in relation to current and previous years' awards. The liability to employees at the end of the year, reported within 'Accruals and deferred income' in the consolidated statement of financial position, is \$23 million (2015: \$23 million).

The Group economically hedges the exposure created by these deferred compensation schemes by entering into derivative transactions with other Morgan Stanley Group undertakings. The derivative balance at the end of the year, recognised within 'Financial liabilities classified as held for trading' in relation to these deferred compensation schemes is \$3 million (2015: \$3 million). The related profit/ (loss) recorded within 'Net gains/ (losses) on financial instruments classified as held for trading' for the year is \$nil (2015: \$nil).

**Plans operated by fellow Morgan Stanley undertakings**

As described in note 6, the Group utilises the services of staff who are employed by other Morgan Stanley Group undertakings. Management charges are incurred in respect of these employee services which include the cost of equity-settled share-based and deferred cash-based compensation plans.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 34. POST EMPLOYMENT BENEFITS

#### Defined contribution plans

The Group operates several Morgan Stanley defined contribution plans, which require contributions to be made to funds held separately from the assets of the Group, under the control of a trustee.

The defined contribution plans are as follows:

- Morgan Stanley Flexible Company Pension Plan (Amsterdam);
- MSII Offshore Retirement Benefit Plan IV, Dubai Section;
- Morgan Stanley Asia Limited Retirement Benefit Plan (Taiwan); and
- Morgan Stanley & Co International plc, Seoul Branch Defined Contribution Plan

The Group pays fixed contributions to the funds, with no legal or constructive obligation to pay further contributions.

The defined contribution pension charge in relation to the above schemes recognised within 'Direct staff costs' in 'Other expense' in the consolidated income statement was \$3 million for the year (2015: \$3 million) of which \$nil was accrued at 31 December 2016 (2015: \$nil).

#### Defined benefit plans

The Group also operates several Morgan Stanley defined benefit plans, which provide post-employment benefits that are based on length of service and salary. The Group's policy is to fund at least the amounts sufficient to meet minimum funding requirements under applicable employee benefit and tax regulations.

The defined benefits plans are as follows:

- Morgan Stanley & Co International plc Paris Branch IFC (Indemnites de Fin de Carriere);
- Morgan Stanley France (SAS) Leaving Indemnity Plan (Indemnites de Fin de Carriere);
- Morgan Stanley Asia (Taiwan) Limited Retirement Scheme;
- Morgan Stanley Asia (Taiwan) Limited Book Reserve Plan;
- Morgan Stanley & Co International plc Zurich Branch Base Plan (formerly Personalvorsorgestiftung der Bank Morgan Stanley AG Plan)
- Morgan Stanley & Co International plc Zurich Branch Top-up Plan (formerly Personalvorsorgestiftung der Bank Morgan Stanley AG Plan); and
- Morgan Stanley Dubai End of Service Gratuity

The defined benefit pension charge in relation to the above plans recognised in 'Direct staff costs' in 'Other expense' in the consolidated income statement was \$nil for the year (2015: \$2 million). The cumulative amount of actuarial gains and losses recognised in other comprehensive income is a \$2 million loss (2015: \$2 million gain). A net liability of \$5 million (2015: \$6 million) is recognised in the Group's consolidated statement of financial position in respect of these plans.

During 2015 the obligations and assets of the Personalvorsorgestiftung der Bank Morgan Stanley AG Plan relating to the Group's Zurich Branch were fully transferred to two new plans: Morgan Stanley & Co International plc Zurich Branch Base Plan and Morgan Stanley & Co International plc Zurich Branch Top-up Plan, providing substantially the same benefits.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 34. POST EMPLOYMENT BENEFITS (CONTINUED)

#### Plans operated by fellow Morgan Stanley undertakings

In addition to the above, along with a number of other Morgan Stanley Group companies, the Group incurs management charges from fellow Morgan Stanley undertakings in respect of post-employment benefits provided to staff utilised by the Group but employed by other Morgan Stanley entities. These management recharges include post retirement benefit costs related to the Morgan Stanley UK Group Pension Plan ('the Plan') operated by Morgan Stanley UK Limited ("MSUK"). The Plan is a defined contribution scheme with a closed defined benefit section.

#### *Defined contribution scheme*

Contributions made into the defined contribution section of the Plan are held in trust separate from the assets of the defined benefit section of the Plan.

The management recharge for the year in respect of the defined contribution scheme recognised within 'Management charges from other Morgan Stanley Group undertakings relating to staff costs' in 'Other expense' was \$39 million (2015: \$54 million).

#### *Defined benefit section*

The defined benefit section of the Plan has been closed to new members since 1996. The Plan was previously open to permanent employees of the Morgan Stanley Group employed in the UK, and with the consent of the Trustees, other Morgan Stanley employees located outside of the UK who had previously been employed in the UK and who at some point had been members of the Plan. The amount of pension benefit that a member is entitled to receive on retirement is dependent on years of service and salary at the time of closure of the Plan in 1996. Additionally, the Plan also includes a Guaranteed Minimum Pension ("GMP") underpin in respect of certain defined contribution members who transferred their benefits from the defined benefit section in the past. If the value of each member's investment at retirement is less than the amount needed to secure the GMP benefits that accrued under the defined benefit section, the shortfall must be covered by the defined benefit section of the Plan.

The Plan assets are held in a separate Trustee-administered fund to meet long-term pension liabilities. The Trustees of the fund are required to act in the best interests of the fund's beneficiaries. The appointment of Trustees to the Plan is determined by the Plan's trust documentation. MSUK has a policy that one third of Trustees should be nominated by members of the fund.

A full actuarial valuation of the defined benefit section of the Plan is conducted at least every three years. The most recent full actuarial valuation of the Plan was carried out at 31 December 2015.

The full actuarial valuation provides both an accounting valuation and a funding basis for the Plan. The funding basis is determined using assumptions reflective of the cost of securing the benefits built up in the Plan with an insurance company and therefore can be different to the valuation for accounting purposes. The funding position is reviewed each year as part of the annual funding update and the strategy is to maintain the plan at close to fully funded on the funding basis. Significant factors impacting the funding basis are interest rates, longevity and insurance market trends.

The full actuarial valuation at 31 December 2015 indicated a surplus on a funding basis of \$16 million. Accordingly, no new schedule of contributions has been put in place. Future contributions may be agreed between by the Trustees and MSUK following the next triennial valuation in 2018 or in the event of a material worsening of the position of the Plan before the next triennial valuation.

On an accounting basis, the Plan has a surplus of scheme assets over liabilities. The full actuarial valuation as at 31 December 2015, adjusted as appropriate for the requirements of IAS 19, was updated by a qualified actuary at 31 December 2016 to allow for changes in market conditions and actuarial assumptions. The liabilities of the Plan are measured by discounting the best estimate of future cash flows to be paid out by the Plan using the projected unit method.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 34. POST EMPLOYMENT BENEFITS (CONTINUED)

#### Plans operated by fellow Morgan Stanley undertakings (continued)

##### *Defined benefit section (continued)*

Under this method, each participant's benefits under the Plan are attributed to years of service, taking into consideration the Plan's benefit allocation formula. For the defined benefit section of the Plan, accrual of future benefits ceased in 1996 and no further benefit has been attributed to service during subsequent reporting periods.

The accumulated benefit obligation is therefore an actuarial measure of the present value of benefits for service already rendered and includes no assumption for future salary increases. An assumption for revaluation in deferment is built into the valuation of the scheme. This revaluation preserves the benefits accrued and prevents the benefit diminishing over time through the effects of inflation.

Under contractual group recharging arrangements, the net defined benefit cost for the plan as a whole, measured in accordance with IAS 19, is recharged to the Group and information on the MSUK Plan is provided below. On this basis, the management recharge for the year in respect of the defined benefit plan recognised within 'Management charges from other Morgan Stanley Group undertakings relating to staff costs' in 'Other expense' was \$nil (2015: \$1 million debit).

The following table provides a summary of the present value of the defined benefit obligation and fair value of plan assets:

	<b>2016</b>	<b>2015</b>
	<b>\$millions</b>	<b>\$millions</b>
Present value of the funded defined benefit obligation	(262)	(243)
Fair value of plan assets	337	325
Surplus of the funded defined benefit plan	75	82
Impact of asset ceiling	(75)	(82)
Net asset	-	-

The Plan has a surplus that is not recognised in the MSUK statement of financial position on the basis that future economic benefits are not available to the entity in the form of reduced contributions or a cash refund.

The weighted average duration of the defined benefit obligation at 31 December 2016 is 28 years (2015: 28 years).

#### **Movement in the net defined benefit asset and impact of asset ceiling**

The following tables provide a summary of the present value of the obligation, the fair value of the plan assets and the impact of the asset ceiling:

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**Year ended 31 December 2016**

**34. POST EMPLOYMENT BENEFITS (CONTINUED)**

**Movement in the net defined benefit asset and impact of asset ceiling (continued)**

<b>2016</b>	<b>Present value of obligation \$millions</b>	<b>Fair value of plan assets \$millions</b>	<b>Total \$millions</b>	<b>Impact of asset ceiling \$millions</b>	<b>Total \$millions</b>
At 1 January 2016	(243)	325	82	(82)	-
Net interest (expense)/income	(8)	10	2	(2)	-
<b>Amounts recognised in the income statement</b>	<b>(8)</b>	<b>10</b>	<b>2</b>	<b>(2)</b>	<b>-</b>
Remeasurements:					
The return on scheme assets (excluding amounts included in net interest expense)	-	70	70	-	70
Actuarial gain/(loss) arising from changes in demographic assumptions	10		10	-	10
Actuarial gain/(loss) arising from changes in financial assumptions	(79)		(79)	-	(79)
Effect of experience adjustments	4		4	-	4
Adjustments for restrictions on the defined benefit asset	-	-	-	(5)	(5)
<b>Amounts recognised in the statement of comprehensive income</b>	<b>(65)</b>	<b>70</b>	<b>5</b>	<b>(5)</b>	<b>-</b>
Foreign exchange rate changes	45	(59)	(14)	14	-
Contributions:					
Benefit payments	9	(9)	-	-	-
<b>At 31 December 2016</b>	<b>(262)</b>	<b>337</b>	<b>75</b>	<b>(75)</b>	<b>-</b>

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**  
**Year ended 31 December 2016**

**34. POST EMPLOYMENT BENEFITS (CONTINUED)**

**Movement in the net defined benefit asset and impact of asset ceiling (continued)**

<b>2015</b>	<b>Present value of obligation \$millions</b>	<b>Fair value of plan assets \$millions</b>	<b>Total \$millions</b>	<b>Impact of asset ceiling \$millions</b>	<b>Total \$millions</b>
At 1 January 2015	(264)	343	79	(80)	(1)
Net interest (expense)/income	(9)	11	2	(2)	-
<b>Amounts recognised in the income statement</b>	<b>(9)</b>	<b>11</b>	<b>2</b>	<b>(2)</b>	<b>-</b>
Remeasurements:					
The return on scheme assets (excluding amounts included in net interest expense)	-	(4)	(4)	-	(4)
Actuarial gain/(loss) arising from changes in financial assumptions	8	-	8	-	8
Adjustments for restrictions on the defined benefit asset	-	-	-	(4)	(4)
<b>Amounts recognised in the statement of comprehensive income</b>	<b>8</b>	<b>(4)</b>	<b>4</b>	<b>(4)</b>	<b>-</b>
Foreign exchange rate changes	14	(18)	(4)	4	-
Contributions:					
- Employer	-	1	1	-	1
Benefit payments	8	(8)	-	-	-
<b>At 31 December 2015</b>	<b>(243)</b>	<b>325</b>	<b>82</b>	<b>(82)</b>	<b>-</b>

**Actuarial assumptions**

The following table presents the principal actuarial assumptions used in the valuation of the Plan:

	<b>2016</b>	<b>2015</b>
	<b>%</b>	<b>%</b>
Pre retirement discount rate	2.5	3.6
Post retirement discount rate	1.9	2.9
Inflation	3.5	3.1
Revaluation in deferment	2.5	2.1

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 34. POST EMPLOYMENT BENEFITS (CONTINUED)

#### Actuarial assumptions (continued)

The mortality assumptions used give the following life expectations at age 65:

	Life expectancy at age 65 for a male member currently:		Life expectancy at age 65 for a female member currently:	
	Aged 65	Aged 45	Aged 65	Aged 45
<b>31 December 2016</b>				
UK	89.7	91.2	91.7	93.5
<b>31 December 2015</b>				
UK	90.1	92.2	92.2	94.6

The sensitivities regarding the principal assumptions used to measure the defined benefit obligation are as follows:

Assumption	Change in assumption	Impact on scheme liabilities
Discount rate	Increase/ decrease by 0.25%	Decrease/ increase by 7.36%/7.97%
Inflation assumption	Increase/ decrease by 0.25%	Increase/ decrease by 4.20%/4.01%
Life expectancy	Increase by 1 year	Increase by 3.44%

The sensitivity analysis presented above has been determined based on reasonably possible changes of the assumptions occurring at 31 December 2016 assuming that all other assumptions are held constant. The methods and types of assumptions used in preparing the sensitivity analysis did not change compared to the prior year.

#### Plan assets

MSUK and the Trustees, in consultation with their independent investment consultants and actuaries, determine the asset allocation targets based on their assessment of business and financial conditions, demographic and actuarial data, funding characteristics and related risk factors. Other relevant factors, including industry practices and long-term historical and prospective capital market returns, are also considered. The overall investment objective is expected to minimise the volatility of the Plan's surplus or deficit through asset liability matching. The investment strategy is low risk.

Specific risks which are managed through the asset allocation targets include:

- Interest rate and inflation risk – Plan liabilities will change in response to changes in interest rates and inflation. The policy is to hedge this risk as far as possible;
- Asset volatility – investment in asset classes such as equities gives rise to volatility in the value of the assets. The policy is to invest in asset classes which closely match the Plan's liabilities;
- Credit risk – any default or downgrade in instruments such as corporate bonds and money market instruments may result in losses. The policy is to partially mitigate this risk by investment in a range of different credit instruments via pooled funds;
- Liquidity risk – the liquidity of investments may change over time which may have an impact on the expected transaction costs. The Trustees and MSUK have reviewed the likely cash requirements of the Plan and are satisfied that the investment arrangements provide sufficient liquidity; and
- Longevity risk – the longevity experience may differ from expectations and expectations may change over time. The purchase of annuities for pensioners mitigates a substantial portion of this risk.

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## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 34. POST EMPLOYMENT BENEFITS (CONTINUED)

#### Plan assets (continued)

In line with the above investment objectives, the Plan holds investments in a range of pooled investment vehicles of varying maturities intended to broadly reflect the expected liability profile of the Plan. The major categories and fair values of scheme assets at the end of the reporting period are set out below. All investments are quoted in an active market in both years.

	<b>2016</b>	<b>2015</b>
	<b>\$millions</b>	<b>\$millions</b>
Cash funds	35	88
Corporate bond index funds	51	51
Government bond index funds:		
UK Gilt index funds	193	83
GBP fixed liability matching funds	47	91
Fixed Gilts	11	12
	<u>337</u>	<u>325</u>

An asset-liability review occurs every three years and is used to assist the Trustees and the Company in determining the optimal long-term asset allocation with regard to the structure of liabilities within the scheme.

On the basis of the 2013 review, the main strategic choices formulated in the actuarial and technical policy documents of the scheme are:

- a) Assets invested in hedging assets such as gilts, corporate bonds and swap-based hedging funds in order to hedge liability-related risks.
- b) Interest rate sensitivity caused by the duration of the defined benefit obligation should be reduced by the use of debt instruments such as gilts in combination with interest rate swap-based hedging funds.
- c) In respect of GMP underpin liabilities, investment in long-dated corporate bonds to approximately hedge annuity prices, provide a degree of liquidity and generate modest degree of excess investment return

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## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 35. RELATED PARTY DISCLOSURES

#### Parent and subsidiary relationships

##### *Parent and ultimate controlling entity*

The Group's immediate parent undertaking is Morgan Stanley Investments (UK) which is registered in England and Wales. Copies of its financial statements can be obtained from the Registrar of Companies for England and Wales, Companies House, Crown Way, Cardiff CF14 3UZ.

The ultimate parent undertaking and controlling entity is Morgan Stanley. This is the largest group of which the Group is a member and for which group financial statements are prepared. 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, in the United States of America. Copies of its financial statements can be obtained from [www.morganstanley.com/investorrelations](http://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 Group.

The Morgan Stanley Group's corporate governance framework gives consideration to legal, geographical and business lines through a combination of boards of directors, and regional and global management committees. Accordingly, in addition to the Directors of the Company, key management personnel of the Group is considered to include the boards of directors of certain parent companies, including that of Morgan Stanley, certain members of key Morgan Stanley Group management committees, those designated as senior managers under the UK's Senior Manager regime and certain executive officers of Morgan Stanley.

These personnel cover the full range of the Morgan Stanley Group's business activities. Only those members with responsibility for the Institutional Securities business, being the reportable business segment of the Group, are considered to be key management personnel of the Group. The aggregate compensation below represents the proportion of compensation paid to these key management personnel, including the Directors of the Company, in respect of their services to the Group.

