

Pillar 3

Regulatory Disclosure (UK)

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1. Basel Capital Accord

The Basel Capital Accord provides a global regulatory framework for capital and liquidity. It is detailed in the “International Convergence of Capital Measurement and Capital Standards: A Revised Framework—Comprehensive Version” June 2006 (“Basel II”). This was revised in 2010 following the financial crisis through a number of reforms collectively known as Basel III, and, in particular, “Basel III: a Global regulatory framework for more resilient banks and banking systems” and “Revisions to the Basel II market risk framework”.

The revised Basel Capital Accord has been implemented in the European Union via the Capital Requirements Directive (“CRD”) and the Capital Requirements Regulation (“CRR”) (collectively known as “CRDIV”). These new requirements took effect from 1 January 2014.

The framework consists of three “pillars”:

- Pillar 1—Minimum capital requirements: defines rules for the calculation of credit, market and operational risk;
- Pillar 2—Supervisory review process: including a requirement for firms to undertake an Internal Capital Adequacy Assessment Process (“ICAAP”);
- Pillar 3—Market discipline: requires expanded disclosures to allow investors and other market participants to understand capital adequacy, particular risk exposures and risk management processes of individual firms.

2. Background to Pillar 3 Disclosures

This disclosure covers Morgan Stanley International Limited (“MSI”) together with its subsidiaries (the “MSI Group”) as discussed further in Section 3 and Section 5. The MSI Group’s ultimate parent undertaking and controlling entity is Morgan Stanley, a Delaware corporation, which together with its consolidated subsidiaries, form the Morgan Stanley Group (“Morgan Stanley Group”). Morgan Stanley is a “Financial Holding Company” as defined by the Bank Holding Company Act of 1956, as amended, and is subject to regulation by

the Board of Governors of the Federal Reserve System (the “Federal Reserve”).

The Morgan Stanley Group and its United States (“US”) Banks became subject to US Basel III requirements from 1 January 2014. For more details, see the latest Morgan Stanley Group Pillar 3 disclosure at http://www.morganstanley.com/about/ir/regulated_information.html.

Morgan Stanley is listed on the New York Stock Exchange and is required, by the US Securities and Exchange Commission (“SEC”), to file public disclosures, including Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K.

These disclosures can be found at http://www.morganstanley.com/about/ir/sec_filings.html.

Public disclosures, including those required under Pillar 3 by the Prudential Regulation Authority (“PRA”) and the Financial Conduct Authority (“FCA”), will continue to evolve over time. The qualitative and quantitative information contained in this document represents the position of the MSI Group as at 31 December 2014, unless otherwise stated.

The numerical disclosures in this document are calculated by reference to regulatory methodologies set out in CRDIV and are not necessarily the primary exposure measures used by internal management. These exposures include intragroup exposures that form a sizeable proportion of the total exposure.

This document does not constitute a set of financial statements. With effect from 2014, the MSI Group has applied the United Kingdom (“UK”) Companies Act 2006 exemption from producing group accounts. The exemption applies for a UK parent company where certain requirements are met, including that the UK parent is included in group accounts of a larger non-European Economic Area (“EEA”) group on an equivalent basis. Financial statements for the group will therefore not be published, although they are available for each regulated entity including group financial statements for Morgan Stanley & Co. International plc and its subsidiaries (“MSIP Group”), which form the significant majority of the MSI Group. Management accounts for the MSI Group, as received by the MSI Board and the MSI Audit Committee, are prepared in accordance with applicable UK company law and UK Accounting Standards (“UK GAAP”).

Trading Book and Non-Trading Book definitions used in this document refer to the regulatory view and may differ from the accounting definitions.

THE MSI Group is a wholly owned subgroup of the Morgan Stanley Group. Whilst the MSI Group is a material sub-group, the information disclosed in this document is not necessarily indicative of the Morgan Stanley Group as a whole, nor is it comprehensively representative of the Morgan Stanley Group’s activity in any particular region. Investors, stakeholders, creditors or other users seeking information on capital adequacy, risk exposure and risk management policies should consult the public disclosures of Morgan Stanley Group.

3. Application of the Pillar 3 Framework

This document represents the annual public Pillar 3 qualitative and quantitative disclosures required by the CRDIV in relation to the MSI Group.

The remuneration requirements (CRR article 450) are met in the Remuneration disclosure, published separately. This can be found at <http://www.morganstanley.com/about-us-ir/pillar-uk.html>.

This disclosure is made on a consolidated basis, rather than on an individual basis for each regulated entity, as allowed by CRDIV.

The basis of consolidation for prudential purposes is materially the same as consolidation for accounting purposes. The MSI Group completes its prudential consolidation in compliance with CRR Part One, Title II Chapter 2.

The most significant subsidiary of the MSI Group is MSIP, the results of which are material to the MSI Group. The risk profile of MSIP is materially the same as the MSI Group and risk management policies and procedures are applied consistently.

The MSI Group has policies and procedures in place to assess the appropriateness of its Pillar 3 disclosures, including their verification and frequency.

This disclosure comprehensively conveys the risk profile of the MSI Group.

4. Key Basel III Changes

CRDIV came into effect from 1 January 2014. The disclosures made in this document therefore have some material differences to the last disclosure made for 31 December 2013 due to these new requirements.

The new requirements include the following material items:

- a. New requirements to raise the quality, consistency and transparency of the capital base:
 - Tier 3 capital resources are no longer eligible.
 - Restrictions on ability to recognise minority investments at a consolidated level are now applied.
 - A new potential deduction is applied when holding capital instruments of other financial institutions over a certain threshold.
- b. Introduction of new capital ratios and buffers to ensure higher levels of capital to be available in stress periods:
 - New Common Equity Tier 1 and total Tier 1 ratios apply.
 - Capital conservation buffer introduced to ensure banks build up capital buffers outside of periods of stress that can then be drawn down in a stress period. This buffer is phased in between 1 January 2016 and January 2019.
 - Countercyclical buffer introduced to ensure macro-financial factors, for example, excess credit growth, are accounted

for. The buffer will increase the minimum capital ratio by between 0% and 2.5% based on exposures to jurisdictions that have been identified as having excess credit growth. As at 31 December 2014 this buffer was 0% but with effect from 3 October 2015, exposures to Sweden and Norway will be subject to a 1% buffer. From 27 January 2016 exposures to Hong Kong will be subject to a 0.625% buffer.

- Global Systemically Important Institutions (“G-SIIs”) are subject to an additional buffer. In addition, other systemic buffers may be applied to ring-fenced banks. Neither of these are applicable to the MSI Group.
- c. Increased capital requirements to cover counterparty credit risk:
 - Inclusion of the concept of stressed Internal Model Method (“IMM”) whereby the counterparty exposure measure under the IMM is calibrated using stressed inputs.
 - Addition of a new capital requirement to capture exposure to Credit Valuation Adjustments (“CVA”).
 - Increased requirements for credit exposures to large financial institutions.
 - New standards for collateral management.
 - New requirements when facing central counterparties.
 - d. Introduction of a leverage ratio to provide a credible supplementary non-risk based measure to the risk-based capital requirements, to be disclosed after 1 January 2015. For a further discussion see Section 10, Leverage and Liquidity Requirements.
 - e. Introduction of new global liquidity standards.
 - f. Introduction of reporting on encumbered assets.

5. Morgan Stanley International Limited and the MSI Group

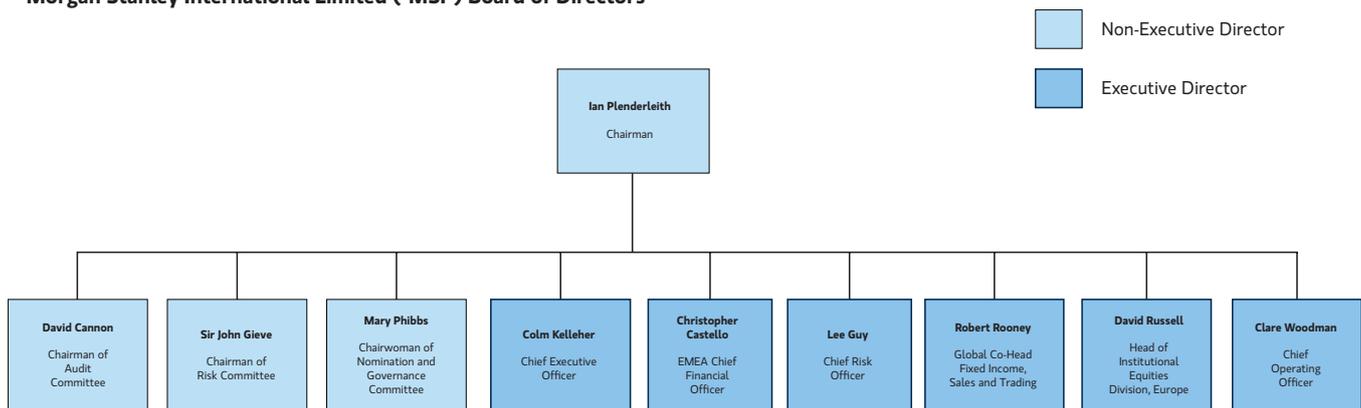
The Morgan Stanley Group structures its business segments primarily based upon the nature of the financial products and services provided to customers. The MSI Group’s own business segments are consistent with those of the Morgan Stanley Group.

The principal activity of the MSI Group is the provision of financial services to corporations, governments and financial institutions. There have not been any significant changes in the period under review and no other significant changes in the MSI Group’s principal activity is expected.

As at 31 December 2014, the following entities within the MSI Group were authorised by the PRA and regulated by the PRA and FCA:

- Morgan Stanley & Co. International plc (“MSIP”)
- Morgan Stanley Bank International Limited (“MSBIL”)
- Morgan Stanley Securities Limited (“MSSL”)¹.

1. On 31 March 2015, Morgan Stanley submitted an application to the PRA to deregister MSSL ahead of its planned closure. This will not impact the risk profile of the MSI Group.

Morgan Stanley International Limited ("MSI") Board of Directors

The following entities within the MSI Group were authorised and regulated by the FCA:

- Morgan Stanley & Co. Limited ("MSCL")
- Morgan Stanley Investment Management Limited ("MSIM")
- Morgan Stanley Investment Management (ACD) Limited ("MSIM ACD")

The MSI Group includes all the entities that form part of the accounting consolidation group.

As at 31 December 2014, no deductions were required due to investments in subsidiaries.

As at 31 December 2014, the MSI Board was comprised of 10 directors (6 executive directors and 4 non-executive directors). A summary of their knowledge, skills and expertise is set out below:

Ian Plenderleith

Ian Plenderleith was appointed a non-executive director in December 2011 and as Chairman of the MSI Board in January 2014. He is also a member of the MSI Audit Committee and Risk Committee.

Ian has worked in the financial sector for over forty years. He was Executive Director responsible for Financial Market Operations at the Bank of England when he retired in 2002 and held a number of other positions with the Bank of England since joining in 1965, including Head of the Bank of England's Markets Division (1980 to 1994) and Private Secretary to the Governor of the Bank of England (1976 to 1979). Ian was a member of the Monetary Policy Committee from its inception in 1997. He has also served as Deputy Governor of the South African Reserve Bank (2003 to 2005).

Ian holds non-executive directorships at a number of other financial institutions. He also has a degree in Literae Humaniores from Oxford University and an MBA from Columbia Business School.

Colm Kelleher

Colm Kelleher is President of Morgan Stanley Institutional Securities, CEO of EMEA and Asia Pacific and an Executive Director of the MSI Board (appointed April 2011).

Prior to assuming this role in January 2010, Colm served as Chief Financial Officer and Co-Head of Corporate Strategy for

MSI Group (2007 to 2009) and Head of Global Capital Markets (2006 to 2007). Prior to 2006, he held a number of other roles including Co-Head of Fixed Income Europe, Sales.

Colm has an M.A. in History from the University of Oxford and qualified as a Chartered Accountant at Arthur Anderson & Co. before joining Morgan Stanley in 1989.

David Cannon

David Cannon was appointed a non-executive director of the MSI Board in June 2013. He is Chairman of the MSI Audit Committee and a member of the Risk Committee and the Nomination and Governance Committee.