Compensation paid by the Group to key management personnel in respect of their services rendered to the Group is:	2016	2015
	\$millions	\$millions
Short-term employee benefits	48	58
Share-based payments	27	25
Other long-term employee benefits	18	13
Termination benefits	-	1
	<u>93</u>	<u>97</u>

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

Key management personnel compensation is borne by the Group and other Morgan Stanley Group undertakings in both the current and prior years. Management recharges in respect of key management personnel compensation borne by other Morgan Stanley Group undertakings are included in 'Management charges from other Morgan Stanley Group undertakings relating to staff costs' within 'Other expense', as disclosed in note 6.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 35. RELATED PARTY DISCLOSURES (CONTINUED)

#### Directors' emoluments

	2016 \$millions	2015 \$millions
<b>Total emoluments of all Directors:</b>		
Aggregate remuneration	14	14
Long term incentive schemes	5	6
	<u>19</u>	<u>20</u>
<b>Disclosures in respect of the highest paid Director:</b>		
Aggregate remuneration	5	4
Long term incentive schemes	2	2
	<u>7</u>	<u>6</u>

Directors' remuneration has been calculated as the sum of cash, bonuses and benefits in kind.

All Directors who are employees of the Morgan Stanley Group are eligible for shares and share options of the parent company, Morgan Stanley, awarded under the Morgan Stanley Group's equity-based long term incentive schemes. In accordance with Schedule 5 paragraph 1(3)(a) of The Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008, the above disclosures include neither the value of shares awarded, nor the gains made on exercise of share options. During the year under these incentive schemes, no Directors exercised share options (2015: none) and eight Directors received deferred stock unit awards in respect of qualifying services, including the highest paid Director (2015: six).

The value of assets (other than shares or share options) awarded under other long term incentive schemes has been included in the above disclosures when the awards vest, which is generally within three years from the date of the award.

Three Directors have retirement benefits accruing under a non-UK defined benefits scheme (2015: two). In addition one Director has benefits accruing under the Alternative Retirement Plan, a defined benefit scheme, operated by Morgan Stanley UK Limited (2015: one).

The Group operates a defined contribution scheme, the Morgan Stanley Pension Plan. There are four Directors to whom retirement benefits are accruing under a UK defined contribution scheme (2015: five). Two directors have benefits accruing under a non-UK defined contribution scheme (2015: none).

The Group has not provided any loans or other credit advances to its Directors during the year (2015: nil).

#### 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 Group 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. The Group has not recognised any expense and has made no provision for impairment relating to the amount of outstanding balances from related parties (2015: \$nil).

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 35. RELATED PARTY DISCLOSURES (CONTINUED)

#### Transactions with related parties (continued)

##### Cash

The Group places cash with other Morgan Stanley Group undertakings. All such transactions are entered into on an arm's length basis.

	2016		2015	
	Interest \$millions	Balance \$millions	Interest \$millions	Balance \$millions
Amounts due from other Morgan Stanley Group undertakings	-	572	-	34

##### Funding

The Group 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. 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 consolidated income statement during the year are shown in the table below:

	2016		2015	
	Interest \$millions	Balance \$millions	Interest \$millions	Balance \$millions
Amounts due from the Group's direct and indirect parent undertakings	5	154	7	119
Amounts due from other Morgan Stanley Group undertakings	16	704	31	1,090
	<u>21</u>	<u>858</u>	<u>38</u>	<u>1,209</u>
Amounts due to the Group's direct and indirect parent undertakings	119	4,527	232	4,367
Amounts due to other Morgan Stanley Group undertakings	134	6,075	152	7,030
	<u>253</u>	<u>10,602</u>	<u>384</u>	<u>11,397</u>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 35. RELATED PARTY DISCLOSURES (CONTINUED)

#### Transactions with related parties (continued)

##### *Funding (continued)*

- *Subordinated loans*

The Group received a subordinated loan from another Morgan Stanley Group undertaking. Details of the terms of the loan, including the contractual maturity and the interest rate are shown in note 18. The interest rate is established by the Morgan Stanley Group Treasury function based on available market information at the time the loan is provided or subsequently amended.

##### *Trading and risk management*

In the course of funding its business, the Group enters into collateralised financing transactions with other Morgan Stanley Group undertakings. All such transactions are entered into on an arm's length basis.

Details of the outstanding balances included in cash collateral on securities borrowed/ loaned and securities purchased/ sold under agreements to resell/ repurchase in the consolidated statement of financial position on such transactions and the related interest income or expense recognised in the consolidated income statement during the year are shown in the table below:

	2016		2015	
	Interest \$millions	Balance \$millions	Interest \$millions	Balance \$millions
Amounts due from the Group's direct and indirect parent undertakings	-	-	(1)	-
Amounts due from other Morgan Stanley Group undertakings	(37)	30,019	(148)	26,759
	<u>(37)</u>	<u>30,019</u>	<u>(149)</u>	<u>26,759</u>
Amounts due to the Group's direct and indirect parent undertakings	(13)	11,787	22	12,122
Amounts due to other Morgan Stanley Group undertakings	136	18,039	178	15,061
	<u>123</u>	<u>29,826</u>	<u>200</u>	<u>27,183</u>

The Group enters into purchases and sales of securities and derivative transactions with other Morgan Stanley Group undertakings to facilitate the provision of financial services to clients on a global basis and to manage the market risks associated with such business. The Group also enters into derivative transactions with other Morgan Stanley Group undertakings to manage the market risks associated with certain of its compensation plans. All such transactions are entered into on an arm's length basis. The total amounts receivable and payable from such transactions are included within trade receivables and trade payables in the consolidated statement of financial position and the fair value of such derivatives contracts outstanding included in financial assets/ liabilities classified as held for trading in the consolidated statement of financial position at the year end were as follows:

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 35. RELATED PARTY DISCLOSURES (CONTINUED)

#### Transactions with related parties (continued)

*Trading and risk management (continued)*

	2016 \$millions	2015 \$millions
Amounts due from the Group's direct and indirect parent undertakings on securities and derivative transactions	2,554	2,158
Amounts due from other Morgan Stanley Group undertakings on securities and derivative transactions	46,096	49,000
	<u>48,650</u>	<u>51,158</u>
Amounts due to the Group's direct and indirect parent undertakings on securities and derivative transactions	2,023	925
Amounts due to other Morgan Stanley Group undertakings on securities and derivative transactions	45,300	48,115
	<u>47,323</u>	<u>49,040</u>

The Group has received collateral of \$658 million (2015: \$1,764) from the Group's direct and indirect parent undertaking and \$3,084 million (2015: \$1,883 million) from other Morgan Stanley Group undertakings. The Group has pledged collateral of \$21,486 million (2015: \$20,021 million) to other Morgan Stanley Group undertakings. The Group has received and pledged collateral in order to mitigate credit risk on exposures arising under derivatives contracts between the Group and other Morgan Stanley Group undertakings.

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 entities. The Morgan Stanley Group operates a number of intra-group policies to ensure that, where possible, revenues and related costs are matched. For the year ended 31 December 2016, a net loss of \$1,578 million was transferred to other Morgan Stanley Group undertakings relating to such revenue transfer pricing policies and recognised in the consolidated income statement arising from such policies (2015: net loss of \$1,798 million).

For certain business strategies transacted by the Group, where that business strategy has incurred a loss on another Morgan Stanley Group entity, policies are in place such that losses are only transferred to the Group to the extent that the losses are offset by profits arising on the same business strategy after the loss was incurred. During 2014, this resulted in losses being incurred on other Morgan Stanley Group entities that would otherwise be transferred to the Group. These losses were transferred to the Group during 2015. During 2016, there were no such losses that impacted the Group.

For policies for certain business strategies transacted by other Morgan Stanley Group undertakings, where that business strategy has booked positions on the Group, any losses on these positions are netted across all business strategies on each loss bearing entity and are only transferred to the relevant Morgan Stanley Group undertakings to the extent that the losses are offset by profits arising from the same population of business strategies within the other Morgan Stanley Group undertakings. During 2014, this resulted in losses being incurred by the Group that would otherwise have been transferred to other Morgan Stanley Group entities. These losses were transferred to other Morgan Stanley Group entities during 2015. During 2016, there were no such losses that impacted the Group.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS Year ended 31 December 2016

### 35. RELATED PARTY DISCLOSURES (CONTINUED)

#### Transactions with related parties (continued)

##### *Infrastructure services*

The Group 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:

	2016		2015	
	Staff costs	Other	Staff costs	Other
	\$millions	services	\$millions	services
		\$millions	\$millions	\$millions
Amounts recharged from the Group's direct and indirect parent undertakings	361	168	408	319
Amounts recharged from other Morgan Stanley Group undertakings	1,158	386	1,208	73
	<u>1,519</u>	<u>554</u>	<u>1,616</u>	<u>392</u>

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

##### *Taxation*

The Group has surrendered group relief to other members of the Morgan Stanley UK tax group for no cash consideration (see note 7).

##### *Other related party transactions*

The Group has received a guarantee from Morgan Stanley Group (Europe), to guarantee the obligations under derivative contracts of certain fellow Morgan Stanley Group undertakings to the Company. As at 31 December 2016, no call had been made by the Group under this arrangement.

### 36. EVENTS AFTER THE REPORTING PERIOD

#### **Morgan Stanley French operations**

On 13 January 2017, Morgan Stanley (France) S.A.S., a wholly owned subsidiary of the Company, was converted into an S.A. (Société Anonyme).

On 1 February 2017, the Company transferred the assets and liabilities of the French branch to Morgan Stanley (France) S.A. The Company invested further capital of €241 million in Morgan Stanley (France) S.A. Upon transfer, the branch was dissolved.

This transfer had no impact to the Group.

#### **Subordinated loans**

Refer to Note 17 for information on the reassignment of the Group's subordinated loan.

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**COMPANY FINANCIAL STATEMENTS**

**31 December 2016**

**MORGAN STANLEY & CO. INTERNATIONAL plc**  
**COMPANY STATEMENT OF COMPREHENSIVE INCOME**  
**Year ended 31 December 2016**

	Note	2016 \$millions	2015 \$millions
<b>PROFIT FOR THE YEAR</b>	3	469	414
<b>OTHER COMPREHENSIVE INCOME, NET OF TAX</b>			
<b>Items that will not be reclassified subsequently to profit or loss:</b>			
Remeasurement of net defined benefit liability		-	(1)
Changes in fair value attributable to own credit risk on financial liabilities designated at fair value		(42)	-
<b>Items that may be reclassified subsequently to profit or loss:</b>			
Currency translation reserve:			
Foreign currency translation differences arising on foreign operations		(14)	(32)
Available-for-sale reserve:			
Net change in fair value of available-for-sale financial assets	10	(7)	(3)
<b>OTHER COMPREHENSIVE INCOME AFTER INCOME TAX FOR THE YEAR</b>		<u>(63)</u>	<u>(36)</u>
<b>TOTAL COMPREHENSIVE INCOME FOR THE YEAR</b>		<u>406</u>	<u>378</u>

The notes on pages 139 to 185 form an integral part of the financial statements.

**MORGAN STANLEY & CO. INTERNATIONAL plc**  
**COMPANY STATEMENT OF CHANGES IN EQUITY**  
**Year ended 31 December 2016**

	Equity instruments	Share premium	Currency translation reserve	Available- for-sale reserve	Capital contribution reserve	Capital redemption reserve	Pension Reserve	Debt valuation adjustment reserve	Retained earnings	Total equity
Note	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions
<b>Balance at 1 January 2015</b>	12,764	513	(88)	6	3	1,400	1	-	1,518	16,117
Profit for the year	-	-	-	-	-	-	-	-	414	414
Other comprehensive income/(loss)	-	-	(32)	(3)	-	-	(1)	-	-	(36)
<b>Total comprehensive income/(loss)</b>	-	-	(32)	(3)	-	-	(1)	-	414	378
<b>Transactions with owners:</b>										
Issue of ordinary share capital	1	-	-	-	-	-	-	-	-	1
Dividends	-	-	-	-	-	-	-	-	(12)	(12)
<b>Balance at 31 December 2015</b>	12,765	513	(120)	3	3	1,400	-	-	1,920	16,484
Restated for adoption of new accounting standard	-	-	-	-	-	-	-	(3)	3	-
Profit for the year	-	-	-	-	-	-	-	-	469	469
Other comprehensive income/(loss)	-	-	(14)	(7)	-	-	-	(42)	-	(63)
<b>Total comprehensive income/(loss)</b>	-	-	(14)	(7)	-	-	-	(42)	469	406
<b>Transactions with owners:</b>										
Dividends	19	-	-	-	-	-	-	-	(117)	(117)
<b>Balance at 31 December 2016</b>	12,765	513	(134)	(4)	3	1,400	-	(45)	2,275	16,773

The notes on pages 139 to 185 form an integral part of the financial statements.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

	Note	2016 \$millions	2015 \$millions
<b>ASSETS</b>			
Loans and receivables:			
Cash and short-term deposits	4	20,205	11,726
Cash collateral on securities borrowed		19,601	22,369
Securities purchased under agreements to resell		77,446	58,644
Trade receivables		51,751	50,915
Other receivables	6	1,355	1,854
		<u>170,358</u>	<u>145,508</u>
Financial assets classified as held for trading (of which \$50,743 million (2015: \$40,579 million) were pledged to various parties)	7	246,739	245,124
Financial assets designated at fair value through profit or loss	9	4,449	1,636
Available-for-sale financial assets	10	27	35
Current tax assets		161	182
Deferred tax assets	16	79	110
Prepayments and accrued income		38	38
Investments in subsidiaries	11	85	85
Property, plant and equipment	12	5	3
Intangible assets		2	-
<b>TOTAL ASSETS</b>		<u>421,943</u>	<u>392,721</u>
<b>LIABILITIES AND EQUITY</b>			
Financial liabilities at amortised cost:			
Bank loans and overdrafts		25	-
Cash collateral on securities loaned		21,224	16,347
Securities sold under agreements to repurchase		48,416	38,011
Trade payables		85,722	81,523
Subordinated loans	13	7,906	7,906
Other payables	14	10,704	12,023
		<u>173,997</u>	<u>155,810</u>
Financial liabilities classified as held for trading	7	224,737	215,328
Financial liabilities designated at fair value through profit or loss	9	6,157	4,865
Provisions	15	85	21
Current tax liabilities		45	43
Deferred tax liabilities	16	3	1
Accruals and deferred income		142	166
Post employment benefit obligations	30	4	3
<b>TOTAL LIABILITIES</b>		<u>405,170</u>	<u>376,237</u>
<b>EQUITY</b>			
Equity instruments	18	12,765	12,765
Share premium account		513	513
Currency translation reserve		(134)	(120)
Available-for-sale reserve		(4)	3
Capital contribution reserve		3	3
Capital redemption reserve		1,400	1,400
Debt valuation adjustment reserve		(45)	-
Retained earnings		2,275	1,920
<b>TOTAL EQUITY ATTRIBUTABLE TO THE OWNER OF THE COMPANY</b>		<u>16,773</u>	<u>16,484</u>
<b>TOTAL LIABILITIES AND EQUITY</b>		<u>421,943</u>	<u>392,721</u>

These financial statements were approved by the Board and authorised for issue on 20 April 2017  
Signed on behalf of the Board

C Castello, Director



The notes on pages 139 to 185 form an integral part of the financial statements.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 1. BASIS OF PREPARATION

These financial statements contain information about the Company as an individual company and do not contain consolidated financial information as the parent of a group.

#### Statement of compliance

These financial statements are prepared in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards and applicable law), including FRS 101 with a departure from the requirement of Schedule 1 paragraph 40 to The Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 (“the Regulations”) as described in note 2(c) below for the overriding purpose of giving a true and fair view.

The Company meets the definition of a qualifying entity and is a Financial Institution as defined in FRS 100. Therefore the Company has taken advantage of the following disclosure exemptions under FRS 101:

- The requirements of paragraphs 45(b) and 46-52 of IFRS 2 ‘*Share-based payment*’;
- The requirements of paragraphs 91-99 of IFRS 13 ‘*Fair value measurement*’ to the extent that they apply to assets and liabilities other than financial instruments;
- The requirement in paragraph 38 of IAS 1 ‘*Presentation of financial statements*’ (“IAS 1”) to present comparative information in respect of:
  - Paragraph 79(a)(iv) of IAS 1
  - Paragraph 73(e) of IAS 16 ‘*Property, plant and equipment*’;
- The requirements of paragraph 10(d) and (f) of IAS 1;
- The requirements of IAS 7 ‘*Statement of cash flows*’;
- The requirements of paragraphs 30 and 31 of IAS 8 ‘*Accounting policies, changes in accounting estimates and errors*’;
- The requirements of paragraphs 17 and 18A of IAS 24 ‘*Related party disclosures*’ (“IAS 24”); and
- The requirements in IAS 24 ‘*Related party disclosures*’ to disclose related party transactions entered into between two or more members of a group, provided that any subsidiary which is a party to the transaction is wholly owned by such a member.

Where relevant, equivalent disclosures have been provided in the Group accounts in which the Company is consolidated.

#### New standards and interpretations adopted during the year

The following amendments to standards and interpretations relevant to the Company’s operations were adopted during the year. Except where otherwise stated, these amendments to standards and interpretations did not have a material impact on the Company’s financial statements.

An amendment to IAS 1 ‘*Presentation of financial statements*’ was issued by the IASB in December 2014, as part of the Disclosure Initiative project. The amendment is applicable in annual periods beginning on or after 1 January 2016. The amendment was endorsed by the EU in December 2015.

Amendments to IAS 16 ‘*Property, plant and equipment*’ and IAS 38 ‘*Acceptable Methods of Depreciation and Amortisation*’ were issued by the IASB in May 2014, for prospective application in annual periods beginning on or after 1 January 2016. The amendments were endorsed by the EU in December 2015.

An amendment to IAS 27 ‘*Separate financial statements*’ was issued by the IASB in August 2014, for retrospective application in annual periods beginning on or after 1 January 2016.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 1. BASIS OF PREPARATION (CONTINUED)

#### **New standards and interpretations adopted during the year (continued)**

Amendments to IFRS 10 '*Consolidated financial statements*', IFRS 12 '*Disclosure of interest in other entities*' and IAS 28 '*Investment entities: Applying the consolidation exemption*' were issued by the IASB in December 2014 for retrospective application in annual periods beginning on or after 1 January 2016. The amendments were endorsed by the EU in September 2016.

As part of the 2012 – 2014 Annual Improvements Cycle published in September 2014, the IASB made amendments to the following standards that are relevant to the Company's operations: IFRS 7 '*Financial instruments: disclosures*', IAS 19 '*Employee benefits*' and IAS 34 '*Interim financial reporting*', for application in accounting periods beginning on or after 1 January 2016. The improvements were endorsed by the EU in December 2015.

An amendment to FRS 101 '*Notification of shareholders*' was issued by the Financial Reporting Council in December 2016, for application in accounting periods beginning on or after 1 January 2016.

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

#### **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.

#### **Use of estimates and sources of uncertainty**

The preparation of the Company's financial statements requires management to make judgements, estimates and assumptions regarding the valuation of certain financial instruments, impairment of assets, tax balances, pension obligations, the outcome of litigation, and other matters that affect the financial statements and related disclosures. The Company believes that the estimates utilised in preparing the financial statements are reasonable, relevant and reliable. Actual results could differ from these estimates.

For further details on the judgements used in determining fair value of certain assets and liabilities, see accounting policy note 3(d) in the consolidated financial statements and note 26.

For further details on the estimates used in determining tax balances, see note 15.

For further details on the judgement and used in determining provisions, see note 15.

#### **The going concern assumption**

The Company's business activities, together with the factors likely to affect its future development, performance and position, and the Company's objectives, policies and processes for managing its capital; its financial risk management objectives; and its exposures to credit risk and liquidity risk, are reflected in the Strategic report on pages 6 to 28. In addition, the notes to the financial statements include the details of its financial instruments and additional detail, not included in the Group's Strategic Report, on its credit risk and liquidity risk.

As set out in the Group's Strategic report, retaining sufficient liquidity and capital to withstand market pressures remains central to the Morgan Stanley Group's and the Company's strategy.

Taking all of these factors into consideration, the Directors believe it is reasonable to assume 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 annual report and financial statements.

# **MORGAN STANLEY & CO. INTERNATIONAL plc**

## **NOTES TO THE COMPANY FINANCIAL STATEMENTS**

**Year ended 31 December 2016**

### **2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

The accounting policies of the Company are the same as those of the Group which are set out in note 3 to the consolidated financial statements, except the policy 3(j) on business combinations and disposals which is not applicable to the Company. The Group accounting policy 3(c)(ii) on financial instruments designated at fair value through profit or loss is applied by the Company, however, for the Company this represents a departure from the Regulations (see 2(c) below). Investments in subsidiaries held by the Company are carried at historical cost less provision for impairment in accordance with the policy as noted 2(a) and 2(b) below.

#### **a. Investments in subsidiaries**

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

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

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

Investments in subsidiaries are stated at cost, less provision for any impairment (see note 2(b) below). Dividends, impairment losses and reversals of impairment losses are recognised in total profit or loss. Dividends from investments which would be classified as financial liabilities by the investee are classified as interest and recognised in total profit or loss.

#### **b. Impairment of subsidiaries**

Impairment losses on investment in subsidiaries are measured as the difference between cost and the current estimated recoverable amount. When the recoverable amount is less than the cost, an impairment is recognised within total profit or loss and is reflected against the carrying amount of the impaired asset on the statement of financial position. Investments in subsidiaries which have suffered an impairment are reviewed for possible reversal of the impairment at the end of each reporting period.

#### **c. Financial instruments designated at fair value through profit or loss**

From 1 January 2016, the change in the fair value of certain financial liabilities designated at fair value through profit or loss that is attributable to changes in the credit risk of those liabilities, including foreign exchange differences, is presented in other comprehensive income, within the 'Debt valuation adjustment reserve'. For the Company, this represents a departure from Schedule 1 paragraph 40 to the Regulations, which requires that changes in the value of financial instruments be included in the profit and loss account. The Directors consider that this departure is necessary in order that the accounts give a true and fair view of the results of the Company. All other subsequent changes in fair value, foreign exchange differences not relating to changes in the credit risk of those liabilities, interest and dividends are reflected in the income statement.

### **3. PROFIT OR LOSS FOR THE YEAR**

As permitted by section 408 of the Companies Act 2006, the Company has elected not to present its own income statement for the period. The Company reported a profit after tax of \$469 million for the year ended 31 December 2016 (2015: \$414 million).

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 4. CASH AND SHORT TERM DEPOSITS

Included within 'Cash and short term deposits' is \$9,446 million (2015: \$9,497 million) of segregated client money, held in accordance with the FCA's Client Money Rules, and an amount of \$59 million (2015: \$494 million) which represents other client money that is not available for use by the Company. The corresponding payable is recognised and included in 'Trade payables' within 'Financial liabilities at amortised cost'.

### 5. LOANS AND RECEIVABLES

	<b>2016</b>	<b>2015</b>
	<b>\$millions</b>	<b>\$millions</b>
Loans and receivables	170,398	145,536
Less impairment losses	(40)	(28)
	<u>170,358</u>	<u>145,508</u>

A reconciliation of impairment losses for loans and receivables is as follows:

	<b>2016</b>	<b>2015</b>
	<b>\$millions</b>	<b>\$millions</b>
At 1 January	28	38
Charge for the year	26	17
Reversal of impairment losses	(12)	(10)
Amounts written off	(1)	(2)
Net foreign exchange gains	(1)	-
Reclassification of other receivables	-	(15)
At 31 December	<u>40</u>	<u>28</u>

During 2016 impairment losses of \$nil (2015: \$15 million) related to certain withholding tax reclaim balances were reclassified from other receivables to current tax assets.

### 6. OTHER RECEIVABLES

	<b>2016</b>	<b>2015</b>
	<b>\$millions</b>	<b>\$millions</b>
Amounts held at exchanges	532	592
Amounts due from other Morgan Stanley Group undertakings	716	1,188
Other amounts receivable	107	74
	<u>1,355</u>	<u>1,854</u>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 7. FINANCIAL ASSETS AND FINANCIAL LIABILITIES CLASSIFIED AS HELD FOR TRADING

Financial assets and financial liabilities classified as held for trading are summarised as follows:

	2016		2015	
	Assets	Liabilities	Assets	Liabilities
	\$millions	\$millions	\$millions	\$millions
Government debt securities	10,052	19,476	11,365	10,747
Corporate and other debt	8,552	2,855	6,965	1,281
Corporate equities	46,026	23,278	40,909	23,364
Derivatives (see note 8)	182,109	179,128	185,885	179,936
	<u>246,739</u>	<u>224,737</u>	<u>245,124</u>	<u>215,328</u>

There are no terms and conditions of any financial asset or liability classified as held for trading that may individually significantly affect the amount, timing and certainty of future cash flows for the Company.

### 8. DERIVATIVES CLASSIFIED AS HELD FOR TRADING

The fair value of derivative assets and liabilities classified as held for trading, split by instrument type, is summarised as follows:

	2016			
	Bilateral OTC	Cleared OTC	Listed derivative contracts	Total
	\$millions	\$millions	\$millions	\$millions
Derivative assets:				
Interest rate contracts	76,154	3,260	9	79,423
Credit contracts	6,152	6	-	6,158
Foreign exchange and gold contracts	65,226	1,039	-	66,265
Equity contracts	23,376	-	4,518	27,894
Commodity contracts	2,279	-	90	2,369
	<u>173,187</u>	<u>4,305</u>	<u>4,617</u>	<u>182,109</u>
Derivative liabilities:				
Interest rate contracts	71,777	3,202	4	74,983
Credit contracts	6,332	16	-	6,348
Foreign exchange and gold contracts	65,066	975	-	66,041
Equity contracts	24,961	-	4,473	29,434
Commodity contracts	2,285	-	37	2,322
	<u>170,421</u>	<u>4,193</u>	<u>4,514</u>	<u>179,128</u>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 8. DERIVATIVES CLASSIFIED AS HELD FOR TRADING (CONTINUED)

	2015			
	Bilateral OTC	Cleared OTC	Listed derivative contracts	Total
	\$millions	\$millions	\$millions	\$millions
Derivative assets:				
Interest rate contracts	76,802	2,761	1	79,564
Credit contracts	10,154	4	-	10,158
Foreign exchange and gold contracts	61,489	295	-	61,784
Equity contracts	24,617	-	5,253	29,870
Commodity contracts	4,438	-	71	4,509
	<u>177,500</u>	<u>3,060</u>	<u>5,325</u>	<u>185,885</u>
Derivative liabilities:				
Interest rate contracts	71,253	2,854	2	74,109
Credit contracts	10,391	7	-	10,398
Foreign exchange and gold contracts	60,304	238	-	60,542
Equity contracts	26,452	-	5,241	31,693
Commodity contracts	2,811	-	383	3,194
	<u>171,211</u>	<u>3,099</u>	<u>5,626</u>	<u>179,936</u>

### 9. FINANCIAL ASSETS AND FINANCIAL LIABILITIES DESIGNATED AT FAIR VALUE THROUGH PROFIT OR LOSS

A description of financial instruments designated at fair value through profit and loss is provided in note 12 of the consolidated financial statements and consists of the following:

	2016		2015	
	Assets	Liabilities	Assets	Liabilities
	\$millions	\$millions	\$millions	\$millions
Prepaid OTC contracts	894	1,397	491	1,060
Corporate loans	305	-	436	-
Issued structured notes	-	2,096	-	1,371
Other financial assets and liabilities	3,250	2,664	709	2,434
	<u>4,449</u>	<u>6,157</u>	<u>1,636</u>	<u>4,865</u>

The maximum exposure to credit risk of corporate loans which are designated at fair value through profit or loss as at 31 December 2016 is \$305 million (2015: \$436 million). The cumulative change in fair value of such corporate loans attributable to changes in credit risk amounts to \$nil (2015: nil) and the change for the current year is \$nil (2015: loss of \$1 million). Corporate loans are fully collateralised with securities received by the Company.

The cumulative change in fair value recognised through other comprehensive income attributable to own credit risk for financial liabilities designated at fair value at 31 December 2016 is a loss of \$62 million. During the year a loss of \$nil million was realised as a result of the derecognition of such financial liabilities and was transferred from the 'Debt valuation adjustment reserve' to 'Retained earnings'.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 9. FINANCIAL ASSETS AND FINANCIAL LIABILITIES DESIGNATED AT FAIR VALUE THROUGH PROFIT OR LOSS (CONTINUED)

The Company determines the amount of changes in fair value attributable to changes in counterparty credit risk or own credit risk, as relating to loans and receivables and financial liabilities designated at fair value, 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 fair value for which the effect of changes in those liabilities' credit risk is presented within other comprehensive income was \$49 million lower than the contractual amount due at maturity (2015: \$14 million lower).

At 1 January 2016, and subsequently at initial recognition of a specific structured note issuance program, the Company's issuance process, and any planned hedging structure relating to the issuance of those structured notes, has been considered, to determine whether the presentation of fair value changes attributable to credit risk of those structured notes through other comprehensive income would create or enlarge an accounting mismatch in the income statement. If financial instruments measured at fair value and for which changes in fair value incorporating counterparty credit risk are reflected within the income statement, are traded to economically hedge the structured note issuances in full, the CVA arising on the hedging instruments may materially offset the CVA applied to structured notes, where the counterparties of the hedging instruments are part of the Morgan Stanley Group. In such cases, the fair value change attributable to changes in credit risk of those structured notes is not reflected within other comprehensive income, and instead is presented in the income statement, to offset the CVA on those hedging instruments.

The Company has determined that no such accounting mismatch exists.

### 10. AVAILABLE-FOR-SALE FINANCIAL ASSETS

Financial assets that are classified as available-for-sale consists of corporate equities, of which \$nil are listed investments (2015: \$1 million). All other investments classified as available-for-sale financial assets are unlisted.

#### Movement in available-for-sale financial assets:

	2016	2015
	\$millions	\$millions
<b>Fair value</b>		
At 1 January	35	38
Additions	-	1
Changes in fair value recognised in the available-for-sale reserve	(7)	(3)
Disposals and other settlements	(1)	(1)
At 31 December	<u>27</u>	<u>35</u>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 11. INVESTMENTS IN SUBSIDIARIES

	<b>Subsidiary undertakings \$millions</b>
<b>Cost</b>	
At 1 January 2016	1,081
At 31 December 2016	<u>1,081</u>
<b>Impairment provisions</b>	
At 1 January 2016	(996)
At 31 December 2016	<u>(996)</u>
<b>Carrying amounts</b>	
At 31 December 2015	<u>85</u>
At 31 December 2016	<u>85</u>

Details of all subsidiary undertakings (including indirect subsidiaries) of the Company at 31 December 2016 and 31 December 2015 are provided in the Appendix to the financial statements (see pages 186 to 187).

### 12. PROPERTY, PLANT AND EQUIPMENT

	<b>Leasehold improvement \$millions</b>	<b>Fixtures, fittings and equipment \$millions</b>	<b>Total \$millions</b>
<b>Cost</b>			
At 1 January 2016	13	13	26
Additions	3	2	5
Foreign exchange revaluation	(1)	-	(1)
Disposals	-	(1)	(1)
At 31 December 2016	<u>15</u>	<u>14</u>	<u>29</u>
<b>Depreciation</b>			
At 1 January 2016	12	11	23
Charge for the year	1	1	2
Disposals	-	(1)	(1)
At 31 December 2016	<u>13</u>	<u>11</u>	<u>24</u>
<b>Carrying amount</b>			
At 31 December 2016	<u>2</u>	<u>3</u>	<u>5</u>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 13. SUBORDINATED LOANS

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

Counterparty	Repayment Date	Interest Rate	2016	2015
			\$millions	\$millions
Morgan Stanley UK Finance I LP	31 October 2025	LIBOR <sup>(1)</sup> plus 1.475%	7,906	7,906

(1) London Interbank Offered Rate ("LIBOR")

The amount outstanding under the subordinated loan agreement is repayable at any time at the Company's option, subject to appropriate notice to the lender and at least three months' notice to the PRA.

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

On 3 January 2017, the subordinated loan of \$7,906 million was reassigned from Morgan Stanley UK Financing I LP to Morgan Stanley International Finance S.A., another Morgan Stanley Group undertaking. On 8 February 2017 a new \$5,000 million subordinated loan was issued by the Group to its immediate parent undertaking, Morgan Stanley Investments (UK). \$5,906 million of the existing subordinated loan with Morgan Stanley International Finance S.A. was repaid.

### 14. OTHER PAYABLES

	2016	2015
	\$millions	\$millions
Amounts due to other Morgan Stanley Group undertakings	10,537	11,846
Other amounts payable	167	177
	<u>10,704</u>	<u>12,023</u>

### 15. PROVISIONS

	Property	Litigation	Taxes and levies	Total
	\$millions	\$millions	\$millions	\$millions
At 1 January 2016	4	1	16	21
Additional provisions	-	11	76	87
Provisions utilised	-	(2)	(1)	(3)
Unused provisions reversed	-	(1)	(19)	(20)
Foreign exchange revaluation	-	-	(2)	(2)
Reclassifications	-	-	2	2
At 31 December 2016	<u>4</u>	<u>9</u>	<u>72</u>	<u>85</u>

#### Property

Property provisions represent the net present value of expected future costs of excess office space (net of sublease income) and 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 12).

**NOTES TO THE COMPANY FINANCIAL STATEMENTS**

**Year ended 31 December 2016**

**15. PROVISIONS (CONTINUED)**

**Litigation matters and other provisions**

Litigation matters and other provisions related to the Company are the same as the Group. Refer to note 19 of the consolidated financial statements for a description of these matters and provisions.