David has over thirty years' experience in the financial sector, with a particular focus on accounting and investment banking. He was a Partner at Ernst & Young from 1986 to 1995, leading the audit of a number of large financial services groups and being responsible for one of Ernst & Young's audit divisions before leaving in 1995 to become Chief Financial Officer of BZW/Barclays Capital. He returned to Ernst & Young in 1998 as Managing Partner of the London Financial Services Office. Between 2003 and 2012, David held a number of positions at Deutsche Bank including Deputy Group CFO and Chief Finance Officer for the Investment Bank.

David has an M.A. in PPE from the University of Oxford and is a qualified Chartered Accountant.

Sir John Gieve

Sir John Gieve was appointed a non-executive director of the MSI Board in October 2012. He is a Chairman of the MSI Risk Committee and a member of the Audit Committee and Nomination and Governance Committee.

Sir John has over twenty years' experience in government and public institutions, including the Treasury and the Bank of England. Between 2006 and 2009, he was Deputy Governor of the Bank of England, a member of the Monetary Policy Committee and sat on the Board of the Financial Services Authority. Sir John has spent much of his career in government: he was Private Secretary to three Chancellors and Permanent Secretary at the Home Office.

Sir John is a non-executive director of a number of other organisations. He holds a degree in PPE and a Master's in Philosophy from the University of Oxford.

Mary Phibbs

Mary Phibbs was appointed a non-executive director of the MSI Board in May 2013. She chairs the MSI Nomination and Governance Committee and is a member of the Audit Committee and Risk Committee.

Mary has over thirty years' experience in audit, advisory, banking (wholesale and retail), finance and insurance in the UK, Australia and Asia Pacific. During her career she has held roles with a number of retail and investment banks predominantly in Australia, including Standard Chartered Bank and National Australia Bank.

Mary holds a number of non-executive directorships with other financial institutions. She also has a Bachelor of Science degree from Surrey University and is a qualified Chartered Accountant.

Christopher Castello

Christopher Castello is EMEA Chief Financial Officer and an executive director of the MSI Board (appointed September 2014).

Christopher joined Morgan Stanley in March 2014 from Goldman Sachs Group where he was Asia Pacific Controller (2008 to 2014) and Chief Administrative Officer Japan and Korea (2012 to 2014). Prior to this, Christopher held roles in Product Control, including Product Control Managing Director and Head of Asia Product Control. He joined Goldman Sachs Group in 1993.

Christopher has a First Class Honours degree in Business Administration from Pace University and an MBA from Columbia Business School. He holds Chartered Financial Analyst and Certified Public Accountant qualifications.

Lee Guy

Lee Guy is EMEA Chief Risk Officer and an executive director of the MSI Board (appointed September 2014).

Lee joined Morgan Stanley in July 2014 from Barclays Investment Bank where he was Co-Chief Risk Officer from 2011. Prior to this, Lee was Head of Operational Risk (2011) and Head of Market Risk (2004 to 2011) at Barclays Capital Inc. Lee has also held risk management roles at Dresdner Kleinwort Wasserstein (2001 to 2004) and Kleinwort Benson Limited (1994 to 1997).

Lee has a degree in Mathematics from Warwick University and is a Chartered Financial Analyst.

Robert Rooney

Robert Rooney is Global Co-Head of Fixed Income, Sales & Trading and an executive director of the MSI Board (appointed July 2010).

Robert was appointed to this role in May 2013. Prior to this he held a number of other roles within Morgan Stanley including Head of Fixed Income EMEA, Global Head of Income Sales, Client Coverage.

Robert graduated from Columbia University in 1989 before joining Morgan Stanley in 1990.

David Russell

David Russell is Head of Morgan Stanley's Institutional Equities Division in Europe and an executive director of the MSI Board (appointed May 2011).

He joined Morgan Stanley in 1990 as a European Equity trader and has held a number of other roles including Head of Trading

for Europe and Head of Institutional Equities Division in Asia before taking up his current role.

David graduated from the University of London in 1987 with a degree in History before joining Morgan Stanley in 1990.

Clare Woodman

Clare Woodman is Chief Operating Officer of Morgan Stanley International, Co-Global Chief Operating Officer of Morgan Stanley's Institutional Securities Group and an executive director of the MSI Board (appointed March 2009).

Clare joined Morgan Stanley in 2002 as a lawyer specialising in Banking and Derivatives for Global Capital Markets and Investment Banking in EMEA. She was previously a lawyer with Clifford Chance in London and New York.

Clare is a non-executive director for a number of financial associations. She is also a trustee of the Morgan Stanley International Foundation, Morgan Stanley's charitable trust entity.

Clare has a First Class Honours degree in Government from the University of Essex and a graduate diploma in Law from the College of Law and qualified as a solicitor in 1994.

Morgan Stanley International Limited Directors — Number of Directorships

| | NUMBER OF DIRECTORSHIP HELD AS AT 31 DECEMBER 2014 | DIRECTORSHIPS ADJUSTED FOR SYSC4.3A.7(2) |
|-----------------------------|---|--|
| Ian Plenderleith (Chairman) | 9 | 4 |
| Colm Kelleher | 6 | 1 |
| David Cannon | 4 | 1 |
| Sir John Gieve | 8 | 4 |
| Mary Phibbs | 10 | 4 |
| Christopher Castello | 1 | 1 |
| Lee Guy | 3 | 1 |
| Robert Rooney | 4 | 1 |
| David Russell | 7 | 2 |
| Clare Woodman | 10 | 3 |

Appointments to MSI Board

When identifying and recommending candidates to join the MSI Board, the MSI Nomination and Governance Committee will consider a broad range of qualities and characteristics, giving due regard to ensuring a broad range of knowledge, skills, diversity and experience is present on the Board and its Committees. It will also take into account relevant policies of the MSI Group. When identifying and selecting non-executive directors, the Nomination and Governance Committee may also consult with executive search firms (no such appointments were made in 2014). The Nomination and Governance Committee met five times during 2014.

Diversity and the Composition of the MSI Board

The MSI Board recognises the importance and benefits of diversity both within business operations and at a board level. All appointments to the MSI Board are made on merit, in the

context of the skills and experience that the MSI Board as a whole requires to be effective, with due regard given to the benefits of diversity. When assessing the composition of the MSI Board and recommending new directors, the MSI Nomination and Governance Committee considers the benefits of all aspects of diversity, including gender diversity.

The MSI Board is aiming to reach a target of 25% female representation by the end of 2016. Selection of female candidates to join the MSI Board will be, in part, dependent on the pool of female candidates with the necessary skills, knowledge and experience. In order to promote the specific objective of gender diversity at Board level, the Nomination and Governance Committee expects short-lists of potential candidates prepared by external executive search firms to include at least one female candidate.

6. Valuation and Accounting Policies

Audited financial statements are prepared where there is a legal requirement, which includes all material subsidiaries, in accordance with applicable UK company law, UK GAAP and for the MSIP Group in accordance with International Financial Reporting Standards (“IFRS”).

As noted in Section 2, financial statements for the MSI Group will not be published as at 31 December 2014, although standalone audited financial statements are prepared for MSI.

The MSI Group relies on its policies, procedures and systems to determine the adequacy of valuation for financial assets and compliance with accounting standards. To comply with the requirements of CRDIV, additional valuation adjustments are applied to capital over and above those that are taken in order to comply with UK GAAP.

7. Regulatory Capital

Capital Resources, described in CRR and tables below as Own Funds and Risk Weighted Assets (“RWA”) as at 31 December 2014 are calculated and presented on the basis of CRDIV. Table 1 summarises the MSI Group’s key capital ratios.

Table 1: Capital Summary

| | MSI GROUP \$MM | MSIP \$MM |
|------------------------------|-------------------|---------------|
| Common Equity Tier 1 Capital | 17,075 | 13,493 |
| Additional Tier 1 Capital | 1,300 | 1,300 |
| Tier 1 Capital | 18,375 | 14,793 |
| Tier 2 Capital | 9,225 | 7,906 |
| MSI Own Funds | 27,600 | 22,699 |
| RWA | 143,630 | 130,819 |
| CET 1 Ratio | 11.9% | 10.3% |
| Tier 1 Capital Ratio | 12.8% | 11.3% |
| Total Capital Ratio | 19.2% | 17.4% |
| Capital Adequacy Ratio | 240.2% | 216.9% |

8. Capital Resources

Under PRA supervision, the MSI Group is required to maintain a minimum ratio of total capital resources to capital requirements. As at 31 December 2014, the MSI Group is in compliance with the PRA capital requirements as defined by CRR. All capital resources included in Tier 1 and 2 capital are of standard form and the main terms and conditions of the capital instruments are disclosed in Appendix I.

Table 2 shows the regulatory capital resources of the MSI Group and MSIP as at 31 December 2014. They are based on management accounts and audited financial statements, respectively.

Table 2: Own Funds

| | MSI GROUP \$MM | MSIP \$MM |
|--|-------------------|---------------|
| Capital instruments eligible as CET1 Capital | 1,614 | 11,977 |
| Retained earnings | 9,800 | 1,520 |
| Accumulated other comprehensive income | (441) | (82) |
| Other reserves | 7,461 | 1,402 |
| Adjustments to CET1 due to prudential filters | (1,016) | (992) |
| IRB shortfall of credit risk adjustments to expected losses | (258) | (252) |
| Free deliveries which can alternatively be subject to a 1.250% risk weight | (85) | (80) |
| Common Equity Tier 1 Capital | 17,075 | 13,493 |
| Additional Tier 1 Capital | 1,300 | 1,300 |
| Tier 1 Capital | 18,375 | 14,793 |
| Capital instruments and subordinated loans eligible as T2 Capital | 1,300 | 7,906 |
| Instruments issued by subsidiaries that are given recognition in T2 Capital | 5,951 | 0 |
| Transitional adjustments due to additional recognition in T2 Capital of instruments issued by subsidiaries | 1,974 | 0 |
| Tier 2 Capital | 9,225 | 7,906 |
| Total Own Funds | 27,600 | 22,699 |

1. MSI Group’s Tier 1 Capital and Total Capital Resources as at 31 December 2013 were \$18,727MM and \$29,222MM, respectively, based on audited financial statements.

2. MSIP’s Tier 1 Capital and Total Capital Resources as at 31 December 2013 were \$15,348MM and \$22,920MM, respectively.

There are no current or foreseen material practical or legal impediments to the prompt transfer of capital resources or repayment of liabilities among the MSI Group and its subsidiary undertakings.

Management review capital levels on an ongoing basis in light of changing risk appetite, business needs and the external environment.

Management ensure that appropriate levels of capital are maintained to support business needs whilst remaining in compliance with the target operating range established by the relevant MSI Group governing bodies and applicable regulatory requirements.

9. Regulatory Capital Requirements

The MSI Group calculates Pillar 1 capital requirements in accordance with CRDIV. As at 31 December 2014, the MSI Group had the following capital requirements, as detailed in Table 3.

Credit and counterparty credit risk refers to the risk of loss arising when a borrower, counterparty or issuer does not meet its financial obligations. Credit and counterparty credit capital requirements are derived from RWA, determined using approved internal modelling approaches—the foundation Internal Ratings Based approach (“IRB”) for credit risk and the IMM for counterparty risk—as well as standardised approaches. For a further discussion, see Section 14 Credit Risk.

Market risk is the risk of loss resulting from adverse changes in market prices and other factors. The market risk capital requirements of the MSI Group comprise capital associated with the internal modelling approaches approved by the PRA and that associated with the standardised approach. For a further discussion, see Section 15 Market Risk.

Operational Risk refers to the risk of loss or damage to Morgan Stanley’s reputation, resulting from inadequate or failed processes, people and systems or from external events. This definition includes legal risk, but excludes strategic risk. Capital requirements for operational risk are currently calculated

under the Basic Indicator Approach. For a further discussion, see Section 13 Operational Risk.

Credit Valuation Adjustment is the capital requirement that covers the risk of mark-to-market losses on the expected counterparty risk of Over-the-Counter (“OTC”) derivatives. It is calculated based on the combination of an advanced approach based on using internal modelling approaches and a standardised approach.

Large Exposures in the Trading Book is the capital requirement that covers the risk due to concentrated exposures to a single counterparty or group of connected counterparties. This capital requirement is entirely due to MSI Group exposures to other Morgan Stanley Group counterparties.

The risk capital calculations evolve over time as the MSI Group enhances its risk management strategy and incorporates improvements in modelling techniques while maintaining compliance with the regulatory requirements.