**Tax related provisions**

The Group is subject to income tax laws which are complex and subject to different interpretations by the taxpayer and the relevant governmental taxing authorities. Management makes judgments and interpretations about the application of these inherently complex tax laws when determining the provision for income taxes. Disputes over interpretations of the tax laws may be settled with the taxing authority upon examination or audit. The Group periodically evaluates the likelihood of assessments in each taxing jurisdiction resulting from current and subsequent years' examinations. Provisions related to potential losses that may arise from tax audits are established in accordance with the guidance on accounting for uncertain tax items. The Group has established provisions that it believes are adequate in relation to the potential for additional assessments. Whilst a range of outcomes is foreseeable, management considers the amount of the provision to be a reasonable estimate of expected future liabilities after consideration of all pertinent facts, based on the status of inquiries at the balance sheet date.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 16. DEFERRED TAX ASSETS AND LIABILITIES

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

	2016		2015	
	Deferred tax asset \$millions	Deferred tax liability \$millions	Deferred tax asset \$millions	Deferred tax liability \$millions
At 1 January	110	(1)	70	(1)
Amount recognised in the income statement				
- Current year timing differences	(41)	(1)	(24)	1
- Prior year timing differences	(4)	-	37	-
Amount recognised in other comprehensive income	16	(1)	(1)	-
Impact of change in tax rates	(2)	-	28	(1)
At 31 December	79	(3)	110	(1)

	2016		2015	
	Deferred tax asset \$millions	Deferred tax liability \$millions	Deferred tax asset \$millions	Deferred tax liability \$millions
Accelerated capital allowances	2	-	4	-
Deferred compensation	4	-	6	-
Deferred interest	51	-	95	-
IFRS9 transitional adjustment	-	(1)	-	-
Temporary differences arising in respect of changes in the Company's own credit risk	16	-	-	-
Other temporary differences	6	(2)	5	(1)
	79	(3)	110	(1)

Finance (No. 2) Act 2015 enacted reductions in the UK corporation tax main rate to 19% with effect from 1 April 2017. Finance Act 2016 enacted reductions in the UK corporation tax main rate to 17% with effect from 1 April 2020. These changes to UK corporation tax rates impacted the deferred tax charge and closing deferred tax position for 2015 and 2016.

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

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 17. COMMITMENTS AND CONTINGENCIES

#### Leases

The Company has entered into non-cancellable commercial leases on premises and equipment. These leases have lives ranging from one to seven years. The leases on the premises include renewal options and escalation clauses in line with general rental market conditions and rent adjustments based on price indices. The lease agreements do not contain contingent rent payment clauses or purchase options and they do not impose any restrictions on the Company's ability to pay dividends, engage in debt financing transactions or enter into further lease agreements.

Future minimum lease payments under non-cancellable operating leases at 31 December are due as follows:

	<b>2016</b>	<b>2015</b>
	<b>\$millions</b>	<b>\$millions</b>
Within one year	7	7
In the second to fifth years inclusive	18	23
After five years	3	4
	<u>28</u>	<u>34</u>

Future minimum sub-lease receivables under non-cancellable operating leases at 31 December are due as follows:

	<b>2016</b>	<b>2015</b>
	<b>\$millions</b>	<b>\$millions</b>
Within one year	3	3
In the second to fifth years inclusive	10	10
	<u>13</u>	<u>13</u>

#### Other commitments and contingent liabilities

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

##### *Contingent liabilities*

	<b>2016</b>	<b>2015</b>
	<b>\$millions</b>	<b>\$millions</b>
Guarantees	1,135	982
Letters of credit	1	1
	<u>1,136</u>	<u>983</u>

##### *Commitments*

	<b>2016</b>	<b>2015</b>
	<b>\$millions</b>	<b>\$millions</b>
Loan commitments	2,662	1,983
Underwriting commitments	1,309	-
Unsettled securities purchased under agreements to resell <sup>(1)</sup>	30,121	18,391
Unsettled securities sold under agreements to repurchase <sup>(2)</sup>	17,604	11,630
	<u>51,696</u>	<u>32,004</u>

(1) Unsettled securities purchased under agreements to resell have a trade date at or prior to 31 December 2016 and settle subsequent to period end.

(2) Unsettled securities sold under agreements to repurchase have a trade date at or prior to 31 December 2016 and settle subsequent to period end.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 18. EQUITY INSTRUMENTS

	Ordinary shares of \$1 each \$millions	Ordinary shares of £1 each \$millions	Class A ordinary shares of \$1 each \$millions	Additional Tier 1 capital \$millions	Total equity instruments \$millions
<b>Issued and fully paid up:</b>					
At 1 January 2015	9,934	30	1,500	1,300	12,764
Issued in the year:					
Ordinary shares of \$1 each issued	1	-	-	-	1
At 31 December 2015	<u>9,935</u>	<u>30</u>	<u>1,500</u>	<u>1,300</u>	<u>12,765</u>
At 1 January 2016 and 31 December 2016	<u>9,935</u>	<u>30</u>	<u>1,500</u>	<u>1,300</u>	<u>12,765</u>
Voting rights as 31 December 2016	<u>99.7% <sup>(1)</sup></u>	<u>0.3% <sup>(1)</sup></u>	<u>Non-voting</u>	<u>Non-voting</u>	<u>100%</u>

(1) Ordinary shares are pari passu with each other regardless of currency and together carry 100% of the voting rights (2015: 100%).

#### Equity instruments

At 31 December 2015 and 31 December 2016 the total equity instruments in issue of the Company equated to \$12,765 million comprising 9,935,105,148 ordinary shares of \$1 each, 17,615,107 ordinary shares of £1 each, 1,500,000,000 Class A Non-voting ordinary shares of \$1 each and Additional Tier 1 capital instruments of \$1,300,000,000. All equity instruments are fully paid.

#### Ordinary shares

The holders of the ordinary shares are entitled to receive dividends as declared from time to time and are entitled, on a show of hands, to one vote and, on a poll, one vote per share at meetings of the shareholders of the Company. All shares rank equally with regard to the Company's residual net assets.

All ordinary shares are recorded at the rates of exchange ruling at the date the shares were paid up.

#### Additional Tier 1 capital

The Additional Tier 1 capital instruments (the "Instruments") includes a trigger mechanism whereby if the Common Equity Tier 1 capital ratio of the Company falls below a pre-determined level, the Company will write-down the outstanding principal amount of the Instruments, together with any unpaid interest coupon. In this situation, Morgan Stanley UK Group, the holder of the Instruments, would have no further rights against the Company in respect of the Instruments. The Instruments have no defined maturity, are callable at the Company's discretion after five years from their date of issuance and are subordinated to senior creditors and subordinated loan creditors of the Company. The Instruments are not entitled to any participation in the residual net assets of the Company. Coupons on the Instruments are non-cumulative and payable at a fixed rate of 9% per annum. Payment of the coupon is wholly at the discretion of the Company.

A payment of coupon interest was approved by the Board of Directors on 15 December 2016 and paid on 20 December 2016 (see note 19).

#### Reserves

Details of each reserve are provided in note 22 of the consolidated financial statements.

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**NOTES TO THE COMPANY FINANCIAL STATEMENTS**

**Year ended 31 December 2016**

**19. DIVIDENDS**

On 15 December 2016, the Directors approved a coupon payment on the Additional Tier 1 capital instruments of \$157,625,000 (2015: \$14,850,694) out of reserves available for distribution at 31 December 2015. The coupon was paid on 20 December 2016 and has a related tax benefit of \$40,253,052 (2015: \$3,103,649).

The Directors have not proposed the payment of a final dividend out of reserves available at 31 December 2016 (2015: \$nil).

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 20. 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 2016

	Less than or equal to twelve months \$millions	More than twelve months \$millions	Total \$millions
<b>ASSETS</b>			
Loans and receivables:			
Cash and short-term deposits	20,205	-	20,205
Cash collateral on securities borrowed	19,601	-	19,601
Securities purchased under agreements to resell	77,099	347	77,446
Trade receivables	51,751	-	51,751
Other receivables	737	618	1,355
	<u>169,393</u>	<u>965</u>	<u>170,358</u>
Financial assets classified as held for trading	246,739	-	246,739
Financial assets designated at fair value through profit or loss	3,478	971	4,449
Available-for-sale financial assets	-	27	27
Current tax assets	161	-	161
Deferred tax assets	51	28	79
Prepayments and accrued income	38	-	38
Investments in subsidiaries	-	85	85
Property, plant and equipment	-	5	5
Intangible assets	-	2	2
	<u>419,860</u>	<u>2,083</u>	<u>421,943</u>
<b>LIABILITIES</b>			
Financial liabilities at amortised cost:			
Bank loans and overdrafts	25	-	25
Cash collateral on securities loaned	21,119	105	21,224
Securities sold under agreements to repurchase	44,033	4,383	48,416
Trade payables	85,722	-	85,722
Subordinated loans	-	7,906	7,906
Other payables	3,463	7,241	10,704
	<u>154,362</u>	<u>19,635</u>	<u>173,997</u>
Financial liabilities classified as held for trading	224,737	-	224,737
Financial liabilities designated at fair value through profit or	3,262	2,895	6,157
Provisions	-	85	85
Current tax liabilities	45	-	45
Deferred tax liabilities	-	3	3
Accruals and deferred income	142	-	142
Post-employment benefit obligations	-	4	4
	<u>382,548</u>	<u>22,622</u>	<u>405,170</u>

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**NOTES TO THE COMPANY FINANCIAL STATEMENTS**

**Year ended 31 December 2016**

**20. EXPECTED MATURITY OF ASSETS AND LIABILITIES (CONTINUED)**

**At 31 December 2015**

	<b>Less than or equal to twelve months \$millions</b>	<b>More than twelve months \$millions</b>	<b>Total \$millions</b>
<b>ASSETS</b>			
Loans and receivables:			
Cash and short term deposits	11,726	-	11,726
Cash collateral on securities borrowed	22,369	-	22,369
Securities purchased under agreements to resell	58,609	35	58,644
Trade receivables	50,915	-	50,915
Other receivables	1,262	592	1,854
	<u>144,881</u>	<u>627</u>	<u>145,508</u>
Financial assets classified as held for trading	245,124	-	245,124
Financial assets designated at fair value through profit or loss	1,091	545	1,636
Available-for-sale financial assets	-	35	35
Current tax assets	182	-	182
Deferred tax assets	-	110	110
Prepayments and accrued income	38	-	38
Investment in subsidiaries	-	85	85
Property, plant and equipment	-	3	3
	<u>391,316</u>	<u>1,405</u>	<u>392,721</u>
<b>LIABILITIES</b>			
Financial liabilities at amortised cost:			
Cash collateral on securities loaned	14,954	1,393	16,347
Securities sold under agreements to repurchase	34,558	3,453	38,011
Trade payables	81,523	-	81,523
Subordinated loans	-	7,906	7,906
Other payables	5,005	7,018	12,023
	<u>136,040</u>	<u>19,770</u>	<u>155,810</u>
Financial liabilities classified as held for trading	215,328	-	215,328
Financial liabilities designated at fair value through profit or loss	3,376	1,489	4,865
Provisions	-	21	21
Current tax liabilities	43	-	43
Deferred tax liabilities	-	1	1
Accruals and deferred income	166	-	166
Post-employment benefit obligations	-	3	3
	<u>354,953</u>	<u>21,284</u>	<u>376,237</u>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 21. SEGMENT REPORTING

Segment information is presented in respect of the Company's business and geographical segments. The Company operates in the same business and geographical segments as the Group. Refer to note 26 of the consolidated financial statements for details of business and geographical segments.

#### Business segments

In 2016 and 2015, the Company had one reportable business segment, Institutional Securities.

#### Geographical segments

The Company operates in three geographical regions being, EMEA, the Americas and Asia. The following table presents total assets of the Company's operations by geographic area.

	EMEA		Americas		Asia		Total	
	2016	2015	2016	2015	2016	2015	2016	2015
	\$millions							
Total assets	294,239	283,241	59,881	58,324	67,823	51,156	421,943	392,721

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 22. FINANCIAL RISK MANAGEMENT

#### Risk management procedures

The Company's risk management procedures are consistent with those of the Group. This disclosure is limited to quantitative data for each risk category and should be read in conjunction with the risk management procedures detailed in the Group's Strategic report from pages 6 to 28.

#### Market risk

##### VaR

VaR for the year ended 31 December 2016

The table below presents the Management VaR for the Company's Trading portfolio on a year-end, average and annual high and low basis for 31 December 2016 and 31 December 2015.

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

	95%/ one-day VaR for the year ended 31 December 2016				95%/ one-day VaR for the year ended 31 December 2015			
	Period end	Average	High	Low	Period end	Average	High	Low
<i>Market risk category:</i>	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions
Interest rate and credit spread	12	12	20	9	10	14	20	10
Equity price	11	11	15	9	12	14	38	10
Foreign exchange rate	3	3	6	2	2	6	12	2
Commodity price	-	1	3	-	2	2	3	-
Less diversification benefit <sup>(1)(2)</sup>	(10)	(10)	N/A	N/A	(8)	(14)	N/A	N/A
Primary Risk Categories VaR	16	17	24	14	18	22	42	16
Credit Portfolio VaR	7	8	10	6	6	6	8	5
Less diversification benefit <sup>(1)(2)</sup>	(6)	(5)	N/A	N/A	(4)	(5)	N/A	N/A
Total Management VaR	17	20	27	15	20	23	43	17

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

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

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

The Company's average VaR for Primary Risk Categories for 2016 was \$17 million compared with \$22 million for 2015. The decrease in average VaR for Primary Risk Categories is due to risk reduction across interest rate, equity and foreign exchange.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 22. FINANCIAL RISK MANAGEMENT (CONTINUED)

#### Market risk (continued)

*VaR (continued)*

*VaR for the year ended 31 December 2016 (continued)*

The average Credit Portfolio VaR for 2016 was \$8 million compared with \$6 million for 2015. The increase in the average VaR over the year was driven by a combination of market moves (credit spread and volatility) and exposure changes during 2016.

The average total VaR for 2016 was \$20 million compared with \$23 million for 2015.

*Non trading risks for the year ended 31 December 2016*

The Company believes that sensitivity analysis is an appropriate representation of the Company's non-trading risks. Reflected below is this analysis, which covers 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 a net gain or loss of approximately \$2.0 million, compared to a net gain or loss of \$1.8 million as at 31 December 2015.

*Funding liabilities*

The credit spread risk sensitivity of the Company's mark-to-market funding liabilities corresponds to an increase in value of approximately \$0.8 million and \$0.3 million for each 1 basis point widening in the Company's credit spread level for both 31 December 2016 and 31 December 2015.

*Equity investments price risk*

The Company is exposed to equity price risk as a result of changes in the fair value of its investments in listed equity securities and private equities classified as available-for-sale financial assets. These investments are predominantly equity positions with long investment horizons, the majority of which are for business facilitation purposes. The market risk related to these investments is measured by estimating the potential reduction in net revenues associated with a 10% decline in asset values as shown in the table below.

	<b>31 December 2016</b>	<b>31 December 2015</b>
	<b>10% sensitivity</b>	<b>10% sensitivity</b>
	<b>\$millions</b>	<b>\$millions</b>
Available-for-sale financial assets	3	4

#### Currency risk

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

The Company also has foreign currency exposure arising from its trading activities in currencies other than US dollars. It actively manages this exposure by hedging with other Morgan Stanley company undertakings.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 22. FINANCIAL RISK MANAGEMENT (CONTINUED)

#### Currency risk (continued)

The analysis below details the foreign currency exposure for the Company, by foreign currency, relating to the retranslation of its non-US dollar denominated branches. 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.

	2016			2015		
	Foreign currency exposure	Percentage change applied	Other comprehensive income	Foreign currency exposure	Percentage change applied	Other comprehensive income
	\$millions	%	\$millions	\$millions	%	\$millions
Euro	166	12%	20	86	12%	10
Polish Zloty	3	17%	1	2	17%	-
South Korean Won	177	8%	14	191	8%	15
Swiss Franc	13	12%	2	11	12%	1
	<u>359</u>		<u>37</u>	<u>290</u>		<u>26</u>

The reasonably possible percentage change in the currency rate in relation to US dollars has been calculated based on the greatest annual percentage change over the 5 year period from 1 January 2012 to 31 December 2016 (2015: from 1 January 2011 to 31 December 2015). Thus, the percentage change applied may not be the same percentage as the actual change in the currency rate for the relevant year.

#### Credit risk

##### *Exposure to credit risk*

The maximum exposure to credit risk (“gross credit exposure”) of the Company as at 31 December 2016 is disclosed below, based on the carrying amounts of the financial assets the Company believes are subject to credit risk. Exposure arising from financial instruments not recognised on the consolidated statement of financial position is measured as the maximum amount that the Company could have to pay, which may be significantly greater than the amount that would be recognised as a liability. 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 “unrated” balance in the ‘Maximum exposure to credit risk by credit rating’ represents the pool of counterparties that either do not require a rating or are under review in accordance with the Company’s rating policies. These counterparties individually generate no material credit exposure and this pool is highly diversified, monitored and subject to limits.

Financial assets classified as held for trading, excluding derivatives, are subject to traded credit risk through exposure to the issuer of the financial asset; the Company manages this issuer credit risk through its market risk management infrastructure and this traded credit risk is incorporated within the VaR based risk measures included in the market risk disclosure.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 22. FINANCIAL RISK MANAGEMENT (CONTINUED)

#### Credit risk (continued)

*Exposure to credit risk (continued)*

*Exposure to credit risk by class*

Class	2016			2015		
	Gross credit exposure <sup>(1)</sup> \$millions	Credit enhancements \$millions	Net credit exposure <sup>(2)</sup> \$millions	Gross credit exposure <sup>(1)</sup> \$millions	Credit enhancements \$millions	Net credit exposure <sup>(2)</sup> \$millions
Loans and receivables:						
Cash and short-term deposits	20,205	-	20,205	11,726	-	11,726
Cash collateral on securities borrowed	19,601	(18,900)	701	22,369	(21,052)	1,317
Securities purchased under agreements to resell	77,446	(75,053)	2,393	58,644	(57,951)	693
Trade receivables <sup>(3)</sup>	51,751	-	51,751	50,915	-	50,915
Other receivables	716	-	716	1,188	-	1,188
Financial assets classified as held for trading:						
Derivatives	182,109	(174,236)	7,873	185,885	(177,314)	8,571
Financial assets designated at fair value through profit or loss	4,449	(3,697)	752	1,636	(958)	678
	356,277	(271,886)	84,391	332,363	(257,275)	75,088
<b>Unrecognised financial instruments</b>						
Guarantees	1,135	-	1,135	982	-	982
Letters of credit	1	-	1	1	-	1
Loan commitments	2,662	(777)	1,885	1,983	-	1,983
Underwriting commitments	1,309	-	1,309	-	-	-
Unsettled securities purchased under agreements to resell <sup>(4)</sup>	30,121	-	30,121	18,391	-	18,391
	391,505	(272,663)	118,842	353,720	(257,275)	96,445

(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 \$3,593 million (2015: \$2,645 million) to be offset in the ordinary course of business and/or in the event of default.

(3) Trade receivables primarily include cash collateral pledged against the payable on OTC derivative positions. These derivative liabilities are included within financial liabilities classified as held for trading in the statement of financial position.

(4) For contingent settlement provisions, collateral in the form of securities will be received at the point of settlement. Since the value of collateral is determined at a future date it is currently unquantifiable and not included in the table.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 22. FINANCIAL RISK MANAGEMENT (CONTINUED)

#### Credit risk (continued)

*Exposure to credit risk (continued)*

*Maximum exposure to credit risk by credit rating<sup>(1)</sup>*

Credit rating	2016 \$millions	2015 \$millions
AAA	16,721	12,004
AA	74,995	62,579
A	212,166	202,679
BBB	66,757	52,652
BB	11,542	13,912
B	5,177	5,214
CCC	1,386	2,447
D	9	12
Unrated	2,752	2,221
Total	<u>391,505</u>	<u>353,720</u>

(1) Internal credit rating derived using methodologies generally consistent with those used by external agencies

#### *Financial assets past due but not impaired*

At 31 December 2016, \$1,408 million of financial assets included in trade receivables in the statement of financial position were past due but not impaired (31 December 2015: \$1,180 million).

#### *Financial assets individually impaired*

Class	2016 \$millions	2015 \$millions
Loans and receivables:		
Trade receivables	<u>40</u>	<u>28</u>

### Liquidity and funding risk

#### *Maturity analysis*

In the following maturity analysis of financial liabilities, derivative contracts and other financial liabilities held as part of the Company's trading activities are presented at fair value, consistent with how these financial liabilities are managed, and disclosed as on demand. Derivatives not held as part of the Company's trading activities and financial liabilities designated at fair value through profit or loss are disclosed according to their earliest contractual maturity; all such amounts are presented at their fair value, consistent with how these financial liabilities are managed. All other amounts represent undiscounted cash flows payable by the Company arising from its financial liabilities to their earliest contractual maturities as at 31 December 2016 and 31 December 2015. 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, and is consistent with how the liquidity risk on these financial liabilities is managed by the Company.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 22. FINANCIAL RISK MANAGEMENT (CONTINUED)

#### Liquidity and funding risk (continued)

*Maturity analysis (continued)*

31 December 2016	On demand \$millions	Less than 1 month \$millions	Equal to or more than 1 month but less than 3 months \$millions	Equal to or more than 3 months but less than 1 year \$millions	Equal to or more than 1 year but less than 5 years \$millions	Equal to or more than 5 years \$millions	Total \$millions
<b>Financial liabilities</b>							
Financial liabilities at amortised cost:							
Bank loans and overdrafts	25	-	-	-	-	-	25
Cash collateral on securities loaned	15,911	678	2,224	2,306	105	-	21,224
Securities sold under agreements to repurchase	22,188	9,549	5,683	6,614	4,379	52	48,465
Trade payables	85,721	-	4	22	-	-	85,747
Subordinated loans	-	48	-	156	1,105	9,099	10,408
Other payables	2835	12	118	141	5,145	2,841	11,092
Financial liabilities classified as held for trading:							
Derivatives	179,128	-	-	-	-	-	179,128
Other	45,609	-	-	-	-	-	45,609
Financial liabilities designated at fair value through profit or loss							
	2,651	38	89	484	965	1,930	6,157
<b>Total financial liabilities</b>	<b>354,068</b>	<b>10,325</b>	<b>8,118</b>	<b>9,723</b>	<b>11,699</b>	<b>13,922</b>	<b>407,855</b>
<b>Unrecognised financial instruments</b>							
Guarantees	1,135	-	-	-	-	-	1,135
Letters of credit	-	-	-	-	1	-	1
Loan commitments	2,662	-	-	-	-	-	2,662
Underwriting commitments	-	-	-	1,309	-	-	1,309
Unsettled securities purchased under agreements to resell <sup>(1)</sup>	30,121	-	-	-	-	-	30,121
<b>Total unrecognised financial instruments</b>	<b>33,918</b>	<b>-</b>	<b>-</b>	<b>1,309</b>	<b>1</b>	<b>-</b>	<b>35,228</b>

(1) The Company enters into forward starting reverse repurchase agreements (agreements which have a trade date at or prior to 31 December 2016 and settle subsequent to period end). These agreements primarily settle within three business days and of the total amount at 31 December 2016, \$30,121 million settled within three business days.

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**NOTES TO THE COMPANY FINANCIAL STATEMENTS**

**Year ended 31 December 2016**

**22. FINANCIAL RISK MANAGEMENT (CONTINUED)**

**Liquidity and funding risk (continued)**

*Maturity analysis (continued)*

	On demand	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
	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions
<b>31 December 2015</b>							
<b>Financial liabilities</b>							
Financial liabilities at amortised cost:							
Cash collateral on securities loaned	12,650	216	706	1,382	1,393	-	16,347
Securities sold under agreements to repurchase	20,642	5,739	2,614	5,581	3,474	-	38,050
Trade payables	81,523	-	1	8	31	-	81,563
Subordinated loans	-	-	-	178	1,016	9,357	10,551
Other payables	4,888	14	29	244	4,976	2,760	12,911
Financial liabilities classified as held for trading:							
Derivatives	179,936	-	-	-	-	-	179,936
Other	35,390	-	-	-	-	-	35,390
Financial liabilities designated at fair value through profit or loss	2,571	148	86	571	561	928	4,865
<b>Total financial liabilities</b>	<b>337,600</b>	<b>6,117</b>	<b>3,436</b>	<b>7,964</b>	<b>11,451</b>	<b>13,045</b>	<b>379,613</b>
<b>Unrecognised financial instruments</b>							
Guarantees	982	-	-	-	-	-	982
Letters of credit	-	-	-	-	-	1	1
Loan commitments	1,983	-	-	-	-	-	1,983
Unsettled securities purchased under agreements to resell <sup>(1)</sup>	18,228	163	-	-	-	-	18,391
<b>Total unrecognised financial instruments</b>	<b>21,193</b>	<b>163</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>21,357</b>

(1) The Company enters into forward starting reverse repurchase agreements (agreements which have a trade date at or prior to 31 December 2015 and settle subsequent to period end). These agreements primarily settle within three business days and of the total amount at 31 December 2015, \$18,228 million settled within three business days.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 23. TRANSFERS OF FINANCIALS ASSETS, INCLUDING PLEDGES OF COLLATERAL

#### Transferred financial assets that are not derecognised in their entirety

In the ordinary course of business, the Company enters into various arrangements including selling securities under agreements to repurchase, purchasing securities under agreements to resell, securities borrowed and securities loaned to, amongst other things, acquire securities to cover short positions and settle other securities obligations, to accommodate customers' needs and to finance the Company's inventory positions.

The Company pledges certain financial instruments to collateralise repurchase agreements and other securities financings. Pledged financial instruments that can be sold or repledged by the secured party are identified as financial instruments classified as held for trading (pledged to various parties) in the statement of financial position. The Company has determined that it retains substantially all the risks and rewards of these financial instruments including credit risk, settlement risk, country risk and market risk, and therefore has not derecognised them. In addition, it recognises a financial liability in respect of the consideration received.

Other financial assets transferred that continue to be recognised for accounting purposes include pledges of securities as collateral for derivative transactions or otherwise, as well as certain sales of securities with related transactions, such as derivatives, that result in the Company retaining substantially all the risks and rewards of the financial assets transferred. In addition, it recognises a financial liability in respect of the consideration received.

These transactions are mostly conducted under standard agreements used by financial market participants and are undertaken with counterparties subject to the Company's normal credit risk control processes. The resulting credit exposures are controlled by daily monitoring and collateralisation of the positions. The carrying amount of the associated financial liabilities related to financial assets transferred that continue to be recognised is \$47,426 million (2015: \$42,047 million).

The following table presents those financial assets which have been sold or otherwise transferred, but which for accounting purposes remain recognised on the statement of financial position. Positions presented below are shown prior to the impact of offsetting asset and liabilities of the same type, whilst the consolidated statement of financial position is presented after the impact of offsetting such positions.

	<b>2016</b>	<b>2015</b>
	<b>\$millions</b>	<b>\$millions</b>
<b>Financial assets classified as held for trading</b>		
Government debt securities	10,753	13,088
Corporate and other debt	5,115	1,657
Corporate equities	41,091	32,905
	<u>56,959</u>	<u>47,650</u>

## **MORGAN STANLEY & CO. INTERNATIONAL plc**

### **NOTES TO THE COMPANY FINANCIAL STATEMENTS**

**Year ended 31 December 2016**

#### **24. FINANCIAL ASSETS ACCEPTED AS COLLATERAL**

The Company's policy is generally to take possession of securities received as collateral, securities purchased under agreements to resell and securities borrowed. The Company monitors the fair value of the underlying securities as compared with the related receivable or payable, including accrued interest, and, as necessary, requests additional collateral to ensure such transactions are adequately collateralised. Where deemed appropriate, the Company's agreements with third parties specify its rights to request additional collateral. These transactions are mostly conducted under standard documentation used by financial market participants.

The fair value of collateral accepted under these arrangements as at 31 December 2016 was \$202,920 million (2015: \$180,648 million). Of this amount \$175,104 million (2015: \$146,964 million) has been sold or repledged to third parties in connection with financing activities, or to comply with commitments under short sale transactions.

#### **25. FINANCIAL ASSETS AND FINANCIAL LIABILITIES SUBJECT TO OFFSETTING**

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

The following tables present information about the offsetting of financial instruments and related collateral amounts. It 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 22.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 25. FINANCIAL ASSETS AND FINANCIAL LIABILITIES SUBJECT TO OFFSETTING (CONTINUED)

	Gross amounts <sup>(1)</sup> \$millions	Amounts offset in the statement of financial position <sup>(2) (3)</sup> \$millions	Net amounts presented in the statement of financial position \$millions	Amounts not offset in the statement of financial position <sup>(4) (5) (6)</sup>		Net exposure <sup>(7)</sup> \$millions
				Financial instruments \$millions	Cash collateral \$millions	
<b>31 December 2016</b>						
<b>Assets</b>						
Loans and receivables:						
Cash collateral on securities borrowed	32,385	(12,784)	19,601	(18,900)	-	701
Securities purchased under agreement to resell	107,121	(29,675)	77,446	(75,053)	-	2,393
Financial assets classified as held for trading:						
Derivatives	235,385	(53,276)	182,109	(148,377)	(25,859)	7,873
<b>TOTAL</b>	<b>374,891</b>	<b>(95,735)</b>	<b>279,156</b>	<b>(242,330)</b>	<b>(25,859)</b>	<b>10,967</b>
<b>Liabilities</b>						
Financial liabilities at amortised cost:						
Cash collateral on securities loaned	34,008	(12,784)	21,224	(20,228)	-	996
Securities sold under agreement to repurchase	78,091	(29,675)	48,416	(46,876)	-	1,540
Financial liabilities classified as held for trading:						
Derivatives	228,682	(49,554)	179,128	(148,519)	(19,665)	10,944
<b>TOTAL</b>	<b>340,781</b>	<b>(92,013)</b>	<b>248,768</b>	<b>(215,623)</b>	<b>(19,665)</b>	<b>13,480</b>

(1) Amounts include \$427 million of cash collateral on securities borrowed, \$2,319 million of securities purchased under agreements to resell, \$2,540 million of financial assets classified as held for trading - derivatives, \$995 million of cash collateral on securities loaned, \$1,535 million of securities sold under agreements to repurchase and \$2,435 million of financial liabilities classified as held for trading - derivatives which are either not subject to master netting agreements or collateral agreements or are subject to such agreements but the Group has not determined the agreements to be legally enforceable.

(2) Amounts are reported on a net basis in the consolidated statements of financial position when there is a legally enforceable master netting arrangement that provides for a current right of offset and there is an intention to either settle on a net basis or to realise the asset and liability simultaneously.

(3) Amounts include \$5,821 million and \$2,099 million of cash collateral related to financial assets classified as held for trading - derivatives recognised in amounts offset in the consolidated statement of financial positions for assets and liabilities respectively.

(4) Amounts relate to master netting arrangements and collateral arrangements which have been determined by the Group to be legally enforceable but do not meet all criteria required for net presentation within the consolidated statement of financial position.

(5) The cash collateral not offset is recognised in the consolidated statement of financial position within trade receivables and payables respectively.

(6) In addition to the balances disclosed in the table, certain financial assets and financial liabilities designated at fair value through profit or loss have legally enforceable master netting arrangements in place, however, these are not eligible for netting within the condensed consolidated statement of financial position. \$408 million not presented net within the condensed consolidated statement of financial position have legally enforceable netting arrangements in place and can be offset in the ordinary course of business and/ or in the event of default.

(7) Intercompany cross-product legally enforceable netting arrangements are in place which would allow for an additional \$3,593 million of the total consolidated statement of financial position, to be offset in the ordinary course of business and/ or in the event of default. The additional amounts for offset would include a portion of the residual net exposure.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 25. FINANCIAL ASSETS AND FINANCIAL LIABILITIES SUBJECT TO OFFSETTING (CONTINUED)

	Gross amounts <sup>(1)</sup>	Amounts offset in the statement of financial position	Net amounts presented in the statement of financial position	Amounts not offset in the statement of financial position <sup>(4) (5) (6)</sup>		Net exposure <sup>(7)</sup>
		(2) (3)		Financial instruments	Cash collateral	
	\$millions	\$millions	\$millions	\$millions	\$millions	\$millions
<b>31 December 2015</b>						
<b>Assets</b>						
Loans and receivables:						
Cash collateral on securities borrowed	37,077	(14,708)	22,369	(21,052)	-	1,317
Securities purchased under agreement to resell	78,218	(19,574)	58,644	(57,951)	-	693
Financial assets classified as held for trading:						
Derivatives	230,870	(44,985)	185,885	(150,675)	(26,639)	8,571
<b>TOTAL</b>	<b>346,165</b>	<b>(79,267)</b>	<b>266,898</b>	<b>(229,678)</b>	<b>(26,639)</b>	<b>10,581</b>
<b>Liabilities</b>						
Financial liabilities at amortised cost:						
Cash collateral on securities loaned	31,055	(14,708)	16,347	(16,313)	-	34
Securities sold under agreement to repurchase	57,585	(19,574)	38,011	(35,808)	-	2,203
Financial liabilities classified as held for trading:						
Derivatives	221,901	(41,965)	179,936	(146,995)	(22,909)	10,032
<b>TOTAL</b>	<b>310,541</b>	<b>(76,247)</b>	<b>234,294</b>	<b>(199,116)</b>	<b>(22,909)</b>	<b>12,269</b>

(1) Amounts include \$773 million of cash collateral on securities borrowed, \$450 million of securities purchased under agreements to resell, \$2,787 million of financial assets classified as held for trading - derivatives, \$10 million of cash collateral on securities loaned, \$2,038 million of securities sold under agreements to repurchase and \$2,922 million of financial liabilities classified as held for trading - derivatives which are either not subject to master netting agreements or collateral agreements or are subject to such agreements but the Company has not determined the agreements to be legally enforceable.