10. Leverage and Liquidity Requirements

As at December 2014, the MSI Group had a leverage ratio of 4.5%. The leverage ratio was prepared on the basis of the CRDIV. Since January 2015, the leverage ratio has been prepared on the basis of the delegated act passed by the European Commission. There was no material movement in the ratio after the implementation of the delegated act compared to the original CRR requirements.

Ahead of the implementation of the liquidity coverage ratio later in 2015, the MSI Group has developed processes to report the ratio. This is in compliance with the CRR requirements and the delegated act published in October 2014.

Table 3: Regulatory Capital Requirements

| | MSI GROUP CAPITAL REQUIREMENTS \$MM | MSIP CAPITAL REQUIREMENTS \$MM |
|---|---|--------------------------------------|
| Foundation Internal Ratings Based | 3,993 | 3,754 |
| Standardised | 358 | 266 |
| Credit Risk and Counterparty Credit Risk | 4,351 | 4,020 |
| Internal Model | 3,140 | 3,114 |
| PRA’s Approved Models | 1,639 | 1,237 |
| Market Risk | 4,779 | 4,351 |
| Operational Risk | 789 | 503 |
| Credit Valuation Adjustment | 1,159 | 1,120 |
| Large Exposures in the Trading Book | 398 | 466 |
| Settlement and Delivery Risk | 14 | 6 |
| Total | 11,490 | 10,466 |

1. MSI Group’s RWA as at 31 December 2014 was \$143,630MM.

2. MSIP’s RWA as at 31 December 2014 was \$130,819MM.

3. MSI Group’s Capital Requirements and RWA as at 31 December 2013 were \$7,783MM and \$97,292MM, respectively.

4. MSIP’s Capital Requirements and RWA as at 31 December 2013 were \$6,117MM and \$76,463MM, respectively.

11. Application of the Pillar 2 Framework

The MSI Group prepares an ICAAP document annually in order to meet its obligations under CRDIV.

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:

- Is designed to ensure the risks to which the MSI Group is exposed 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.
- Assesses capital adequacy under normal and stressed operating environments over the three year capital planning horizon to ensure the MSI Group maintains a capital position in line with internal operating targets and 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.

Supervisory Review

The PRA reviews the MSI Group ICAAP through its Supervisory Review Process (“SREP”) and sets an Individual Capital Guidance (“ICG”) which establishes the minimum level of regulatory capital for the MSI Group. In addition, the PRA requires a capital planning buffer which is available to support the MSI Group in a stressed market environment.

12. Risk Management Objectives and Policies

As a global firm, Morgan Stanley advises, originates, trades, manages and distributes capital for clients globally. The Firm does this in a manner consistent with its core values and which draws upon capabilities that reside across all of its legal entities to deliver strong returns for shareholders and builds long-term value for clients.

The business strategy acts as a key driver for the MSI Group’s business model which in turn drives the risk strategy and the consequent risk profile of the group. As part of the annual strategic review and subsequent planning process, or more frequently if necessary, business strategy and risk assessment are considered and aligned.

Risk Strategy and Appetite

The MSI Group assesses appetite for risk-adjusted returns through prudent and conservative risk-taking that protects its capital base and franchise, utilising risk limits and tolerances that avoid outsized risk-taking. 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 MSI Group’s risks. The combination of risk appetite, tolerance statements and limits aims to ensure that the MSI Group’s businesses are carried out in line with its risk strategy in both normal and stressed environments.

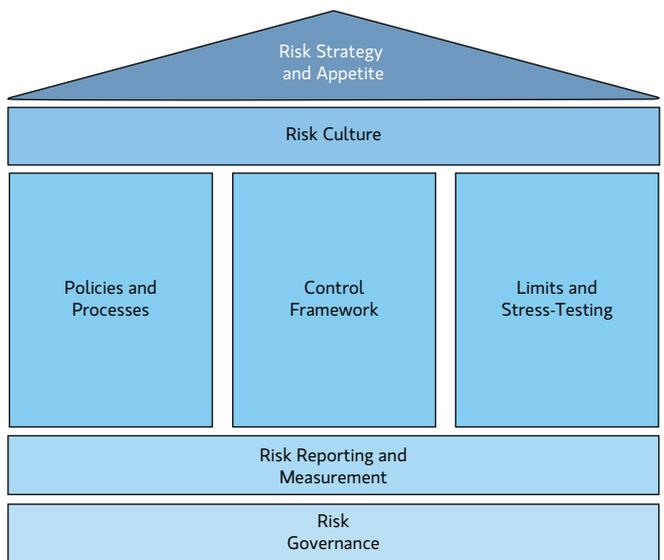
Risk Culture

The MSI Group promotes a sound risk culture that encourages open dialogue, effective challenge, escalation and reporting of risk to senior management, the MSI Risk Committee, the MSI Board and the MSI Group’s regulators as well as external disclosures of risk matters.

Risk Management Framework

Risk of loss is an inevitable consequence of the MSI Group’s businesses activities and effective risk management is vital to the group’s success. The key elements of the MSI Group’s Risk Management Framework are outlined in Figure 1.

Figure 1 Risk Management Framework



Risk Policies and Processes

The MSI Group has a number of policies and processes to establish the standards which govern the business and operations across the group. A number of these policies (along with associated procedures and guidance) cover the identification, measurement, management, monitoring, control and mitigation of the MSI Group’s risks.

Control Framework

The MSI 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” model as outlined in Figure 2. 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).

Figure 2 The MSI Group’s Three Lines of Defence — Risk Management



Limits Framework

The MSI Group’s risk appetite is translated into four primary areas: Market risk, Credit risk, Operational risk and Liquidity and Funding risk. 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 MSI Board. Stress tests set the boundary for risk-taking activities relative to the 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 comprises market and credit risk limits, and macroeconomic stress scenarios and proprietary tail risk metric limits, which are all set by the MSI Board. These are complemented by granular business line limits that are set by the risk senior management for day-to-day risk management.

The MSI Board approves quantitative loss thresholds for each of the identified top operational risks as well as in aggregate for the MSI Group.

The MSI Group mitigates Liquidity and Funding risk through the liquidity tolerance limits and a Liquidity Risk Management

Framework which provides for an appropriate structure to measure, monitor and manage the MSI Group’s Liquidity and Funding risk. The limit framework and certain individual limits are reviewed and approved by the MSI Board at least annually.

Stress Testing

Stress testing plays a central role in the MSI Group, informing a number of processes and associated decisions. Most notably, stress testing is used for:

- Risk management: Identifying areas of potential losses in the portfolio as a basis for senior management to review portfolio-level risk, determine risk mitigation actions and set exposure limits;
- Capital planning: Informing the proposed stressed capital forecasts; and
- Reverse Stress Testing (“RST”): Assessing the impact of extraordinary stresses on the MSI Group tests the business plan to failure and ensures appropriate mitigation is in place. The results feature prominently within the MSI Group’s Annual Recovery Plan. In addition, vulnerabilities highlighted as part of the RST Process are used to inform the suite of macroeconomic stress tests.

Figure 3 MSI Group Limit Framework

| | MARKET RISK | CREDIT RISK | OPERATIONAL RISK | LIQUIDITY AND FUNDING RISK |
|--------------------------------|--|---|---|---|
| RISK METRICS AND LIMITS | <ul style="list-style-type: none"> • MSI Group-wide Macroeconomic Scenario Loss Limits and proprietary tail risk metric • Legal Entity Value at Risk (“VaR”) and Exposure limits • Detailed risk exposure limits are allocated by Desk/Products | <ul style="list-style-type: none"> • MSI Group-wide Macroeconomic Scenario Loss Limits and proprietary tail risk metric • MSI Group Credit Limits • Single Name, Country, and Industry Credit Limits | <ul style="list-style-type: none"> • Operational risk is assessed through risk control self-assessments, scenario analysis and key risk indicators • Quantitative thresholds for each top operational risk and against an aggregate risk tolerance level • Conduct Risk is managed within the context of the UK Group Conduct Risk Framework | <ul style="list-style-type: none"> • Liquidity Risk Tolerance Limits • The MSI Group’s liquidity and funding risk and Operating Environment Indicators (“OELs”) |

Risk Reporting and Measurement

The MSI 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 MSI Group’s risk profile against risk limits and risk tolerance statements. Reporting identifies matters for decisions as well as to highlight emerging risks, mitigating actions and matters that are significant to the MSI Group’s strategy. Material risk issues are investigated and escalated where appropriate as per the specific escalation procedures. Escalation triggers have been articulated, with separate triggers for notification and further escalation where relevant.

The Risk reporting capabilities are supported by a well-controlled infrastructure, including front-office risk systems and the MSI 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 MSI Board and EMEA executive management develop and oversee Morgan Stanley’s strategy in Europe. EMEA executive management are responsible for its execution. Details of the MSI Board and its Committee structure, the EMEA Executive Committee structure and selected management level committees are set out in Figure 4.

The **MSI Board** (and its Committees) determines the strategy for the 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 authorities to its Audit, Risk and Nomination and Governance committees. The MSI Board, through the dedicated risk committee, is regularly informed of the group’s risk profile and relevant trends impacting its risk profile.

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 committees; (iii) recommend to the board corporate governance principles applicable to the group.

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

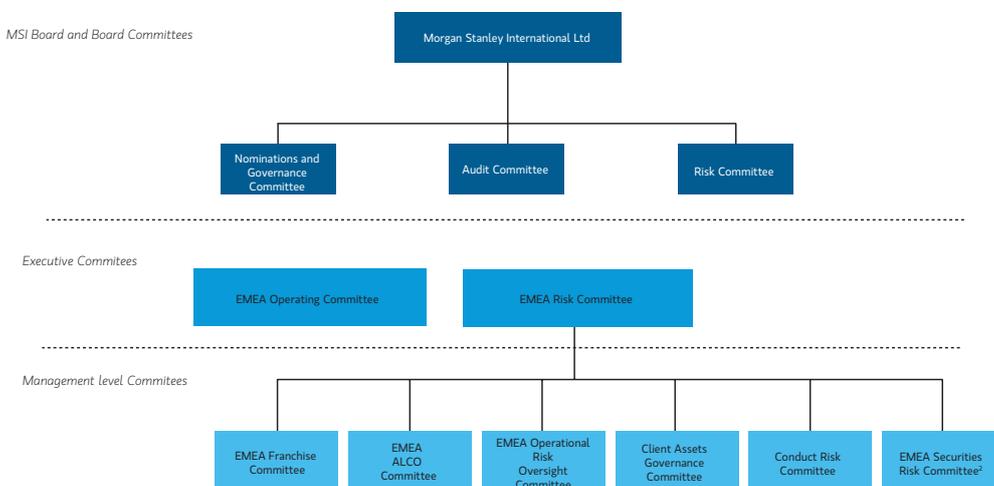
The **MSI Risk Committee** is appointed by the MSI Board to assist and provide guidance to the board on the management of financial and non-financial risks, including: (i) risk strategy and appetite; (ii) risk identification and management; (iii) risk governance framework and policies; (iv) measurement of risk and risk tolerance levels and limits; (v) risk culture; and (vi) financial resource management and capital. The MSI Risk Committee met eleven times in 2014.

The **EMEA Operating Committee** is the forum for key decisions regarding matters affecting the operations and performance of the 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** is appointed by the EMEA Chief Executive Officer to assist 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) Risk Culture; and (v) Financial Resource Management.

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

Figure 4 MSI Board Committee Structure and EMEA Executive Management Structure¹



¹ Select management committees associated with risk governance.

² Does not include all Management Committees.

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

The **EMEA Securities Risk Committee** is a senior management forum to discuss the market and credit risk profile for the MSI Group.

Adequacy of Risk Management Arrangements

The MSI Board is satisfied that the risk management arrangements and systems, as described above, are appropriate given the strategy and risk profile of the group. These elements are often reviewed and, where applicable, updated to reflect best practice, evolving market conditions and in response to changing regulatory requirements.

Risk Coverage

The Pillar 3 disclosures in this document cover the principal risks facing the MSI Group. Details of these, together with the accompanying risk mitigation policies, for Credit Risk and Market Risk are covered in Section 14 and Section 15.

13. Operational Risk

Operational Risk is defined as the risk of loss resulting from inadequate or failed internal 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 includes information security, supplier management and outsourcing risk. Operational risk relates to the following risk event categories as defined by Basel III: 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.