(2) Amounts are reported on a net basis in the statements of financial position when there is a legally enforceable master netting arrangement that provides for a current right of offset and there is an intention to either settle on a net basis or to realise the asset and liability simultaneously.

(3) Amounts include \$4,351 million of cash collateral related to financial assets classified as held for trading - derivatives and \$1,258 million cash collateral related to financial liabilities classified as held for trading - derivatives, recognised in amounts offset in the statement of financial positions for assets and liabilities respectively.

(4) 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.

(5) The cash collateral is recognised in the statement of financial position within trade receivables and payables respectively.

(6) Of the residual net exposure, intercompany cross-product legally enforceable netting arrangements are in place which would allow for an additional \$2,645 million to be offset in the ordinary course of business and / or in the event of default.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 26. 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.

2016	Quoted prices in active market (Level 1) \$millions	Valuation techniques using observable inputs (Level 2) \$millions	Valuation techniques with significant unobservable inputs (Level 3) \$millions	Total \$millions
Financial assets classified as held for trading:				
Government debt securities	7,185	2,863	4	10,052
Corporate and other debt	-	8,334	218	8,552
Corporate equities	45,749	216	61	46,026
Derivatives:				
Interest rate contracts	9	78,641	773	79,423
Credit contracts	-	6,047	111	6,158
Foreign exchange and gold contracts	-	66,197	68	66,265
Equity contracts	329	26,396	1,169	27,894
Commodity contracts	75	2,275	19	2,369
<b>Total financial assets classified as held for trading</b>	<b>53,347</b>	<b>190,969</b>	<b>2,423</b>	<b>246,739</b>
Financial assets designated at fair value through profit or loss	-	4,271	178	4,449
Available-for-sale financial assets:				
Corporate equities	-	-	27	27
<b>Total financial assets measured at fair value</b>	<b>53,347</b>	<b>195,240</b>	<b>2,628</b>	<b>251,215</b>
Financial liabilities classified as held for trading:				
Government debt securities	17,171	2,305	-	19,476
Corporate and other debt	-	2,850	5	2,855
Corporate equities	23,218	32	28	23,278
Derivatives:				
Interest rate contracts	4	74,029	950	74,983
Credit contracts	-	6,232	116	6,348
Foreign exchange and gold contracts	-	65,987	54	66,041
Equity contracts	470	27,162	1,802	29,434
Commodity contracts	32	2,268	22	2,322
<b>Total financial liabilities classified as held for trading</b>	<b>40,895</b>	<b>180,865</b>	<b>2,977</b>	<b>224,737</b>
Financial liabilities designated at fair value through profit or loss	-	5,860	297	6,157
<b>Total financial liabilities measured at fair value</b>	<b>40,895</b>	<b>186,725</b>	<b>3,274</b>	<b>230,894</b>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 26. ASSETS AND LIABILITIES MEASURED AT FAIR VALUE (CONTINUED)

#### a. Financial assets and liabilities recognised at fair value on a recurring basis (continued)

2015	Quoted prices in active market (Level 1) \$millions	Valuation techniques using observable inputs (Level 2) \$millions	Valuation techniques with significant unobservable inputs (Level 3) \$millions	Total \$millions
Financial assets classified as held for trading:				
Government debt securities	7,282	4,079	4	11,365
Corporate and other debt	-	6,389	576	6,965
Corporate equities	40,445	236	228	40,909
Derivatives:				
Interest rate contracts	-	79,317	247	79,564
Credit contracts	-	9,890	268	10,158
Foreign exchange and gold contracts	-	61,332	452	61,784
Equity contracts	566	27,402	1,902	29,870
Commodity contracts	8	4,495	6	4,509
<b>Total financial assets classified as held for trading</b>	<b>48,301</b>	<b>193,140</b>	<b>3,683</b>	<b>245,124</b>
Financial assets designated at fair value through profit or loss	-	1,255	381	1,636
Available-for-sale financial assets:				
Corporate equities	1	-	34	35
<b>Total financial assets measured at fair value</b>	<b>48,302</b>	<b>194,395</b>	<b>4,098</b>	<b>246,795</b>
Financial liabilities classified as held for trading:				
Government debt securities	8,450	2,297	-	10,747
Corporate and other debt	-	1,276	5	1,281
Corporate equities	23,312	37	15	23,364
Derivatives:				
Interest rate contracts	-	73,180	929	74,109
Credit contracts	-	10,119	279	10,398
Foreign exchange and gold contracts	-	60,330	212	60,542
Equity contracts	183	29,055	2,455	31,693
Commodity contracts	14	3,174	6	3,194
<b>Total financial liabilities classified as held for trading</b>	<b>31,959</b>	<b>179,468</b>	<b>3,901</b>	<b>215,328</b>
Financial liabilities designated at fair value through profit or loss	-	4,705	160	4,865
<b>Total financial liabilities measured at fair value</b>	<b>31,959</b>	<b>184,173</b>	<b>4,061</b>	<b>220,193</b>

## MORGAN STANLEY & CO. INTERNATIONAL plc

### NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

#### 26. ASSETS AND LIABILITIES MEASURED AT FAIR VALUE (CONTINUED)

##### a. Financial assets and liabilities recognised at fair value on a recurring basis (continued)

The Company's valuation approach and fair value hierarchy categorisation for certain significant classes of financial instruments recognised at fair value on a recurring basis are consistent with those disclosed for the Group. Refer to note 31 of the consolidated financial statements for details.

##### 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

During the year, the Company reclassified approximately \$910 million (2015: \$nil) of European government debt securities assets and \$602 million (2015: \$nil) of European government debt securities liabilities from Level 2 to Level 1 as certain European government bonds traded with sufficient frequency to constitute an active market.

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

The following tables present the changes in the fair value of the Company's Level 3 financial assets and financial liabilities for the years ended 31 December 2016 and 31 December 2015. Level 3 instruments may be hedged with instruments classified in Level 1 and Level 2. As a result, the realised and unrealised gains/ (losses) for assets and liabilities within the Level 3 category presented in the following tables do not reflect the related realised and unrealised gains/ (losses) on hedging instruments that have been classified by the Company within the Level 1 and/ or Level 2 categories.

Additionally, both observable and unobservable inputs may be used to determine the fair value of positions that the Company has classified within the Level 3 category. As a result, the unrealised gains/ (losses) during the period for assets and liabilities within the Level 3 category presented in the following tables herein may include changes in fair value during the period that were attributable to both observable and unobservable inputs.

The Morgan Stanley Company operates a number of intra-company policies to ensure that, where possible, revenues and related costs are matched. Where the trading positions included in the below table are risk managed using financial instruments held by other Morgan Stanley Company undertakings, these policies potentially result in the recognition of offsetting gains or losses in the Company.

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**NOTES TO THE COMPANY FINANCIAL STATEMENTS**

**Year ended 31 December 2016**

**26. ASSETS AND LIABILITIES MEASURED AT FAIR VALUE (CONTINUED)**

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

2016

	Balance at 1 January 2016 \$millions	Total gains/ (losses) recognised in profit for the year (1) \$millions	Total gains/ (losses) recognised in the statement of comprehensive income (1) \$millions	Purchases \$millions	Sales \$millions	Issuances \$millions	Settlements \$millions	Net transfers in and/or (out) of Level 3 (2) \$millions	Balance at 31 December 2016 \$millions	Unrealised gains/ (losses) for Level 3 assets/ liabilities outstanding as at 31 December 2016 (3) \$millions
Financial assets classified as held for trading:										
Government debt securities	4	-	-	2	(4)	-	-	2	4	-
Corporate and other debt	576	8	-	71	(409)	-	-	(28)	218	(5)
Corporate equities	228	(13)	-	32	(24)	-	-	(162)	61	-
<b>Total financial assets classified as held for trading</b>	<b>808</b>	<b>(5)</b>	<b>-</b>	<b>105</b>	<b>(437)</b>	<b>-</b>	<b>-</b>	<b>(188)</b>	<b>283</b>	<b>(5)</b>
Financial assets designated at fair value through profit or loss	381	7	-	15	(236)	-	-	11	178	7
Available-for-sale financial assets:										
Corporate equities	34	-	(8)	1	-	-	-	-	27	(8)
<b>Total financial assets measured at fair value</b>	<b>1,223</b>	<b>2</b>	<b>(8)</b>	<b>121</b>	<b>(673)</b>	<b>-</b>	<b>-</b>	<b>(177)</b>	<b>488</b>	<b>(6)</b>
Financial liabilities classified as held for trading:										
Corporate and other debt	5	-	-	(1)	1	-	-	-	5	-
Corporate equities	15	12	-	(3)	24	-	-	4	28	-
Net derivative contracts <sup>(4)</sup>	1,006	212	-	(355)	-	543	301	(479)	804	13
<b>Total financial liabilities classified as held for trading</b>	<b>1,026</b>	<b>224</b>	<b>-</b>	<b>(359)</b>	<b>25</b>	<b>543</b>	<b>301</b>	<b>(475)</b>	<b>837</b>	<b>13</b>
Financial liabilities designated at fair value through profit or loss	160	8	-	-	-	251	(88)	(18)	297	8
<b>Total financial liabilities measured at fair value</b>	<b>1,186</b>	<b>232</b>	<b>-</b>	<b>(359)</b>	<b>25</b>	<b>794</b>	<b>213</b>	<b>(493)</b>	<b>1,134</b>	<b>21</b>

(1) The total gains or (losses) are recognised in the income statement and the statement of comprehensive income as detailed in the financial instruments accounting policy (note 3c) of the consolidated financial statements.

(2) For financial assets and financial liabilities that were transferred into and out of Level 3 during the year, gains or (losses) are presented as if the assets or liabilities had been transferred into or out of Level 3 as at the beginning of the year.

(3) Amounts represent unrealised gains or (losses) for the year ended 31 December 2016 related to assets and liabilities still outstanding at 31 December 2016. The unrealised gains or (losses) are recognised in the income statement or statement of comprehensive income as detailed in the financial instruments accounting policy (note 3c) of the consolidated financial statements.

(4) Net derivative contracts represent Financial liabilities classified as held for trading – derivative contracts net of Financial assets classified as held for trading – derivative contracts.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 26. ASSETS AND LIABILITIES MEASURED AT FAIR VALUE (CONTINUED)

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

2015

	Balance at 1 January 2015 \$millions	Total gains/ (losses) recognised in profit for the year (1) \$millions	Total gains/ (losses) recognised in the statement of comprehensive income (1) \$millions	Purchases \$millions	Sales \$millions	Issuances \$millions	Settlements \$millions	Net transfers in and/or (out) of Level 3 (2) \$millions	Balance at 31 December 2015 \$millions	Unrealised gains/ (losses) for Level 3 assets/ liabilities outstanding as at 31 December 2015 (3) \$millions
Financial assets classified as held for trading:										
Government debt securities	39	(1)	-	1	(30)	-	-	(5)	4	-
Corporate and other debt	496	16	-	376	(303)	-	(2)	(7)	576	5
Corporate equities	119	12	-	128	(193)	-	-	162	228	20
<b>Total financial assets classified as held for trading</b>	<b>654</b>	<b>27</b>	<b>-</b>	<b>505</b>	<b>(526)</b>	<b>-</b>	<b>(2)</b>	<b>150</b>	<b>808</b>	<b>25</b>
Financial assets designated at fair value through profit or loss	1,316	(14)	-	93	(737)	-	(263)	(14)	381	(14)
Available-for-sale financial assets:										
Corporate equities	36	-	(2)	-	-	-	-	-	34	-
<b>Total financial assets measured at fair value</b>	<b>2,006</b>	<b>13</b>	<b>(2)</b>	<b>598</b>	<b>(1,263)</b>	<b>-</b>	<b>(265)</b>	<b>136</b>	<b>1,223</b>	<b>11</b>
Financial liabilities classified as held for trading:										
Corporate and other debt	6	2	-	(5)	6	-	-	-	5	-
Corporate equities	3	79	-	(144)	102	-	-	133	15	79
Net derivative contracts <sup>(4)</sup>	834	250	-	(2,534)	-	2,667	(83)	372	1,006	101
<b>Total financial liabilities classified as held for trading</b>	<b>843</b>	<b>331</b>	<b>-</b>	<b>(2,683)</b>	<b>108</b>	<b>2,667</b>	<b>(83)</b>	<b>505</b>	<b>1,026</b>	<b>180</b>
Financial liabilities designated at fair value through profit or loss	69	2	-	-	-	141	(43)	(5)	160	2
<b>Total financial liabilities measured at fair value</b>	<b>912</b>	<b>333</b>	<b>-</b>	<b>(2,683)</b>	<b>108</b>	<b>2,808</b>	<b>(126)</b>	<b>500</b>	<b>1,186</b>	<b>182</b>

(1) The total gains or (losses) are recognised in the income statement and the statement of comprehensive income as detailed in the financial instruments accounting policy (note 3c) of the consolidated financial statements.

(2) For financial assets and financial liabilities that were transferred into and out of Level 3 during the year, gains or (losses) are presented as if the assets or liabilities had been transferred into or out of Level 3 as at the beginning of the year.

(3) Amounts represent unrealised gains or (losses) for the year ended 31 December 2015 related to assets and liabilities still outstanding at 31 December 2015. The unrealised gains or (losses) are recognised in the income statement or statement of comprehensive income as detailed in the financial instruments accounting policy (note 3c) of the consolidated financial statements.

(4) Net derivative contracts represent Financial liabilities classified as held for trading – derivative contracts net of Financial assets classified as held for trading – derivative contracts.

There were no material transfers from Level 2 to Level 3 or from Level 3 to Level 2 of the fair value hierarchy during the year (2015: \$nil).

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**NOTES TO THE COMPANY FINANCIAL STATEMENTS**

**Year ended 31 December 2016**

**26. ASSETS AND LIABILITIES MEASURED AT FAIR VALUE (CONTINUED)**

**d. Valuation of Level 3 financial assets and liabilities recognised at fair value on a recurring basis**

The following disclosures provide information on the sensitivity of fair value measurements to key inputs and assumptions.

**i. Quantitative information about and qualitative sensitivity of significant unobservable inputs**

The following table provides information on the valuation techniques, significant unobservable inputs and their ranges and averages for each material category of assets and liabilities measured at fair value on a recurring basis.

The level of aggregation and breadth of products cause the range of inputs to be wide and not evenly distributed across the inventory. Further, the range of unobservable inputs may differ across companies in the financial services industry because of diversity in the types of products included in each company's inventory. The following disclosures also include qualitative information on the sensitivity of the fair value measurements to changes in the significant unobservable inputs. There are no predictable relationships between multiple significant unobservable inputs attributable to a given valuation technique. A single amount is disclosed when there is no significant difference between the minimum, maximum and average (weighted average or similar average / median).

31 December 2016	Fair value \$millions	Predominant valuation techniques/ Significant unobservable inputs	Range <sup>(2)</sup> (Weighted averages or simple averages/median) <sup>(3)</sup>
<b>ASSETS</b>			
<b>Financial assets classified as held for trading:</b>			
- Corporate and other debt:			
- Residential mortgage-backed securities	61	Comparable pricing Comparable bond price	2 to 14 pts (7 pts)
- Asset-backed securities	43	Comparable pricing Comparable bond price	28 to 100 pts (88 pts)
- Corporate bonds	91	Comparable pricing Comparable bond price	5 to 130 pts (99 pts)
- Corporate equities	61	Comparable pricing Comparable equity price	100% (100%)
<b>Financial assets designated at fair value through profit or loss:</b>			
- Customer loans	152	Margin loan model Discount rate Option model Volatility skew	9% (9%) -1% (-1%)
<b>Available-for-sale financial assets:</b>			
- Corporate equities	27	Comparable pricing Comparable equity price	100%(100%)
<b>LIABILITIES</b>			
<b>Financial liabilities classified as held for trading:</b>			
- Corporate equities	(28)	Comparable pricing Comparable equity price	100%(100%)

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**NOTES TO THE COMPANY FINANCIAL STATEMENTS**

**Year ended 31 December 2016**

**26. ASSETS AND LIABILITIES MEASURED AT FAIR VALUE (CONTINUED)**

**d. Valuation of Level 3 financial assets and liabilities recognised at fair value on a recurring basis (continued)**

**i. Quantitative information about and qualitative sensitivity of significant unobservable inputs (continued)**

31 December 2016	Fair value \$millions	Predominant valuation techniques/ Significant unobservable inputs	Range <sup>(2)</sup> (Weighted averages or simple averages/median) <sup>(3)</sup>
<b>LIABILITIES</b>			
<b>Financial liabilities classified as held for trading:</b>			
- Net derivatives contracts: <sup>(1)(4)(5)</sup>			
- Interest rate	(177)	Option model	
		Inflation volatility	24% to 55% (40%/39%)
		Interest rate-foreign exchange correlation	28% to 58% (44%/43%)
		Interest rate curve correlation	28% to 98% (67%/69%)
		Interest rate quanto correlation	-8% to 37% (6%/-7%)
		Inflation rate curve	1.5% to 1.6% (1.5%/1.5%)
		Interest rate volatility skew	31% to 116% (47%/50%)
- Credit	(5)	Correlation model	
		Credit correlation	35% to 59% (44%)
		Comparable pricing	
		Comparable bond price	2 to 100 pts (39 pts)
- Foreign exchange and gold	14	Option model	
		Interest rate-foreign exchange correlation	28% to 58% (44%/43%)
		Interest rate volatility skew	31% to 116% (47%/50%)
		Credit-foreign exchange correlation	0% (0%)
- Equity	(633)	Option model	
		At the money volatility	16% to 66% (32%)
		Volatility skew	-2% to 0% (-1%)
		Equity-equity correlation	35% to 99% (74%)
		Equity-foreign exchange correlation	-63% to -5% (-41%)
- Commodity	(3)	Comparable pricing	
		Comparable price	\$508 to \$1,626 (\$829)

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 26. ASSETS AND LIABILITIES MEASURED AT FAIR VALUE (CONTINUED)

#### d. Valuation of Level 3 financial assets and liabilities recognised at fair value on a recurring basis (continued)

##### i. Quantitative information about and qualitative sensitivity of significant unobservable inputs (continued)

31 December 2016	Fair value \$millions	Predominant valuation techniques/ Significant unobservable inputs	Range <sup>(2)</sup> (Weighted averages or simple averages/median) <sup>(3)</sup>
<b>LIABILITIES</b>			
<b>Financial liabilities designated at fair value through profit or loss:</b>			
- Issued structured notes	(270)	Option model	
		At the money volatility	7% to 34% (29%)
		Volatility skew	-1% to 0% (-1%)
		Equity-equity correlation	46% to 98% (82%)
		Equity-foreign exchange correlation	-55% to -6% (-41%)

(1) Net derivative contracts represent financial liabilities classified as held for trading – derivative contracts net of financial assets classified as held for trading – derivative contracts.