Operational risk may be incurred across the MSI Group's full scope of business activities, including revenue-generating activities (e.g. sales and trading) and support control functions (e.g. information technology and trade processing).

The MSI Group has established an operational risk framework to identify, measure, monitor and control risk in the context of an approved risk tolerance appetite, set by the MSI Board. Effective operational risk management is essential to reducing the impact of operational risk incidents and mitigating legal and reputational risks.

The MSI Group has implemented operational risk data and assessment systems to monitor and analyse internal and external operational risk events, business environment and internal control factors and to perform scenario analysis. The collected data elements are incorporated in the operational risk capital model which encompasses both quantitative and qualitative elements.

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

14. Credit Risk

14.1 Credit Risk Management

Credit and counterparty risk refers to the risk of loss arising when a borrower, counterparty or issuer does not meet its financial obligations. The MSI Group primarily incurs credit risk exposure to Corporates, Institutions, Central Governments and Central Banks through its Institutional Securities business segment. In order to help protect the MSI Group from losses resulting from its business activities, the Credit Risk Management ("CRM") function establishes practices to evaluate, monitor and control credit risk exposure at the transaction, obligor and portfolio levels. CRM analyses material lending and derivative transactions and ensures that the creditworthiness of the MSI Group's counterparties and borrowers is reviewed regularly and that credit exposure is actively monitored and managed.

Credit Risk Policies and Procedures

The CRM policies and procedures of the MSI Group aim to ensure transparency of material credit risks, compliance with established limits, requisite approvals for material extensions of credit, and escalation of risk concentrations to appropriate senior management.

Credit Risk Limits

Credit risk exposure is managed under limits delegated by the MSI Board. The MSI Group Credit Limits Framework is one of the primary tools used to evaluate and manage credit risk levels. The Credit Limits Framework includes single name limits and portfolio concentration limits by country, industry and product type (counterparty, lending, settlement and treasury). The MSI Group credit limits restrict potential credit exposure to any one borrower or counterparty and to groups of connected borrowers or counterparties. The limits are assigned based on multiple factors including the size of counterparty, the counterparty's Probability of Default ("PD"), the perceived correlation between the credit exposure and the counterparty's credit quality, and the Loss-Given Default ("LGD") and tenor profile of the specific credit exposure.

Credit Evaluation

The MSI Group is exposed to single-name credit risk and country risk, requiring credit analysis of specific counterparties, both initially and on an ongoing basis. Credit risk management takes place at the transaction, counterparty and portfolio levels. For lending transactions, the MSI Group evaluates the relative position of its particular exposure in the borrower's capital structure and relative recovery prospects. The MSI Group also considers collateral arrangements and other structural elements of the particular transaction.

14.2 Counterparty and Credit Risk Capital Requirements

The regulatory framework distinguishes between Credit Risk and Counterparty Credit Risk capital requirements. The Credit Risk capital component reflects the capital requirements attributable to the risk of loss arising from a borrower failing to meet its obligations and relates to investments made in the Non-Trading Book such as loans and other securities that the MSI Group holds until maturity with no intention to trade. Counterparty credit exposure arises from the risk that counterparties are unable to meet their payment obligations under contracts for traded products including OTC derivatives, securities financing transactions and margin lending. The distinction between Credit Risk and Counterparty Credit Risk exposures is due to the bilateral nature of the risk for Counterparty Credit Risk exposures.

The MSI Group uses the IMM and the Mark-to-Market Method for calculating its Counterparty Credit Risk exposure. The majority of OTC derivatives within the MSI Group are in scope of the IMM permission. The IMM approach uses a Monte Carlo simulation technique to measure and monitor potential future exposures of derivative portfolios. The models used simulate risk factors and replicate the risk mitigation techniques such as netting and collateral. The most material risk factors are calibrated daily to market implied data, while other risk factors are calibrated based on three years or more of historical data.

RWA are determined using the IRB approach which reflects the MSI Group's internal estimate of a borrower or counterparty's creditworthiness. For exposures not covered by the IRB approach, the standardised approach is applied. The standardised approach uses supervisory risk weights which are a function of the exposure class and, where applicable and available, the rating by an External Credit Assessment Institution ("ECAI") of the borrower or counterparty.

Table 4 shows the Credit Risk and Counterparty Credit Risk for the MSI Group as at 31 December 2014, for each exposure class, as per the classifications set out in the CRR.

Table 4: Credit Risk and Counterparty Credit Risk EAD, RWA and Capital Requirements

| | EAD \$MM | RWA \$MM | CAPITAL REQUIRE- MENTS \$MM |
|---|----------------|---------------|--------------------------------------|
| IRB | | | |
| Central Governments or Central Banks | 6,578 | 1,073 | 86 |
| Corporates | 59,767 | 29,311 | 2,344 |
| Equity | 1,276 | 3,955 | 316 |
| Institutions | 49,757 | 14,995 | 1,200 |
| Securitisation | 730 | 583 | 47 |
| Total (IRB) | 118,108 | 49,917 | 3,993 |
| Standardised | | | |
| Central Governments or Central Banks | 5 | 5 | 0 |
| Corporates | 9,283 | 3,775 | 304 |
| High Risk | 0 | 0 | 0 |
| Institutions | 6,180 | 280 | 22 |
| Multilateral Developments Banks | 0 | 0 | 0 |
| Public Sector Entities | 2 | 2 | 0 |
| Regional Governments or Local Authorities | 266 | 6 | 0 |
| Securitisation | 302 | 355 | 28 |
| Units or Shares in CIUs | 50 | 50 | 4 |
| Total (Standardised) | 16,088 | 4,473 | 358 |
| Grand Total | 134,196 | 54,390 | 4,351 |

1. Capital Requirements is calculated as 8% of RWA.

2. Exposure classes where the MSI Group has no exposure are not shown in the table.

14.3 Internal Ratings Based Approach

The MSI Group has permission to use the IRB for the calculation of credit and counterparty credit risk capital requirements. The permission covers all material portfolios and is applicable to all exposures to Central Governments, Central Banks, Institutions and Corporates.

The MSI Group leverages the IRB process for internal risk management processes. IRB is used in the sizing of credit limits and influence the terms under which credit exposures are undertaken, including collateral and documentation.

Rating Process

CRM expresses the creditworthiness of each counterparty by assigning it a rating. The rating scale includes 18 segments on a scale from AAA to D, with a single category for defaulted counterparties.

Counterparty ratings correspond to a PD, a “through the cycle” measure that reflects credit quality expectation over a medium-term horizon. Each rating is linked to an exposure limit. To monitor the credit risk of the portfolio, the MSI Group uses quantitative models to estimate various risk parameters related to each counterparty and/or facility. CRM rates counterparties based on analysis of qualitative and quantitative factors relevant to credit standing in that industry or sector. The rating process typically includes analysis of the counterparty’s financial statements, evaluation of its market position, strategy, management, legal and environmental issues, and consideration of industry dynamics affecting its performance. Credit professionals also consider security prices and other financial data reflecting a market view of the counterparty, and carry out due diligence with the counterparty’s management, as needed.

CRM assigns counterparty ratings at the highest level in the counterparty’s corporate structure. A subsidiary’s rating may vary based on a variety of factors considered and documented during the rating process.

MSI Group wholesale exposures fall in to the following exposure classes: Central Governments or Central Banks, Institutions and Corporates. The Central Governments or Central Banks exposure class mainly includes traded products, lending and treasury exposures to Sovereign Governments, Central Banks, Government Guaranteed Entities, Government Guaranteed Banks and Supranationals.

The Sovereign ratings process, used for Central Governments or Central Banks, applies a methodology based on quantitative and qualitative factors which incorporate consideration of the financial systems, legal and regulatory risks (e.g. macro-prudential supervision) as well as the reputational risk of extending credit in the country. The methodology is supplemented by expert judgment to reflect CRM’s assessment of the future ability and willingness of sovereign governments to service debt obligations in full and on time, if material risk factors are not adequately represented in the methodology.

The Institutions exposure class mainly includes traded products, lending and treasury exposures to banks. The ratings process for Institutions applies a methodology that is based on a range of risk factors including capital adequacy, asset quality, earnings, funding and management. The regulatory environment and

implicit government support is incorporated where applicable and permitted. The approach to rating Institutions can vary depending on whether the bank is domiciled in a developed or emerging market.

The Corporates exposure class mainly includes traded products and lending to wholesale counterparties not covered under the Central Governments or Central Banks and Institutions exposure classes. The ratings process for Corporates has different methodologies depending on the industry to which the counterparty belongs. The general characteristics employed include quantitative factors such as leverage, interest coverage, cash flow and company size, as well as qualitative factors such as industry and business risk, market position, liquidity/funding, event risk, management and corporate governance. Tailored methodologies are applied for certain specialist sectors such as broker-dealers, insurance and funds.

Ratings for Special Purpose Vehicles (“SPV”) reflect CRM’s assessment of the risk that the SPV will default. The rating therefore incorporates the Morgan Stanley Group’s relative position in the counterparty’s payment structure as well as the default risk associated with the underlying assets. Ratings are often “tranche specific” (e.g. the AAA rated senior tranche or the BBB subordinated tranche).

Rating Philosophy and PD Estimation

The Morgan Stanley Group’s internal rating process and philosophy are similar to Standard and Poor’s (“S&P”). For credit risk capital and risk management purposes, CRM maps internal ratings to S&P ratings and then applies S&P’s extensive default history to determine the PD. Minor adjustments are made for specific items, such as preserving the monotonic relationship among rating grade PDs and maintaining the regulatory floor of 0.03% for counterparties which are not Central Governments or Central Banks.

The present method of using S&P’s extensive default history reflects a long-run view. The 2014 PDs are long-run averages of one-year default rates and are grounded on historical experience and empirical evidence. They are based on S&P’s annual default rates from 1981 to 2012. This historical period covers at least three major credit downturn periods (1990-91, 2001-02 and 2007-09).

The Morgan Stanley Group confirms through an internal validation process that the PD values it uses are prudent when compared to actual Morgan Stanley Group default experience.

Control Mechanisms for the Rating System

The rating system and its components are validated on a periodic basis. The model validation process is independent of the internal models’ development, implementation and operation. The validation process includes tests of the model’s sensitivity to key inputs and assumptions and evaluation of conceptual soundness. Model governance committees are in place to provide appropriate technical and business review and oversight.

The performance of the rating system is assessed on a quarterly basis. This includes a review of key performance measures including comparison of internal ratings versus agency ratings, ratings of defaulted parties, transitions across grades, and analysis of expert overrides.

Table 5 shows a breakdown of the IRB related exposure amounts for the MSI Group as at 31 December 2014 for the Central Governments or Central Banks, Corporates and Institutions exposure classes.

Table 5: IRB EAD by Exposure Type and PD Banding

| PD BANDING | EXPOSURE VALUE PRIOR TO CREDIT RISK MITIGATION \$MM | EXPOSURE VALUE AFTER CREDIT RISK MITIGATION \$MM | OUTSTANDING LOANS \$MM | EXPOSURE VALUE OF UNDRAWN COMMITMENTS \$MM | EXPOSURE WEIGHTED AVERAGE RISK WEIGHT | EXPOSURE WEIGHTED AVERAGE PD |
|---|---|--|------------------------------|--|--|------------------------------------|
| Central Governments or Central Banks | | | | | | |
| 0.00%–0.08% | 8,911 | 5,705 | – | 100 | 13% | 0.05% |
| 0.09%–0.17% | 616 | 577 | – | – | 24% | 0.14% |
| 0.21%–0.40% | 108 | 103 | – | – | 46% | 0.31% |
| 0.51%–1.65% | 183 | 178 | – | – | 68% | 0.58% |
| 1.92%–100% | 78 | 15 | – | – | 217% | 8.42% |
| Total | 9,896 | 6,578 | – | 100 | | |
| Corporates | | | | | | |
| 0.00%–0.08% | 26,527 | 14,427 | 49 | 1,493 | 24% | 0.06% |
| 0.09%–0.17% | 48,799 | 26,428 | 47 | 777 | 35% | 0.13% |
| 0.21%–0.40% | 10,420 | 5,628 | 54 | 1,026 | 59% | 0.29% |
| 0.51%–1.65% | 9,914 | 7,245 | 284 | 441 | 77% | 0.73% |
| 1.92%–100% | 8,564 | 6,039 | 301 | 170 | 128% | 9.75% |
| Total | 104,224 | 59,767 | 735 | 3,908 | | |
| Institutions | | | | | | |
| 0.00%–0.08% | 28,770 | 15,666 | – | 206 | 22% | 0.06% |
| 0.09%–0.17% | 39,453 | 29,896 | – | 63 | 26% | 0.11% |
| 0.21%–0.40% | 12,220 | 2,585 | – | – | 69% | 0.29% |
| 0.51%–1.65% | 2,728 | 956 | 30 | – | 93% | 0.69% |
| 1.92%–100% | 1,240 | 654 | – | – | 169% | 6.19% |
| Total | 84,411 | 49,757 | 30 | 268 | | |

1. The table does not include the IRB Equities and IRB Securitisation exposure classes, as these exposures are treated through the IRB simple risk weight approach (CRR Article 155.2), and the IRB ratings based method (CRR Article 261), respectively.