(2) The ranges of significant unobservable inputs are represented in points, percentages or basis points. Points are a percentage of par; for example, 100 points would be 100% of par. A basis point equals 1/100th of 1%; for example, 353 basis points would equal 3.53%.

(3) Amounts represent weighted averages except where simple averages and the median of the inputs are provided when more relevant.

(4) CVA and FVA are included in fair value, but excluded from the valuation techniques and significant unobservable inputs in the previous table. CVA is a Level 3 input when the underlying counterparty credit curve is unobservable. FVA is a Level 3 input in its entirety given the lack of observability of funding spreads in the principal market.

(5) Includes derivative contracts with multiple risks (i.e. hybrid products).

31 December 2015	Fair value \$millions	Predominant valuation techniques/ Significant unobservable inputs	Range <sup>(2)</sup> (Weighted averages or simple averages/median) <sup>(3)</sup>
<b>ASSETS</b>			
<b>Financial assets classified as held for trading:</b>			
- Corporate and other debt:			
- Residential mortgage-backed securities	76	Comparable pricing Comparable bond price	4 to 85 pts (32 pts)
- Commercial mortgage-backed securities	58	Comparable pricing Comparable bond price	3 to 90 pts (9 pts)
- Asset-backed securities	96	Comparable pricing Comparable bond price	9 to 100 pts (65 pts)
- Corporate bonds	176	Comparable pricing Comparable bond price Option model	3 to 100 pts (83 pts)
		At the money volatility	6% to 38% (25%)
		Volatility skew	-1% to 0% (0%)
- Collateralised debt obligations	154	Comparable pricing Comparable loan price	67 to 102 pts (87 pts)
- Corporate equities	228	Comparable pricing Comparable equity price Market approach EBITDA Multiple	100% (100%) 9 times (9 times)

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 26. ASSETS AND LIABILITIES MEASURED AT FAIR VALUE (CONTINUED)

#### d. Valuation of Level 3 financial assets and liabilities recognised at fair value on a recurring basis (continued)

##### i. Quantitative information about and qualitative sensitivity of significant unobservable inputs (continued)

31 December 2015	Fair value \$millions	Predominant valuation techniques/ Significant unobservable inputs	Range (2) (Weighted averages or simple averages/median)(3)
<b>ASSETS</b>			
<b>Financial assets designated at fair value through profit or loss:</b>			
- Prepaid OTC contracts	93	Option model	
		At the money volatility	21% to 36% (29%)
		Volatility skew	0% (0%)
- Customer loans	288	Margin loan model	
		Credit spread	499 bps (499bps)
		Volatility skew	13% to 29% (20%)
		Option model	
		Volatility skew	-1% (-1%)
<b>Available-for-sale financial assets:</b>			
- Corporate equities	34	Comparable pricing	
		Comparable equity price	100%(100%)
<b>LIABILITIES</b>			
<b>Financial liabilities classified as held for trading:</b>			
- Net derivatives contracts: <sup>(1)(4)(5)</sup>			
- Interest rate	(682)	Option model	
		Inflation volatility	58% (58%/58%)
		Interest rate curve	0% (0%/0%)
		Interest rate-foreign exchange correlation	25% to 62% (43%/43%)
		Interest rate-inflation correlation	-41% to -39% (-41%/-41%)
		Interest rate curve correlation	24% to 95% (60%/69%)
		Interest rate quanto correlation	-8% to 36% (5%/-6%)
		Interest rate volatility skew	29% to 82% (43%/40%)
- Credit	(11)	Correlation model	
		Credit correlation	39% to 87% (57%)
		Comparable pricing	
		Comparable bond price	3 to 100 pts (37 pts)
- Foreign exchange and gold	240	Option model	
		Interest rate curve	0% (0%/0%)
		Interest rate-foreign exchange correlation	25% to 62% (43%/43%)
		Interest rate volatility skew	29% to 82% (43%/40%)

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**NOTES TO THE COMPANY FINANCIAL STATEMENTS**

**Year ended 31 December 2016**

**26. ASSETS AND LIABILITIES MEASURED AT FAIR VALUE (CONTINUED)**

**d. Valuation of Level 3 financial assets and liabilities recognised at fair value on a recurring basis (continued)**

**i. Quantitative information about and qualitative sensitivity of significant unobservable inputs (continued)**

31 December 2015	Fair value \$millions	Predominant valuation techniques/ Significant unobservable inputs	Range (2) (Weighted averages or simple averages/median)(3)
<b>LIABILITIES</b>			
<b>Financial liabilities classified as held for trading:</b>			
- Equity	(553)	Option model	
		At the money volatility	18% to 65% (36%)
		Volatility skew	-3% to 0% (0%)
		Equity-equity correlation	40% to 99% (69%)
		Equity-foreign exchange correlation	-60% to -10% (-39%)
<b>Financial liabilities designated at fair value through profit or loss:</b>			
- Issued structured notes	(147)	Option model	
		At the money volatility	26% to 38% (31%)
		Volatility skew	-1% to 0% (0%)
		Equity-equity correlation	42% to 97% (67%)
		Equity-foreign exchange correlation	-54% to -6% (-44%)

(1) Net derivative contracts represent financial liabilities classified as held for trading – derivative contracts net of financial assets classified as held for trading – derivative contracts.

(2) The ranges of significant unobservable inputs are represented in points, percentages or basis points. Points are a percentage of par; for example, 100 points would be 100% of par. A basis point equals 1/100th of 1%; for example, 353 basis points (bps) would equal 3.53%.

(3) Amounts represent weighted averages except where simple averages and the median of the inputs are provided.

(4) CVA and FVA are included in fair value, but excluded from the valuation techniques and significant unobservable inputs in the table above. CVA is a Level 3 input when the underlying counterparty credit curve is unobservable. FVA is a Level 3 input in its entirety given the lack of observability of funding spreads in the principal market.

(5) Includes derivative contracts with multiple risks (i.e. hybrid products).

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 26. ASSETS AND LIABILITIES MEASURED AT FAIR VALUE (CONTINUED)

#### d. Valuation of Level 3 financial assets and liabilities recognised at fair value on a recurring basis (continued)

##### i. Quantitative information about and qualitative sensitivity of significant unobservable inputs (continued)

Significant Unobservable Inputs — Description	Sensitivity
<p><i>Comparable bond price</i>—A pricing input used when prices for the identical instrument are not available. Significant subjectivity may be involved when fair value is determined using pricing data available for comparable instruments. Valuation using comparable instruments can be done by calculating an implied yield (or spread over a liquid benchmark) from the price of a comparable bond, then adjusting that yield (or spread) to derive a value for the bond. The adjustment to yield (or spread) should account for relevant differences in the bonds such as maturity or credit quality.</p> <p>Alternatively, a price-to-price basis can be assumed between the comparable instrument and the bond being valued in order to establish the value of the bond. Additionally, as the probability of default increases for a given bond (<i>i.e.</i>, as the bond becomes more distressed), the valuation of that bond will increasingly reflect its expected recovery level assuming default. The decision to use price-to-price or yield/spread comparisons largely reflects trading market convention for the financial instruments in question. Price-to-price comparisons are primarily employed for RMBS, CMBS, ABS, CDOs, CLOs, Other debt, interest rate contracts, foreign exchange contracts, Other secured financings and distressed corporate bonds. Implied yield (or spread over a liquid benchmark) is utilised predominately for non-distressed corporate bonds, loans and credit contracts.</p>	<p>In general, an increase (decrease) to the comparable bond price for an asset would result in a higher (lower) fair value.</p>
<p><i>Comparable equity price</i>—A price derived from equity raises, share buybacks and external bid levels, etc. A discount or premium may be included in the fair value estimate.</p>	<p>In general, an increase (decrease) to the comparable equity price of an asset would result in a higher (lower) fair value.</p>
<p><i>Correlation</i>—A pricing input where the payoff is driven by more than one underlying risk. Correlation is a measure of the relationship between the movements of two variables (<i>i.e.</i>, how the change in one variable influences a change in the other variable). Credit correlation, for example, is the factor that describes the relationship between the probability of individual entities to default on obligations and the joint probability of multiple entities to default on obligations.</p>	<p>In general, an increase (decrease) to the correlation would result in an impact to the fair value, but the magnitude and direction of the impact would depend on whether the Company is long or short the exposure.</p>
<p><i>Credit spread</i>—The difference in yield between different securities due to differences in credit quality. The credit spread reflects the additional net yield an investor can earn from a security with more credit risk relative to one with less credit risk. The credit spread of a particular security is often quoted in relation to the yield on a credit risk-free benchmark security or reference rate, typically either U.S. Treasury or London Interbank Offered Rate (“LIBOR”).</p>	<p>In general, an increase (decrease) to the credit spread of an asset would result in a lower (higher) fair value.</p>
<p><i>EBITDA multiple / Exit multiple</i>—The ratio of the Enterprise Value to EBITDA, where the Enterprise Value is the aggregate value of equity and debt minus cash and cash equivalents. The EBITDA multiple reflects the value of the company in terms of its full-year EBITDA, whereas the exit multiple reflects the value of the company in terms of its full-year expected EBITDA at exit. Either multiple allows comparison between companies from an operational perspective as the effect of capital structure, taxation and depreciation/amortisation is excluded.</p>	<p>In general, an increase (decrease) to the EBITDA or Exit multiple of an asset would result in a higher (lower) fair value.</p>

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 26. ASSETS AND LIABILITIES MEASURED AT FAIR VALUE (CONTINUED)

#### d. Valuation of Level 3 financial assets and liabilities recognised at fair value on a recurring basis (continued)

##### i. Quantitative information about and qualitative sensitivity of significant unobservable inputs (continued)

Significant Unobservable Inputs — Description	Sensitivity
<i>Interest rate curve</i> —The term structure of interest rates (relationship between interest rates and the time to maturity) and a market’s measure of future interest rates at the time of observation. An interest rate curve is used to set interest rate and foreign exchange derivative cash flows and is a pricing input used in the discounting of any OTC derivative cash flow.	In general, an increase (decrease) to the interest rate curve would result in an impact to the fair value, but the magnitude and direction of the impact would depend on whether the Company is long or short the exposure.
<i>Volatility</i> —The measure of the variability in possible returns for an instrument given how much that instrument changes in value over time. Volatility is a pricing input for options, and, generally, the lower the volatility, the less risky the option. The level of volatility used in the valuation of a particular option depends on a number of factors, including the nature of the risk underlying that option (e.g., the volatility of a particular underlying equity security may be significantly different from that of a particular underlying commodity index), the tenor and the strike price of the option.	In general, an increase (decrease) to the volatility would result in an impact to the fair value, but the magnitude and direction of the impact would depend on whether the Company is long or short the exposure.
<i>Volatility skew</i> —The measure of the difference in implied volatility for options with identical underliers and expiry dates but with different strikes. The implied volatility for an option with a strike price that is above or below the current price of an underlying asset will typically deviate from the implied volatility for an option with a strike price equal to the current price of that same underlying asset.	In general, an increase (decrease) to the volatility skew would result in an impact to the fair value, but the magnitude and direction of the impact would depend on whether the Company is long or short the exposure.

##### ii. Sensitivity of fair values to changing significant assumptions to reasonably possible alternatives

All financial instruments are valued in accordance with the techniques outlined in the fair value hierarchy. Some of these techniques, including those used to value instruments categorised in Level 3 of the fair value hierarchy, are dependent on unobservable parameters and the fair value for these financial instruments has been determined using parameters appropriate for the valuation methodology based on prevailing market evidence. It is recognised that the unobservable parameters could have a range of reasonably possible alternative values.

In estimating the change in fair value, to provide information about the variability of the fair value measurement, the unobservable parameters were varied to the extremes of the ranges of reasonably possible alternatives using statistical techniques, such as dispersion in comparable observable external inputs for similar asset classes, historic data or judgement if a statistical technique is not appropriate. Where a financial instrument has more than one unobservable parameter, the sensitivity analysis reflects the greatest reasonably possible increase or decrease to fair value by varying the assumptions individually. It is unlikely that all unobservable parameters would be concurrently at the extreme range of possible alternative assumptions and therefore the sensitivity shown below is likely to be greater than the actual uncertainty relating to the financial instruments.

The following tables present the sensitivity of the fair value of material Level 3 financial assets and financial liabilities to reasonably possible alternative assumptions, providing quantitative information on the potential variability of the fair value measurement.

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**NOTES TO THE COMPANY FINANCIAL STATEMENTS**

**Year ended 31 December 2016**

**26. ASSETS AND LIABILITIES MEASURED AT FAIR VALUE (CONTINUED)**

**d. Valuation of Level 3 financial assets and liabilities recognised at fair value on a recurring basis (continued)**

ii. Sensitivity of fair values to changing significant assumptions to reasonably possible alternatives (continued)

2016	Fair value \$millions	Effect of reasonably possible alternative assumptions	
		Increase in fair value \$millions	Decrease in fair value \$millions
Financial assets classified as held for trading:			
Corporate and other debt	218	10	(10)
Corporate equities	61	10	(13)
Financial assets designated at fair value through profit or loss:			
Customer loans	152	1	(1)
Available-for-sale financial assets:			
Corporate equities	27	6	(10)
Financial liabilities classified as held for trading:			
Corporate equities	28	-	(4)
Net derivative contracts (1)(2)	804	37	(57)
Financial liabilities designated at fair value through profit or loss:			
Issued structured notes	270	2	(2)

(1) Net derivative contracts represent financial liabilities classified as held for trading – derivative contracts net of financial assets classified as held for trading – derivative contracts.

(2) CVA and FVA are included in the fair value, but excluded from the effect of reasonably possible alternative assumptions in the table above. CVA is deemed to be a Level 3 input when the underlying counterparty credit curve is unobservable. FVA is deemed to be a Level 3 input in its entirety given the lack of observability of funding spreads in the principal market.

**MORGAN STANLEY & CO. INTERNATIONAL plc**

**NOTES TO THE COMPANY FINANCIAL STATEMENTS**

**Year ended 31 December 2016**

**26. ASSETS AND LIABILITIES MEASURED AT FAIR VALUE (CONTINUED)**

**d. Valuation of Level 3 financial assets and liabilities recognised at fair value on a recurring basis (continued)**

ii. Sensitivity of fair values to changing significant assumptions to reasonably possible alternatives (continued)

2015	Fair value \$millions	Effect of reasonably possible alternative assumptions	
		Increase in fair value \$millions	Decrease in fair value \$millions
Financial assets classified as held for trading:			
Corporate and other debt	576	19	(35)
Corporate equities	228	2	(41)
Financial assets designated at fair value through profit or loss:			
Prepaid OTC contracts	93	3	(3)
Customer loans	288	1	-
Available-for-sale financial assets:			
Corporate equities	34	8	(2)
Financial liabilities classified as held for trading:			
Net derivatives contracts (1)(2)	1,006	37	(52)
Financial liabilities designated at fair value through profit or loss:			
Issued structured notes	147	2	(2)

(1) Net derivative contracts represent financial liabilities classified as held for trading – derivative contracts net of financial assets classified as held for trading – derivative contracts.