2. Exposure value after CRM is equivalent to Exposure at Default ("EAD").

Non-Trading Book Equity Exposures

The MSI Group applies the IRB simple risk weight approach for equity exposures falling outside of the Trading Book. The majority of the equity positions are held as hedges for employee long-term compensation schemes. Table 6 shows a breakdown of the equity exposures falling outside of the Trading Book by risk weight.

Table 6: Non-Trading Book Equity Exposures

| | EAD \$MM | CAPITAL REQUIREMENTS \$MM |
|------------------|--------------|---------------------------------|
| IRB | | |
| 190% Risk Weight | – | – |
| 250% Risk Weight | – | – |
| 290% Risk Weight | 955 | 221 |
| 370% Risk Weight | 321 | 95 |
| Total | 1,276 | 316 |

1. Capital Requirements is calculated as 8% of RWA.

2. For all Equities, the balance sheet value is equal to the Fair Value.

Table 7: Non-Trading Book Equity Gains and Losses

| | \$MM |
|---|-------------|
| Cumulative amount of realised gains or losses resulting from sales and liquidations | 36 |
| Total unrealised gains or losses | 41 |
| Total latent revaluation gains or losses | – |
| Amount of unrealised gains or losses or latent revaluation gains or losses included in Tier 1 Capital | – |

Estimates Versus Actual Probability of Default and Losses

An analysis of estimated versus actual default rates by exposure class is shown in Table 8. The estimated PDs are expressed as the average PD calculated on the number of obligors covered in each exposure class. These estimated PDs are a prediction, as at the end of prior year, of the 1-year forward looking default rate on a through the cycle basis, and are compared with the actual (realised) defaults in the current year. The comparatively low percentage of actual defaults reflects the benign credit environment.

Table 8: Estimated Versus Actual PD by Exposure Class

| | ESTIMATE AT 2013 | ACTUAL AT 2014 | ESTIMATE AT 2012 | ACTUAL AT 2013 |
|--------------------------------------|-----------------------------|---------------------------|-----------------------------|---------------------------|
| Central Governments or Central Banks | 0.71% | 0.00% | 0.73% | 0.00% |
| Corporates | 5.94% | 0.01% | 6.57% | 0.04% |
| Institutions | 2.28% | 0.00% | 3.02% | 0.12% |

1. The averaging approach for estimated PDs facilitates a meaningful comparison with actual defaults. The weighted average PDs by exposure class, as shown in Table 5, are more reflective of the portfolio quality.

An analysis of credit risk adjustments and expected loss by IRB exposure class is shown in Table 9, with additional information on charges to the profit and loss for loss events that occurred during the respective periods shown in Table 10. The credit risk adjustments balances reflect impaired legacy loans entered into pre-2008 that were affected by the economic downturn and have not recovered. Charges to the profit and loss reflect continued write-downs of these positions.

The MSI Group does not establish credit reserves for traded products. Incurred credit valuation adjustments and debit valuation adjustments are taken through profit and loss.

Table 9: IRB Credit Risk Adjustments, Expected Loss and Charge to the Profit and Loss

| | SPECIFIC RISK ADJUSTMENTS 2014 \$MM | EXPECTED LOSS 2014 \$MM | CHARGE TO THE PROFIT AND LOSS 2014 \$MM | SPECIFIC RISK ADJUSTMENTS 2013 \$MM | EXPECTED LOSS 2013 \$MM | CHARGE TO THE PROFIT AND LOSS 2013 \$MM |
|--------------------------------------|--|--|--|--|--|--|
| Central Governments or Central Banks | - | 3 | - | - | 4 | - |
| Corporates | 130 | 313 | 6 | 133 | 241 | 82 |
| Institutions | - | 39 | - | - | 10 | - |
| Equity | - | 15 | - | - | 11 | - |
| Total | 130 | 370 | 6 | 133 | 266 | 82 |

1. 2013 Expected Loss numbers are calculated on a CRDIII basis.

2. Charge to the Profit and Loss represents loss events that occurred during the period, and does not include the effect of other movements in the Credit Risk Adjustments balance due to: currency translation; changes in estimates of losses arising on events which occurred in the preceding period.

14.4 Standardised Approach

A Standardised approach is used for certain asset categories, including receivables (e.g. fees and interest), unsettled trades and other assets. Table 10 shows the exposures for the MSI Group, calculated using the Standardised approach for each exposure class and broken down by Credit Quality Step (“CQS”).

Table 10: Standardised Approach EAD by Credit Quality Step

| | | CQS1 \$MM | CQS2 \$MM | CQS3 \$MM | CQS4 \$MM | CQS5 \$MM | CQS6 \$MM | OTHER² \$MM | UNRATED \$MM | TOTAL \$MM |
|---|------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------------------------------|-------------------------|-----------------------|
| Central Governments or Central Banks | Gross EAD | 4 | – | – | – | – | – | – | 1 | 5 |
| | EAD | 4 | – | – | – | – | – | – | 1 | 5 |
| Corporates | Gross EAD | 5 | 12 | – | – | – | – | 6,143 | 3,175 | 9,335 |
| | EAD | 5 | 12 | – | – | – | – | 6,091 | 3,175 | 9,283 |
| High Risk | Gross EAD | – | – | – | – | – | – | – | – | – |
| | EAD | – | – | – | – | – | – | – | – | – |
| Institutions | Gross EAD | 17 | 193 | 39 | 1 | 2 | – | 6,087 | 102 | 6,441 |
| | EAD | 17 | 193 | 39 | 1 | 2 | – | 5,826 | 102 | 6,180 |
| Multilateral Developments Banks | Gross EAD | – | – | – | – | – | – | – | – | – |
| | EAD | – | – | – | – | – | – | – | – | – |
| Public Sector Entities | Gross EAD | 2 | – | – | – | – | – | – | – | 2 |
| | EAD | 2 | – | – | – | – | – | – | – | 2 |
| Regional Governments or Local Authorities | Gross EAD | – | – | – | – | – | – | 266 | – | 266 |
| | EAD | – | – | – | – | – | – | 266 | – | 266 |
| Securitisation | Gross EAD | 272 | – | – | 8 | 22 | – | – | – | 302 |
| | EAD | 272 | – | – | 8 | 22 | – | – | – | 302 |
| Units or Shares in CIUs | Gross EAD | – | – | – | – | – | – | – | 50 | 50 |
| | EAD | – | – | – | – | – | – | – | 50 | 50 |
| Total | Gross EAD | 300 | 205 | 39 | 9 | 24 | – | 12,496 | 3,328 | 16,401 |
| | EAD | 300 | 205 | 39 | 9 | 24 | – | 12,183 | 3,328 | 16,088 |

- Under the Standardised Approach, risk weights are generally applied according to the relevant exposure class and the associated credit quality (CRR Article 113). Credit quality may be determined by reference to the credit assessments of ECAI, which are then mapped to a CQS. The Unrated segment represents exposure for which no ECAI credit assessment is available.
- The OTHER segment represents exposures where alternative rules to the CQS treatment described in note above. The majority of exposures in this segment are exposures to central counterparties.

14.5 Maturity Analysis

Maturity analysis of IRB and Standardised exposures are shown in Table 11.

Table 11: Residual Weighted Maturity Breakdown of EAD

| | LESS THAN OR EQUAL TO 1 YEAR \$MM | OVER 1 YEAR AND LESS THAN 5 YEARS \$MM | 5 YEARS AND ABOVE \$MM | NO MATURITY \$MM | TOTAL \$MM |
|---|--|---|------------------------------|------------------------|----------------|
| IRB | | | | | |
| Central Governments or Central Banks | 4,731 | 749 | 1,098 | – | 6,578 |
| Corporates | 36,154 | 13,696 | 9,917 | – | 59,767 |
| Equity | – | – | 1,276 | – | 1,276 |
| Institutions | 36,591 | 9,185 | 3,981 | – | 49,757 |
| Securitisation | 18 | 672 | 40 | – | 730 |
| Total (IRB) | 77,494 | 24,302 | 16,312 | - | 118,108 |
| Standardised | | | | | |
| Central Governments or Central Banks | – | – | – | 5 | 5 |
| Corporates | 3,348 | 2,264 | 1,210 | 2,461 | 9,283 |
| High Risk | – | – | – | 0 | 0 |
| Institutions | 938 | 4,889 | – | 353 | 6,180 |
| Multilateral Developments Banks | – | – | – | 0 | 0 |
| Public Sector Entities | – | – | – | 2 | 2 |
| Regional Governments or Local Authorities | 258 | 7 | – | 1 | 266 |
| Securitisation | – | 302 | – | – | 302 |
| Units or Shares in CIUs | – | – | – | 50 | 50 |
| Total (Standardised) | 4,544 | 7,462 | 1,210 | 2,872 | 16,088 |
| Grand Total | 82,038 | 31,764 | 17,522 | 2,872 | 134,196 |

14.6 Credit Risk Mitigation

The MSI Group 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 MSI Group seeks to mitigate risk through management of key risk elements such as size, tenor, financial covenants, seniority and collateral. The MSI Group actively hedges its lending and derivatives exposure through various financial instruments that may include single-name, portfolio and structured credit derivatives. Additionally, the MSI Group may sell, assign or syndicate funded loans and lending commitments to other financial institutions in the primary and secondary loan market. In connection with its derivatives trading activities, the MSI Group generally enters into master netting agreements and collateral arrangements with counterparties. These agreements provide the MSI 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.

Netting

The MSI Group has policies and procedures in place for recording netting agreements with clients in connection with its derivative trading activities. In order to net a group of similar exposures with a counterparty, a qualifying master netting agreement must be in place between Morgan Stanley and the counterparty. The agreement must be valid and legally enforceable. Upon an event of default, including in the event of a bankruptcy or insolvency of the counterparty, all transactions within the netting set are terminated in a timely manner and a single net close-out amount is determined under a qualifying master netting agreement. Repo-style transactions must also be executed under an agreement that provides for the close-out on a net basis.

The MSI Group does not make use of on-balance-sheet netting of loans and deposits in regulatory capital calculations.

Collateral

The amount and type of collateral required by the MSI Group depends on an assessment of the credit risk of the counterparty. Collateral held is managed in accordance with the MSI Group's guidelines and the relevant underlying agreements.

The MSI Group actively manages its credit exposure through the application of collateral arrangements and readily available market instruments such as credit derivatives. The use of collateral in managing OTC derivative risk is standard in the market place, and is governed by appropriate documentation; for example, the Credit Support Annex to the International Swaps and Derivatives Association ("ISDA") documentation. In line with these standards, the Morgan Stanley Group generally accepts only cash and G7 government bonds, corporate debt and main index equities as eligible collateral. Other securities may be accepted in securities lending, repo and prime brokerage, subject to conservative haircuts based on assessments of collateral volatility and liquidity. There is an established and robust infrastructure to manage, maintain and value collateral on a daily basis.

The MSI Group's collateral management policies include arrangements for maintaining the integrity of the margining process, including the capture of collateral terms and haircuts and the underlying legal rights, interest and ownership of collateral transferred. The policies also include arrangements for safeguarding collateral, rehypothecation, collateral concentrations and dispute resolution. Collateral concentration in OTC derivatives is assessed through considering concentration relative to the liquidity of the underlying assets.

Guarantees

Letters of credit and guarantees can be used to transfer the credit risk of an exposure to another counterparty. For specific transactions or counterparties, the MSI Group will accept letters of credit and guarantees following an appropriate level of due diligence. In such instances, the exposure is assumed to be to the provider of the letter of credit or guarantee. The acceptable types of provider of letters of credit and guarantees are sovereigns, certain supranational and multilateral development banks, banks and other financial institutions, and corporates that are rated at least investment grade. A provider is not deemed acceptable if the provider's creditworthiness is positively correlated with the credit risk of the exposures for which it has provided guarantees.

Table 12 shows the impact of financial collateral and guarantees on exposures.

Table 12: Exposures Covered by Financial Collateral and Guarantees

| | CREDIT EXPOSURE PRIOR TO CREDIT MITIGATION \$MM | TOTAL EXPOSURE COVERED BY ELIGIBLE FINANCIAL COLLATERAL \$MM | TOTAL EXPOSURE COVERED BY GUARANTEES \$MM | EAD \$MM | AVERAGE 12-MONTH EAD \$MM |
|---|--|---|---|----------------|------------------------------------|
| IRB | | | | | |
| Central Governments or Central Banks | 9,896 | 3,292 | – | 6,578 | 7,388 |
| Corporates | 104,224 | 43,303 | 1 | 59,767 | 58,332 |
| Equity | 1,276 | – | – | 1,276 | 964 |
| Institutions | 84,411 | 34,551 | – | 49,757 | 55,207 |
| Securitisation | 814 | 86 | – | 730 | 424 |
| Total (IRB) | 200,621 | 81,232 | 1 | 118,108 | 122,315 |
| Standardised | | | | | |
| Central Governments or Central Banks | 5 | – | – | 5 | 4 |
| Corporates | 9,335 | 52 | – | 9,283 | 11,095 |
| High Risk | 0 | – | – | 0 | 0 |
| Institutions | 6,441 | 261 | – | 6,180 | 7,698 |
| Multilateral Developments Banks | 0 | – | – | 0 | 0 |
| Public Sector Entities | 2 | – | – | 2 | 3 |
| Regional Governments or Local Authorities | 266 | – | – | 266 | 295 |
| Securitisation | 302 | – | – | 302 | 327 |
| Units or Shares in CIUs | 50 | – | – | 50 | 71 |
| Total (Standardised) | 16,401 | 313 | – | 16,088 | 19,493 |
| Grand Total | 217,022 | 81,545 | 1 | 134,196 | 141,808 |

1. There were no exposures covered by other eligible collateral as at 31 December 2014.

14.7 Derivative credit exposure

Table 13 shows the Trading Book gross positive fair value of derivative contracts, netting benefits, netted current credit exposure and collateral held as at 31 December 2014 for the MSI Group.

Table 13: Derivative Credit Exposures

| | \$MM |
|--|---------|
| Gross positive fair value of contracts | 315,950 |
| Netting benefits | 256,738 |
| Gross positive fair value after netting | 59,212 |
| Collateral held | 81,545 |
| Net derivatives exposure (after netting and collateral) | 10,609 |

Gross positive fair value represents any long market value on derivative transactions before netting benefits are applied but after any regulatory eliminations and exemptions are applied. Collateral held represents the market value of enforceable collateral received after regulatory eliminations and exemptions are applied.

Net derivatives credit exposure represents the net exposure after collateral, that meets regulatory and legal requirements, has been applied.

Table 14 shows the Derivative Contracts EAD by calculation method and exposure class for the MSI Group as at 31 December 2014.

Table 14: Derivative Contracts EAD by Calculation Method

| | IMM \$MM | MTM METHOD \$MM | TOTAL \$MM |
|--------------------------------------|---------------|-----------------------|---------------|
| Central Governments or Central Banks | 1,972 | 378 | 2,350 |
| Corporates | 21,194 | 13,189 | 34,383 |
| Institutions | 10,449 | 13,500 | 23,949 |
| Total | 33,615 | 27,067 | 60,682 |

Credit Derivative Transactions

Table 15 shows the notional value of credit derivatives, namely Credit Default Swaps (“CDS”) and Total Return Swaps (“TRS”), segmented by either own credit portfolio or intermediation activities. Own credit portfolio comprises trades used for hedging and credit portfolio management of the Non-Trading Book. Intermediation activities cover all other credit derivatives and mainly comprise derivatives to manage the Trading Book.

Table 15: Notional Value of Credit Derivative Transactions

| | OWN CREDIT PORTFOLIO ¹ | | INTERMEDIATION ² | |
|----------------------|-----------------------------------|----------------|-----------------------------|----------------|
| | PURCHASER \$MM | SELLER \$MM | PURCHASER \$MM | SELLER \$MM |
| Credit Default Swaps | 5,343 | 948 | 489,926 | 445,534 |
| Total Return Swaps | 0 | 0 | 4,010 | 2,200 |
| Total | 5,343 | 948 | 493,936 | 447,734 |

1. Own Credit Portfolio: derivative used to manage the Non-Trading Book.

2. Intermediation activities: derivative used to manage the Trading Book.

14.8 Collateral Impact of a Downgrade

The level of incremental collateral which would be required by derivative counterparties in the event of a ratings downgrade of Morgan Stanley is monitored daily. Collateral triggers are maintained by the collateral management department and vary by counterparty.

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 2014, the future potential collateral amounts and termination payments that could be called or required from the MSI Group, by counterparties or exchanges and clearing organisations, in the event of one-notch or two-notch downgrade scenarios based on the relevant contractual downgrade triggers, were \$1,101MM and an incremental \$1,716MM, respectively.

14.9 Wrong Way Risk

Specific wrong way risk arises when a transaction is structured in such a way that the exposure to the counterparty is positively correlated with the PD of the counterparty. For example, a counterparty writing put options on its own stock or a counterparty collateralised by its own or related party stocks. The MSI Group considers these matters when approving transactions. Ongoing monitoring of transactions with specific wrong way risk is facilitated by systematic identification from inception of the trade throughout the entire lifecycle of the trade. Further, credit and capital exposures are adjusted automatically to reflect the identified specific wrong way risk.

General wrong way risk arises when the counterparty PD is correlated, for non-specific reasons, with the market or macroeconomic factors that affect the value of the counterparty’s trades. Single-factor stress tests are used to probe for general wrong way risk, and counterparties with identified sensitivities are subject to heightened monitoring. Where positions raise concerns, a risk mitigation strategy is agreed between CRM and the business units.

14.10 Industry and Geographical Breakdowns

Tables 16 to 20 show industry and geographical breakdowns.

Table 16: EAD by Credit Industry Type

| | STANDARDISED \$MM | IRB \$MM | TOTAL \$MM |
|-------------------------------|----------------------|----------------|----------------|
| Banks and Securities Firms | 522 | 60,946 | 61,468 |
| Energy and Utilities | 0 | 4,418 | 4,418 |
| Exchanges and Clearing Houses | 12,215 | 4,456 | 16,671 |
| General Industrials | 10 | 3,952 | 3,962 |
| Healthcare and Consumer Goods | 1 | 1,766 | 1,767 |
| Insurance | 5 | 4,134 | 4,139 |
| Leverage and Other Funds | 95 | 7,779 | 7,874 |
| Mutual and Pension Funds | 21 | 18,086 | 18,107 |
| Other Corporates | 2,908 | 3,784 | 6,692 |
| Real Estate | 303 | 860 | 1,163 |
| Sovereign | 6 | 6,690 | 6,696 |
| Special Purpose Vehicles | 2 | 647 | 649 |
| Technology Media and Telecoms | 0 | 590 | 590 |
| Total | 16,088 | 118,108 | 134,196 |

Table 17: Impaired and Past Due Exposures, Credit Risk Adjustments by Industry Type

| | PAST DUE ¹ \$MM | IMPAIRED EXPOSURES ² \$MM | SPECIFIC CREDIT RISK ADJUSTMENTS ³ \$MM | GENERAL CREDIT RISK ADJUSTMENTS ³ \$MM | CHARGES FOR SPECIFIC AND GENERAL CREDIT RISK ADJUSTMENTS \$MM |
|---------------------|-------------------------------|--|---|--|--|
| General Industrials | - | 128 | (84) | - | - |
| Other Corporates | 38 | 176 | (92) | - | 4 |
| Total | 38 | 304 | (176) | - | 4 |

1. A financial asset is considered past due when a counterparty has failed to make a payment when contractually due.
2. A financial asset is considered 'impaired' under the Impairment policy if, and only if, there is objective evidence of impairment resulting from events occurring after initial recognition that have an impact on estimated future cash flows of the financial asset, and the impact on those cash flows can be reliably estimated.
3. Charges for Specific and General Credit Risk Adjustments represents the movement in the Credit Risk Adjustments balance for the year and may include: loss events that occurred during the period; currency translation; changes in estimates of losses arising on events which occurred in the preceding period; or other accounting adjustments.

Table 18: Geographical Breakdown of EAD

| | AMERICA \$MM | EMEA \$MM | ASIA \$MM | TOTAL \$MM |
|---|-----------------|---------------|---------------|----------------|
| IRB | | | | |
| Central Governments or Central Banks | 1,425 | 4,021 | 1,132 | 6,578 |
| Corporates | 19,970 | 36,362 | 3,435 | 59,767 |
| Equity | 276 | 955 | 45 | 1,276 |
| Institutions | 21,651 | 18,776 | 9,330 | 49,757 |
| Securitisation | 1 | 729 | - | 730 |
| Total (IRB) | 43,323 | 60,843 | 13,942 | 118,108 |
| Standardised | | | | |
| Central Governments or Central Banks | - | 4 | 1 | 5 |
| Corporates | 1,240 | 7,668 | 375 | 9,283 |
| High Risk | - | - | - | - |
| Institutions | 98 | 5,926 | 156 | 6,180 |
| Multilateral Developments Banks | - | - | - | - |
| Public Sector Entities | - | 2 | - | 2 |
| Regional Governments or Local Authorities | - | - | 266 | 266 |
| Securitisation | - | 302 | - | 302 |
| Units or shares in CIUs | 28 | 22 | - | 50 |
| Total (Standardised) | 1,366 | 13,924 | 798 | 16,088 |
| Total | 44,689 | 74,767 | 14,740 | 134,196 |

1. Supranational exposures have been allocated to the region of the headquarters of the institution.

Table 19: Impaired and Past Due Exposures, Credit Risk Adjustments by Geographic Region

| | AMERICA \$MM | EMEA \$MM | ASIA \$MM | OTHER \$MM | TOTAL \$MM |
|----------------------------------|-----------------|--------------|--------------|---------------|---------------|
| Impaired | – | 294 | 10 | – | 304 |
| Past Due Exposures | – | 38 | – | – | 38 |
| General Credit Risk Adjustments | – | – | – | – | – |
| Specific Credit Risk Adjustments | – | (169) | (7) | – | (176) |
| Total | – | 163 | 3 | – | 166 |

Table 20: IRB Geographical Breakdown of Exposure Weighted Average PD

| | AMERICA | EMEA | ASIA |
|--------------------------------------|---------|-------|-------|
| Central Governments or Central Banks | 0.08% | 0.09% | 0.11% |
| Corporates | 0.92% | 1.23% | 2.09% |
| Institutions | 0.17% | 0.25% | 0.12% |

1. The table does not include the IRB Equities and IRB Securitisation exposure classes, as these exposures are treated through the IRB simple risk weight approach (CRR Article 155.2), and the IRB ratings based method (CRR Article 261) respectively.
2. Supranational exposures have been allocated to the region of the headquarters of the institution.

14.11 Credit Risk Adjustments

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 MSI 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.

Table 21: Movement of Specific and General Credit Risk Adjustments

| | GENERAL CREDIT RISK ADJUSTMENTS \$MM | SPECIFIC CREDIT RISK ADJUSTMENTS \$MM |
|---|---|--|
| Opening Balances as at 1 January 2014 | – | (191) |
| Amounts taken against the credit risk adjustments | – | (16) |
| Amounts set aside or reversed for estimated probable losses | – | 12 |
| Any other adjustments | – | 19 |
| Closing Balances as at 31 December 2014 | – | (176) |

15. 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 liquidity, will result in losses for a position or portfolio.