(2) CVA and FVA are included in the fair value, but excluded from the effect of reasonably possible alternative assumptions in the table above. CVA is deemed to be a Level 3 input when the underlying counterparty credit curve is unobservable. FVA is deemed to be a Level 3 input in its entirety given the lack of observability of funding spreads in the principal market

**e. Financial instruments valued using unobservable market data**

The amounts not recognised in the income statement relating to the difference between the fair value at initial recognition (the transaction price) and the amounts determined at initial recognition using valuation techniques are as follows:

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 26. ASSETS AND LIABILITIES MEASURED AT FAIR VALUE (CONTINUED)

#### e. Financial instruments valued using unobservable market data basis (continued)

	2016 \$millions	2015 \$millions
At 1 January	216	234
New transactions	70	43
Amounts recognised in the income statement during the year	(41)	(61)
<b>At 31 December</b>	<b>245</b>	<b>216</b>

The balance above predominately relates to derivatives.

The statement of financial position categories 'Financial assets and financial liabilities classified as held for trading', 'Financial assets and financial liabilities designated at fair value through profit or loss', and 'Available-for-sale financial assets' include financial instruments whose fair value is based on valuation techniques using unobservable market data.

#### f. Assets and liabilities measured at fair value on a non-recurring basis

Non-recurring fair value measurements of assets and liabilities are those which are required or permitted in the statement of financial position in particular circumstances. There were no assets or liabilities measured at fair value on a non-recurring basis during the year or prior year.

### 27. ASSETS AND LIABILITIES NOT MEASURED AT FAIR VALUE

The tables below present the carrying value, fair value and fair value hierarchy category of certain financial assets and 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 a reasonable approximation of fair value are excluded from the tables below.

	Fair value measurements using:				
	Carrying value \$millions	Fair value \$millions	Quoted prices in active market (Level 1) \$millions	Valuation techniques using observable inputs (Level 2) \$millions	Valuation techniques with significant unobservable inputs (Level 3) \$millions
<b>Financial liabilities</b>					
Other payables at 31 December 2016	7,240	7,069	-	7,069	-
Other payables at 31 December 2015	6,814	6,566	-	6,566	-

The fair value of other payables is determined based on current interest rates and credit spreads for debt instruments with similar terms and maturity. Also included in the statement of financial position is \$3,531 million of other payables where the carrying value is a reasonable approximation of fair value (2015: \$5,210 million).

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 28. CAPITAL MANAGEMENT

The Company views capital as an important source of financial strength. Capital management procedures of the Company are consistent with those of the Group as detailed in the Strategic report.

The capital managed by the Company broadly includes share capital, Additional Tier 1 capital instruments, subordinated loans and reserves, as outlined below:

	2016	2015
	\$millions	\$millions
Ordinary share capital	11,465	11,465
Additional Tier 1 capital	1,300	1,300
Subordinated debt	7,906	7,906
Reserves	4,008	3,719
Total capital	<u>24,679</u>	<u>24,390</u>
Less: Current year unaudited profit as at 31 December	(513)	(49)
Regulatory deductions	<u>(1,075)</u>	<u>(1,180)</u>
Own Funds	<u><u>23,091</u></u>	<u><u>23,161</u></u>

### Pillar 3 disclosures and Country-by-Country Reporting

The Company is included in the MSI Group Pillar 3 disclosures which allow investors and other market participants to understand capital adequacy, particular risk exposures and risk management processes of individual firms required by the EU implementation of Basel capital standards.

The Company is also included in the MSI consolidated disclosure in order to comply with the provisions of Statutory Instrument 2013 No.3118 Capital Requirements (Country-by-Country Reporting) Regulations 2013, which implements in the UK the requirements set out in Article 89 of the Capital Requirements Directive (Directive 2013/36/EU).

The Pillar 3 disclosures and the Country-by-Country Reporting for the MSI Group for the year ended 31 December 2016 will be made available on the Morgan Stanley website at [www.morganstanley.com/investorrelations](http://www.morganstanley.com/investorrelations).

### 29. EMPLOYEE COMPENSATION PLANS

Morgan Stanley maintains various equity-settled share-based and cash-based deferred compensation plans for the benefit of certain current and former employees.

#### Equity-settled share-based compensation plans

- **Restricted stock units**

Morgan Stanley has granted restricted stock unit (“RSU”) awards pursuant to several equity-based compensation plans. The plans provide for the deferral of a portion of certain employees’ incentive compensation with awards made in the form of restricted common stock or in the right to receive unrestricted shares of common stock in the future. Awards under these plans are generally subject to vesting over time, generally three years from the date of grant, and are generally contingent upon continued employment and to restrictions on sale, transfer or assignment until the end of a specified period. All or a portion of an award may be cancelled if employment is terminated before the end of the relevant vesting period and after the vesting period in certain situations. Recipients of stock-based awards may have voting rights, at the Morgan Stanley Group’s discretion, and generally receive dividend equivalents.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## NOTES TO THE COMPANY FINANCIAL STATEMENTS

Year ended 31 December 2016

### 29. EMPLOYEE COMPENSATION PLANS (CONTINUED)

#### Equity-settled share-based compensation plans (continued)

- **Restricted stock units (continued)**

During the year, Morgan Stanley granted 246,134 units (2015: 224,563 units) of restricted stock units to employees of the Company with a weighted average fair value per unit of \$25.25 (2015: \$34.60), based on the market value of Morgan Stanley shares at grant date. An expense of \$9 million (2015: \$8 million) was incurred through the Company's total profit for the year in relation to restricted stock units equity based compensation plans, granted to employees of the Company.

- **Stock options**

Morgan Stanley also grants stock option awards pursuant to several equity-based compensation plans. The plans provide for the deferral of a portion of certain key employees' incentive compensation with awards made in the form of stock options and generally have an exercise price not less than the fair value of Morgan Stanley's common stock on the date of grant. Such stock options generally vest and become exercisable over a three year period and expire five to ten years from the date of grant, subject to accelerated expiration upon certain terminations of employment. Stock option awards have vesting, restriction and cancellation provisions that are generally similar to those in RSUs.

There were no options exercised during the year (2015: none).

The following table shows activity relating to the Morgan Stanley stock option awards for employees of the Company:

	2016		2015	
	Number of options '000	Weighted average exercise price \$	Number of options '000	Weighted average exercise price \$
Options outstanding at 1 January	19	66.73	22	63.93
Expired during the year	(19)	66.73	(3)	43.15
Options outstanding and exercisable at 31 December	-	-	19	66.73

The following table presents information relating to the stock options outstanding:

Range of exercise prices	2016			2015		
	Number of options '000s	Weighted average exercise price \$	Weighted average remaining life in years	Number of options '000s	Weighted average exercise price \$	Weighted average remaining life in years
\$60.00 - \$69.99	-	-	-	19	66.73	1.0
Total	-	-	-	19	66.73	1.0

## **MORGAN STANLEY & CO. INTERNATIONAL plc**

### **NOTES TO THE COMPANY FINANCIAL STATEMENTS**

**Year ended 31 December 2016**

#### **29. EMPLOYEE COMPENSATION PLANS (CONTINUED)**

##### **Deferred cash-based compensation plans**

The Company has granted deferred cash-based compensation awards to certain current and former 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 six months to three years from the date of grant. All or a portion of an award may be cancelled if employment is terminated before the end of the relevant vesting period. The awards are settled in cash at the end of the relevant vesting period.

Awards with a value of \$5 million (2015: \$4 million) have been granted to employees of the Company during the year and an expense of \$4 million (2015: \$2 million) has been recognised within 'Staff costs' in 'Other expense' in the income statement in relation to current and previous years' awards. The liability to employees at the end of the year, reported within 'Accruals and deferred income' in the statement of financial position, is \$13 million (2015: \$13 million).

The Company economically hedges the exposure created by these deferred compensation schemes by entering into derivative transactions with other Morgan Stanley Group undertakings. The derivative balance at the end of the year, recognised within 'Financial liabilities classified as held for trading' in relation to these deferred compensation schemes is \$2 million (2015: \$2 million). The related profit recorded within 'Net gains/(losses) on financial instruments classified as held for trading' for the year is \$nil (2015: \$nil).

#### **30. POST-EMPLOYMENT BENEFITS**

##### **Defined contribution plans**

The Company operates three Morgan Stanley defined contribution plans, which require contributions to be made to funds held separately from the assets of the Company, under the control of a trustee.

The defined contribution plans are as follows:

- Morgan Stanley Flexible Company Pension Plan (Amsterdam);
- MSII Offshore Retirement Benefit Plan IV, Dubai Section; and
- Morgan Stanley & Co International plc Seoul Branch Defined Contribution Plan

The Company pays fixed contributions to the funds, with no legal or constructive obligation to pay further contributions.

The defined contribution pension charge recognised in total profit was \$3 million for the year (2015: \$2 million) of which \$nil was accrued at 31 December 2016 (2015: \$nil).

## **MORGAN STANLEY & CO. INTERNATIONAL plc**

### **NOTES TO THE COMPANY FINANCIAL STATEMENTS**

**Year ended 31 December 2016**

#### **30. POST-EMPLOYMENT BENEFITS (CONTINUED)**

##### **Defined benefit plans**

The Company also operates defined benefit plans, which provide pension benefits that are based on length of service and salary. The Company's policy is to fund at least the amounts sufficient to meet minimum funding requirements under applicable employee benefit and tax regulations.

The defined benefit plans are as follows:

- Morgan Stanley & Co International plc Paris Branch IFC (Indemnites de Fin de Carriere)
- Morgan Stanley & Co International plc Zurich Branch Base Plan (formerly Personalvorsorgestiftung der Bank Morgan Stanley AG Plan)
- Morgan Stanley & Co International plc Zurich Branch Top-up Plan (formerly Personalvorsorgestiftung der Bank Morgan Stanley AG Plan) ; and
- Morgan Stanley Dubai End of Service Gratuity

A net liability of \$4 million (2015: \$3 million) is recognised in the balance sheet in respect of these plans.

#### **31. PARENT UNDERTAKINGS**

Refer to note 35 of the consolidated financial statements for information on the Company's immediate and ultimate parent undertaking.

The parent undertaking of the smallest group of companies for which group financial statements are drawn up and of which the Company is a member is Morgan Stanley & Co. International plc, which is registered in England and Wales. Copies of its financial statements can be obtained from the Registrar of Companies for England and Wales, Companies House, Crown Way, Cardiff CF14 3UZ.

# MORGAN STANLEY & CO. INTERNATIONAL plc

## APPENDIX TO THE FINANCIAL STATEMENTS

List of subsidiaries, including indirect subsidiaries, as at 31 December 2016 and 31 December 2015:

Name of Company	Address of undertaking's registered office/ principal place of business (2)	Proportion of shares held by the Group (1)(3)		Nature of Business
		2016	2015	
Morgan Stanley (France) S.A.	61 Rue De Monceau, 75008, Paris, France	100%	100%	Financial Services
Morgan Stanley Taiwan Limited	14th & 22nd Floors, Taipei Metro, 207 Tun Hwa South Road, Sec. 2, Taipei, 106, Taiwan	100%	100%	Financial Services
Morgan Stanley Strategic Investments Limited		100%	100%	Financial Services
Morgan Stanley Turnberry Limited		100%	100%	Holding company
Morgan Stanley Mallard Investments Limited		100%	100%	Holding company
Morgan Stanley Montgomerie Investments Limited		100%	100%	Holding company
Morgan Stanley Northcote Investments Limited		100%	100%	Holding company
Morgan Stanley Silvermere Limited		100%	100%	Holding company
Morgan Stanley Equity Trading (DIFC) Limited	Level 7, The Gate, Dubai International Financial Centre, Sheik Zayed Road, PO Box 506501, Dubai, United Arab Emirates	100%	100%	Holding company
Shavano Cooperatieve U.A. (3)		100%	100%	Financial Services
Morgan Stanley Humboldt Investments Limited		100%	100%	Financial Services
Morgan Stanley Equity Finance (Denmark) ApS	Bech-Bruun Dragsted, Langelinie Alle 35, 2100 , Kobenhavn, Denmark	100%	100%	Financial Services
Morgan Stanley Rivelino Investments Limited		100%	100%	Holding company
Morgan Stanley Dolor Limited	Maples Corporate Services Limited, PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands	100%	100%	Holding company
Morgan Stanley Tostao Limited	Maples Corporate Services Limited, PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands	100%	100%	Financial Services
Morgan Stanley Equity Financing Services (Sweden) AB	Hovslagargatan 5 A, 111 48 , Stockholm, Sweden	100%	100%	Financial Services
Morgan Stanley Havel GmbH	Junghofstrasse 13-15, 60311, Frankfurt am Main, Germany	100%	100%	Holding company
Morgan Stanley Cooper Investments Limited		100%	100%	Holding company
Morgan Stanley Montrose Investments Limited		100%	100%	Financial Services
Morgan Stanley Langtree Investments B.V.		100%	100%	Financial Services
Morgan Stanley Equity Investments (UK) Limited	Maples Corporate Services Limited, PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands	100%	100%	Financial Services
Clearcreek, S.L.U.	Calle Aribau 171, 8036, Barcelona, Spain	100%	100%	Financial Services
Cabot 38 Limited		100%	100%	Financial Services
Morgan Stanley Maple Investments Limited	Baker Tilly, 25 Farringdon Street, London, EC4A 4AD	100%	100%	Financial Services
Morgan Stanley Millbrae Investments B.V. (3)		100%	100%	Financial Services
Morgan Stanley Derivative Products (Netherlands) B.V.	Luna Arena, Herikerbergweg 238, 1101 CM, Amsterdam , Netherlands	100%	100%	Financial Services
Morgan Stanley Longcross Limited		100%	100%	Holding company
Morgan Stanley Derivative Products Spain S.L.	Serrano 55, 28006, Madrid, Spain	100%	100%	Financial Services
Morgan Stanley Equity Investments (Luxembourg)	Custom House, Plaza Block 6, , International Financial Services Centre, Dublin, DUBLIN 1, Ireland	99%	99%	Holding company

# MORGAN STANLEY & CO. INTERNATIONAL plc

## APPENDIX TO THE FINANCIAL STATEMENTS (continued)

List of subsidiaries, including indirect subsidiaries, as at 31 December 2016 and 31 December 2015 (continued):

Name of Company	Address of undertaking's registered office/ principal place of business (2)	Proportion of shares held by the Group (1)(3)		Nature of Business
		2016	2015	
Morgan Stanley Langton Limited		100%	100%	Holding company
Morgan Stanley Bowline Limited	Baker Tilly, 25 Farringdon Street, London, EC4A 4AD	100%	100%	Holding company
Morgan Stanley Equity Finance (Malta) Limited	SmartCity Malta, SCM 01 TMF Group (Malta) 401, Ricasoli, Kalkara SCM 1001, Malta	100%	100%	Financial Services
Morgan Stanley Equity Derivative Services (Luxembourg) S.a.r.l	20, rue de la Poste, L-2346, Luxembourg	100%	100%	Financial Services
Morgan Stanley Equity Financing Limited		100%	100%	Financial Services
Drake II Investments Limited	Maples Corporate Services Limited, PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands	100%	100%	Financial Services
Morgan Stanley Grund S.a.r.L	46A, Avenue J.F. Kennedy, L-1855, Luxembourg	100%	100%	Financial Services
Morgan Stanley Kochi Limited	Maples Corporate Services Limited, PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands	100%	100%	Holding company
Morgan Stanley Derivative Products (Portugal), Unipessoal LDA	Rua Duque de Palmela, No. 23, 1250-097, Lisbon, Portugal	100%	100%	Financial Services
Morgan Stanley Corporate Holdings (Luxembourg)	Custom House, Plaza Block 6, International Financial Services Centre, Dublin, DUBLIN 1, Ireland	100%	100%	Holding company
Morgan Stanley Heythorp Investments	Custom House, Plaza Block 6, International Financial Services Centre, Dublin, DUBLIN 1, Ireland	100%	100%	Holding company
Morgan Stanley Equity Holding (Netherlands) B.V.	Luna Arena, Herikerbergweg 238, 1101 CM, Amsterdam, Netherlands	100%	100%	Financial Services
Morgan Stanley Waterloo Limited	Maples Corporate Services Limited, PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands	100%	100%	Financial Services
Morstan Nominees Limited	25 Cabot Square, Canary Wharf, London, E14 4QA	100%	100%	Nominee company
Global Equity High Yield Fund B.V.	Weena 210-212, 3012NJ, Rotterdam, Netherlands	100%	100%	Financial Services
Morgan Stanley Client Securities Nominees Limited	25 Cabot Square, Canary Wharf, London, E14 4QA	100%	100%	Nominee company
Morgan Stanley France Holdings I S.A.S	61 Rue De Monceau, 75008, Paris, France	100%	0%	Holding company
Morgan Stanley France Holdings II S.A.S	61 Rue De Monceau, 75008, Paris, France	100%	0%	Holding company

(1) The proportion of voting rights held by the Group is the same as the proportion of shares held by the Group unless otherwise stated

(2) All entities have a registered address of 20 Bank Street, Canary Wharf, London, E14 4AD, United Kingdom, unless otherwise stated.

(3) All shares held in each Company are ordinary shares with the exception of Shavano Cooperative U.A where €1 C membership shares are held and Morgan Stanley Millbrae Investments B.V. where ordinary and preference shares are held.