Sound market risk management is an integral part of the Morgan Stanley Group culture. The various business units and trading desks are responsible for ensuring that market risk exposures are well managed and prudent. The control groups help ensure that these risks are measured and closely monitored and are made transparent to senior management. The Market Risk Department (“MRD”) is responsible for ensuring transparency of material market risks, monitoring compliance with established limits, and escalating risk concentrations to appropriate senior management. To execute these responsibilities, MRD monitors the Morgan Stanley Group’s risk against limits on aggregate risk exposures, performs a variety of risk analyses, routinely reports risk summaries, and maintains the Morgan Stanley Group’s VaR (“Value-at-Risk”) and scenario analysis systems. These limits are designed to control price and market liquidity risk. Market risk is also monitored through various measures: statistically (using VaR and related analytical measures); by measures of position sensitivity; and through routine stress testing, which measures the impact on the value of existing portfolios of specified changes in market factors, and scenario analyses conducted by MRD in collaboration with the business units. The material risks identified by these processes are summarised in reports produced by MRD that are circulated to and discussed with senior management.

Risk Mitigation Policies

The MSI 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 MSI Group manages and monitors its market risk exposures in such a way as to maintain a portfolio that the MSI Group believes is well-diversified in the aggregate with respect to market risk factors and that reflects the MSI Group’s aggregate risk tolerance as established by the MSI Group senior management.

15.1 Value at Risk

The MSI 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 market risk department calculates and distributes daily VaR-based risk measures to various levels of management.

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 current VaR model uses four years of historical data with a volatility adjustment to reflect current market conditions. The group’s prior VaR model also uses four years of historical data, but does not make any volatility adjustments and is therefore less responsive to current market conditions. The group’s 99%/one-day VaR corresponds to the unrealised loss in portfolio value that, based on historically observed market risk factor movements, would have been exceeded with a frequency of 1%, or once every 100 trading days, if the portfolio were held constant for one day.

The MSI Group’s VaR model generally takes into account linear and non-linear exposures to equity and commodity price risk, interest rate risk, credit spread risk and foreign exchange rates as well as linear exposures to implied volatility risks. The VaR model also captures certain implied correlation risks associated with portfolio credit derivatives as well as certain basis risks (e.g. corporate debt and related credit derivatives).

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 risk reduction due to portfolio diversification or hedging activities. However, VaR has various limitations, which include, but are not limited to: use of historical changes in market risk factors, which may not be accurate predictors of future market conditions, and may not fully incorporate the risk of extreme market events that are outsized relative to observed historical market behaviour or reflect the historical distribution of results beyond the 95% confidence interval; and reporting of losses in a single day, which does not reflect the risk of positions that cannot be liquidated or hedged in one day. A small proportion of market risk generated by trading positions is not included in VaR. The modelling of the risk characteristics of some positions relies on approximations that, under certain circumstances, could produce significantly different results from those produced using more precise measures. VaR is most appropriate as a risk measure for trading positions in liquid financial markets and will understate the risk associated with severe events, such as periods of extreme illiquidity. The MSI 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 and control at the trading desk, division and the MSI Group levels.

The MSI Group’s VaR models evolve over time in response to changes in the composition of trading portfolios and to improvements in modelling techniques and systems capabilities. The MSI 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.

Risk models are subject to independent validation by a quantitative group specialising in the independent validation of models.

Since the VaR statistics reported in Table 22 are estimates based on historical position and market data, VaR should not be viewed as predictive of the MSI Group's future revenues or financial performance or of its ability to monitor and manage risk. There can be no assurance that the MSI 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 once in 100 trading days. VaR does not predict the magnitude of losses which, should they occur, may be significantly greater than the VaR amount.

The methodology, assumptions and limitations of the MSI Group's VaR model are consistent with those of the Morgan Stanley Group. For a further discussion see pages 127 to 136 of the 2014 Form 10-K.

15.2 Market Risk Capital Requirements

The market risk capital requirements of the MSI Group comprises capital associated with the VaR methodology in accordance with PRA's approved models and that associated with the standardised approach. The VaR-based capital and the Stressed VaR based capital are determined by the higher of the average of the 60-day, 10-day VaR and 10-day Stressed VaR numbers multiplied by the regulatory Internal Model multiplication factor as prescribed by the PRA, and the 10-day VaR and 10-day Stressed VaR for the relevant day. The Incremental Risk Charge ("IRC") and All Price Risk ("APR") charges are determined by the higher of the average of the 12 weeks IRC/APR and the IRC/APR charge for the relevant day.

Table 22 shows the maximum, minimum and average VaR and Stressed VaR, as well as the IRC and APR measures, for the year ending 31 December 2014. For further discussion see Sections 15.4 and 15.5.

Table 22: Market Risk Capital Requirements Calculated in Accordance with the PRA's Approved Models

| | VAR ² \$MM | STRESSED VAR ² \$MM | IRC \$MM | APR \$MM |
|------------|--------------------------|--------------------------------------|-------------|-----------------|
| Average | 82 | 194 | 641 | 9 |
| Minimum | 67 | 117 | 410 | 5 |
| Maximum | 123 | 277 | 840 | 56 ³ |
| Period End | 87 | 193 | 640 | 13 |

1. VaR, Stressed VaR, IRC and APR are components of the \$3,140MM modelled market risk capital in table 3, for the year ending 31 December 2014.

2. VaR and Stressed VaR are at a 99% confidence interval, 10-day holding period.

3. Peak position appeared only for 1-day.

The MSI Group performs a daily backtesting analysis on various levels of the MSI Group's consolidated hierarchy as part of a range of tools to validate the accuracy of the VaR models. Backtesting is performed on the firm's Trading Book population and compares the MSI Group's P&L for trade date N against 99%/one-day Regulatory VaR for N-1. As per the requirements of the CRR, backtesting uses 'Actual' and 'Hypothetical' definitions of the P&L. Backtesting on Hypothetical changes in the portfolio's value refers to a comparison between the portfolio's end-of-day value and, assuming unchanged positions, its value at the end of the subsequent day. Backtesting on Actual changes in the portfolio's value refers to a comparison between the portfolio's end-of-day value and its actual value at the end of the subsequent day (i.e. inclusive of intra-day trading/new activity). Both measures of the backtesting P&L also exclude fees, commissions, net interest income and material inception profits.

On days where losses (on either an Actual and/or Hypothetical P&L basis) exceed the prior day's VaR, an exception is recorded and is reported by close of business (N+2) to the PRA. MSIP, the material subsidiary within the MSI Group reported two backtesting exceptions within the rolling 250-business-day range during 2014 meeting the PRA's "Green Zone" standards for model accuracy. Both exceptions were driven by outsized market movements and do not indicate deficiencies within the VaR model. MSSL had 4 exceptions within the period and also meets the PRA's "Green Zone" standards. This entity's VaR is immaterial to the MSI group and has subsequently been transferred to MSIP ahead of its planned closure.

The MSI Group has a comprehensive framework of policies, controls and reporting to meet the requirements of CRR articles 102 to 104. The underlying policies, controls and reporting mechanisms cover a range of different aspects including Trading Intent, Valuation, Liquidity, Restrictions, Hedgeability, Active Management and transfers between the Trading and Non-Trading Books. Governance is provided by the Firm's Banking/Trading committee whose role with respect to the banking/trading boundary is to: develop firm policy and guidance, ensure effective control and reporting mechanisms are in place and to clearly set out roles and responsibilities across the firm.

Table 23 shows the market risk capital requirements for the MSI Group as at 31 December 2014, calculated in accordance with the standardised approach and categorised by component type.

Table 23: Market Risk Capital Requirements Calculated in Accordance with the Standardised Approach

| | \$MM |
|--------------------------------|--------------|
| Interest Rate PRR ¹ | 1,245 |
| Equity PRR | 1 |
| Commodity PRR | 36 |
| Foreign Currency PRR | 357 |
| Total | 1,639 |

1. Of which: Specific Interest Rate Risk of Securitisation Positions \$1,046MM.

15.3 Stressed VaR

Stressed VaR uses the same underlying models as VaR to produce a 1-day 99% VaR constructed over a 1-year period of continuous stress. Stressed VaR uses data based on historical and non-volatility adjusted simulations for the general market risk factors and Monte Carlo simulation for name specific risk in corporate shares, bonds, loans and related derivatives. The 1-year stressed window is chosen for each of the UK Regulated legal entities which have VaR model approval, MSIP and MSSL. The Stressed VaR model is agreed and approved by the PRA for use in regulatory calculations. Stressed 10-day VaR is constructed by scaling the Stressed 1-day VaR. The Stressed 10-day VaR as at 31 December 2014 was \$193MM. The MSI Group's Stressed VaR capital requirement was \$799MM as at 31 December 2014, based upon the higher of the average of the 60-day Stressed 10-day VaR number multiplied by the multiplication factor, and the Stressed 10-day VaR for the relevant day.

15.4 Incremental Risk Charge

The IRC measures the migration and default risk of traded instruments by issuers in a single integrated framework. The model assumes a constant level of risk and is calculated over a one-year horizon at a confidence level of 99.9% using Monte Carlo simulations. The chief risk factors modelled are defaults, credit migrations, recovery risk and liquidity risk. The model differentiates the underlying traded instruments by liquidity horizon, with the minimum liquidity horizon set at three months. Concentrated positions are assigned higher liquidity horizons. The weighted liquidity horizon for IRC is 4.6 months. The MSI Group's capital requirements relating to IRC was \$640MM as at 31 December 2014.

Table 24: IRC Liquidity Horizon for Material Sub Portfolios

| | LIQUIDITY HORIZON (MONTHS) |
|---------------------------------------|-------------------------------|
| Bank Resource Management ¹ | 4.9 |
| Commodities | 4.7 |
| Fixed Income Division | 4.5 |
| Institutional Equity Division | 4.9 |

1. Bank Resource Management is a division within the Institutional Securities Group that is responsible for the Firm's securities financing transactions (including repo and securities lending), hedging of OTC derivative counterparty exposures and global collateral management.

15.5 All Price Risk

The APR is a measure used to calculate all risks within designated credit correlation trading portfolios, as pre-approved by the PRA. Calculated as the 99.9 percentile simulated loss, the APR covers the major risk types associated within the credit correlation trading portfolio, including credit migrations, defaults, recoveries, credit spread and correlation movements and liquidity risk. APR is calculated over a one-year horizon assuming a constant level of risk. The constant liquidity horizon for APR is six months. The overall APR is floored at 8% of the corresponding standardised

rules for the same portfolio. The MSI Group's capital requirements relating to APR was \$13MM as at 31 December 2014.

15.6 Stress Testing

The MSI Group has a comprehensive and dynamic Stress testing Framework incorporating deterministic group-wide Macroeconomic Stress tests, Business area single and multi-factor scenarios and RST scenarios. Stress testing is one of the MSI Group's principal risk management tools used to identify and assess the impact of severe stresses on its portfolios. It complements other risk metrics by providing a flexible and easy to understand approach to understanding risk and assessing the MSI Group's resilience in the face of various scenarios over a range of severities.

In addition to helping the MSI Group understand the risks it is exposed and/or vulnerable to under a range of scenarios, Stress testing is also used by the MSI Board to set the boundary for risk taking within the loss capacity of the MSI Group.

15.7 Interest Rate Risk In The Non-Trading Book

Interest rate risk refers to the risk of losses arising from an adverse change in the interest rates curve within the defined Non-Trading Book population.

The MSI Group is exposed to interest rate risk primarily through the Trading Book, which is captured within VaR.

The interest rate risk in the Non-Trading Book is driven by counterparty exposure on interest rate derivatives and Corporate Treasury activities with subordinated debt liabilities the main contributor.

The interest rate risk in the Non-Trading Book is not material in the context of the MSI Group. The amount is +\$350K per basis point as at 31 December 2014 and the MSI Group risk is exposed to the yield curve lowering.

Table 25 shows the impact of a one basis point ("1bp") parallel shift in interest rates on the value of interest rate positions in the Non-Trading Book for the MSI Group as at 31 December 2014.

Table 25: Interest Rate Risk in Non-Trading Book

| | PROFIT OR LOSS OF A +1BP PARALLEL SHIFT IN INTEREST RATES \$MM | PROFIT OR LOSS OF A -1BP PARALLEL SHIFT IN INTEREST RATES \$MM |
|--------------|--|--|
| USD | (0.68) | 0.68 |
| EUR | 0.97 | (0.97) |
| GBP | 0.40 | (0.40) |
| JPY | (0.41) | 0.41 |
| Other | 0.07 | (0.07) |
| Total | 0.35 | (0.35) |

16. Securitisation

16.1 Securitisation Activities

The MSI Group acts, or has historically acted, as originator, sponsor, liquidity provider, servicer and derivative counterparty to its own originated and sponsored securitisations, as well as those of third party securitisations. The majority of the securitisation exposures are Trading Book as at 31 December 2014.

The MSI Group's strategy has been to use securitisations for customer facilitation. The MSI Group has engaged in securitisation activities related to commercial and residential mortgage loans, corporate bonds and loans, and other types of financial instruments. The derivatives are generally interest rate swaps and usually with senior payment priority.

The MSI Group participated as a bookrunner or lead manager in a number of new securitisations during 2014. The MSI Group did not originate or sponsor any new securitisations in 2014.

16.2 Regulatory Capital Treatment

The MSI Group employs the IRB Approach and the Standardised Approach to calculate the capital on its securitisation positions. The IRB Approach is applied to securitisation exposures where the MSI Group has regulatory approval to use the FIRB approach for the positions underlying the securitisation and the Standardised approach for all other positions. In general, this means securitisations of retail exposures are treated under the Standardised Approach, whilst securitisations of non-retail exposures are captured under the IRB Approach. Both approaches use rating agency credit ratings to determine risk weights. The MSI Group uses ratings from three external credit assessment institutions: Moody's Investor Service, Standard & Poor's Ratings Services and Fitch Ratings.

16.3 Securitisation Exposures

Table 26 shows the exposures and capital requirements of securitisation positions within the MSI Group as at 31 December 2014.

Table 26: Securitisation Exposures and Capital Requirements

| | TRADING BOOK \$MM | NON-TRADING BOOK \$MM |
|----------------------|----------------------|-----------------------------|
| Exposures | 1,919 | 1,032 |
| Capital Requirements | 1,046 | 75 |

Table 27 and Table 28 show the securitisation positions broken down by capital approach and CQS within the MSI Group as at 31 December 2014.

Table 27: IRB Securitisation Exposures and Capital Requirements by Credit Quality

| | TRADING BOOK EXPOSURE \$MM | NON- TRADING BOOK EXPOSURE \$MM | TRADING BOOK CAPITAL REQUIRE- MENTS \$MM | NON- TRADING BOOK CAPITAL REQUIRE- MENTS \$MM |
|--|-------------------------------------|---|---|---|
| Amount of Securitisation Purchased | | | | |
| CQS 1-3 | 3 | 9 | – | – |
| CQS 4-6 | 59 | – | 2 | – |
| CQS 7-11 | 192 | 154 | 46 | 10 |
| All Other CQS | 507 | – | 507 | – |
| Unrated | 112 | 2 | 66 | 2 |
| Amount of Securitisation Retained | | | | |
| CQS 1-3 | – | 207 | – | 6 |
| CQS 4-6 | 2 | 165 | – | 5 |
| CQS 7-11 | 4 | 190 | 4 | 21 |
| Below CQS 11 | 2 | – | 2 | – |
| Amount of Re-securitisation Purchased | | | | |
| Below CQS 11 | – | 3 | – | 3 |
| Total | 881 | 730 | 627 | 47 |

1. The exposures above are after a financial guarantee which reduced one re-securitisation exposure purchased position by \$86MM.

Table 28: Standardised Securitisation Exposures and Capital Requirements by Credit Quality

| | TRADING BOOK EXPOSURE \$MM | NON- TRADING BOOK EXPOSURE \$MM | TRADING BOOK REQUIRE- MENTS \$MM | NON- TRADING BOOK REQUIRE- MENTS \$MM |
|--|-------------------------------------|---|--|--|
| Amount of Securitisation Purchased | | | | |
| CQS 1-3 | 586 | 235 | 29 | 3 |
| CQS 4-5 | 236 | – | 198 | – |
| Unrated | 164 | – | 164 | – |
| Amount of Re-securitisation Purchased | | | | |
| CQS 1-3 | 5 | – | 1 | – |
| CQS 4-5 | 46 | – | 26 | – |
| Unrated | 1 | – | 1 | – |
| Amount of Securitisation Retained | | | | |
| CQS 1-3 | – | 37 | – | 1 |
| CQS 4-5 | – | 30 | – | 24 |
| Total | 1,038 | 302 | 419 | 28 |

Table 29 and Table 30 provide a summary of the types of securitisation activity within the MSI Group as at 31 December 2014.

Table 29: Trading Book Securitisation Exposures by Exposure Type

| | TRADITIONAL \$MM | SYNTHETIC \$MM | POSITIONS RETAINED \$MM | POSITIONS PURCHASED \$MM |
|---|---------------------|-------------------|-------------------------------|--------------------------------|
| Residential Mortgages | 1,034 | – | – | 1,034 |
| Commercial Mortgages | 130 | – | 8 | 122 |
| Credit Card Receivables | – | – | – | – |
| Loans to Corporates or SMEs (treated as Corporates) | 150 | 49 | – | 199 |
| Consumer Loans | 556 | – | – | 556 |
| Total | 1,870 | 49 | 8 | 1,911 |

1. There were no off-balance-sheet exposures in the Trading Book as at 31 December 2014.

Table 30: Non-Trading Book Securitisation Exposures by Exposure Type

| | TRADI- TIONAL \$MM | POSITIONS RETAINED \$MM | POSITIONS PUR- CHASED \$MM | OFF- BALANCE- SHEET EXPOSURES \$MM |
|---|--------------------------|-------------------------------|-------------------------------------|--|
| Residential Mortgages | 304 | 67 | 237 | – |
| Commercial Mortgages | 723 | 524 | 161 | 38 |
| Loans to Corporates or SMEs (treated as Corporates) | 3 | 3 | – | – |
| Other Assets | 1 | – | 1 | – |
| Covered Bonds | 1 | – | 1 | – |
| Total | 1,032 | 594 | 400 | 38 |

1. There were no synthetic securitisation exposures in the Non-Trading Book as at 31 December 2014.

16.4 Accounting

Transfers of financial assets in securitisation transactions are generally accounted for as sales when the MSI Group has relinquished control over the transferred assets and met CRR requirements for significant risk transfer. The gain or loss on sale of such financial assets depends, in part, on the previous carrying amount of the assets involved in the transfer (generally at fair value) and the sum of the proceeds and the fair value of the retained interests at the date of sale.

Further details of the accounting policy applied by MSI Group entities in the UK under UK GAAP can be found in the notes of the audited financial statements of MSBIL.

16.5 Valuation

The MSI Group may retain interests in the securitised financial assets of one or more tranches of the securitisation. These retained interests are included at fair value. Any changes in the fair value of such retained interests are recognised through the profit and loss in the audited financial statements of the entity holding such interests.

For further information on the MSI Group's valuation techniques related to securitisation, please refer to the Notes 3d and 30 in the Morgan Stanley & Co. International plc 2014 audited financial statements, and pages 160 to 164 of the 2014 Form 10-K.

16.6 Risk Monitoring

The credit risk of the MSI Group's securitisations and re-securitisations is controlled by actively monitoring and managing the associated credit exposures. The MSI Group evaluates collateral quality, credit subordination levels and structural characteristics of securitisation and re-securitisation transactions at inception and on an ongoing basis, and manages exposures against internal limits.

The MSI Group follows a set of rigorous procedures for risk managing market risk on securitised products, evolving them with changes in market conditions:

- The MSI Group conducts an assessment of risk limits at least once a year, and more often if required. Market conditions, collateral quality, liquidity and downside risk are important factors for setting market risk limits.
- The MSI Group measures downside risk using various metrics, such as VaR Scenarios, differentiating products based on collateral, seniority and liquidity.

17. Asset Encumbrance

Borrowing and lending securities and hence the encumbrance of assets, is a fundamental part of Morgan Stanley's business within the MSI Group. The following disclosure details the MSI Group's encumbered and unencumbered assets, along with the matching liabilities, as per the mandate created by Article 443 in Part Eight of the CRR. The numbers reported are presented as a median based on the four quarter ends of 2014.

The majority of the on-balance-sheet assets are not subject to any form of encumbrance, given they are mostly cash or receivable assets. The MSI Group also receives securities from the market, which are off-balance-sheet. These may be pledged to the market and encumbered, or held as part of the MSI Group's unencumbered pool of securities. The key sources of encumbrance are secured funding repo and stock lending transactions. Other sources of encumbrance include short coverage and collateral pledged against derivatives.

EMEA ALCO examines asset encumbrance reporting across UK Regulated Entities on a quarterly basis.

Table 31: Template A — Assets

| | CARRYING AMOUNT OF ENCUMBERED ASSETS \$MM | FAIR VALUE OF ENCUMBERED ASSETS \$MM | CARRYING AMOUNT OF UNENCUMBERED ASSETS \$MM | FAIR VALUE OF UNENCUMBERED ASSETS \$MM |
|-------------------------------------|--|---|--|---|
| Assets of the reporting institution | 101,734 | N/A | 356,036 | N/A |
| Equity Instruments | 38,646 | 38,646 | 9,632 | 9,632 |
| Debt Securities | 23,101 | 23,101 | 5,660 | 5,660 |
| Other Assets ¹ | 39,987 | N/A | 340,744 | N/A |

1. "Other Assets" reported in Template A incorporate the balancing on-balance-sheet assets as per the quarterly EBA Supervisory reports, including Loans on Demand and Loans and Advances other than Loans on Demand. Therefore, the total of Equity Instruments, Debt Securities and Other Assets tie back to the "Total Assets of the Reporting Institution".

Table 32: Template B — Collateral Received

| | FAIR VALUE OF ENCUMBERED COLLATERAL RECEIVED OR OWN DEBT SECURITIES ISSUED \$MM | FAIR VALUE OF COLLATERAL RECEIVED OR OWN DEBT SECURITIES ISSUED AVAILABLE FOR ENCUMBRANCE \$MM |
|---|--|--|
| Collateral received by the reporting institution | 188,800 | 34,482 |
| Equity Instruments | 81,753 | 4,077 |
| Debt Securities | 107,047 | 30,405 |
| Other collateral received | 0 | 0 |
| Own debt securities issued other than own covered bonds or ABSs | 0 | 0 |

Table 33: Template C — Encumbered Assets/Collateral Received and Associated Liabilities

| | MATCHING LIABILITIES, CONTINGENT LIABILITIES OR SECURITIES LENT \$MM | ASSETS, COLLATERAL RECEIVED AND OWN DEBT SECURITIES ISSUED OTHER THAN COVERED BONDS AND ABSs ENCUMBERED \$MM |
|--|--|--|
| Carrying amount of selected financial liabilities ² | 277,206 | 290,534 |

2. On-and off-balance-sheet liabilities that are a source of encumbrance are reported.

18. Appendix I: Capital Instruments Main Features Template

REPORTED IN USD UNLESS OTHERWISE STATED

| DESCRIPTION | COMMON EQUITY TIER 1 | | | ADDITIONAL TIER 1 | | | TIER 2 | | |
|---|--|---|--|--|---|--|--|---|--|
| | A | B | C | D | E | F | G | H | |
| Issuer | Morgan Stanley International Limited | Morgan Stanley International Limited | Morgan Stanley International Limited | Morgan Stanley & Co. International plc | Morgan Stanley Bank International Limited | Morgan Stanley International Limited | Morgan Stanley Group (Europe) | Morgan Stanley Securities Limited | |
| Unique Identifier (e.g. CUSIP, ISIN, or Bloomberg identifier for private placement) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Governing law(s) of the instrument | Companies Act 2006 | Companies Act 2006 | English Law | English Law | English Law | English Law | English Law | English Law | |
| Transitional CRR rules | Common Equity Tier 1 | Common Equity Tier 1 | Additional Tier 1 [all eligible as AT1] | Tier 2 [5.3% ineligible] | Tier 2 [19.8% ineligible] | Tier 2 [all eligible as Tier 2] | Ineligible | Tier 2 [18.0% ineligible] | |
| Post-transition- al CRR rules | Common Equity Tier 1 | Common Equity Tier 1 | Additional Tier 1 | Tier 2 | Tier 2 | Tier 2 | Ineligible | Tier 2 | |
| Eligible at solo/(sub-) consolidated/solo & (sub-) consolidated | (Sub-) Consolidated | (Sub-) Consolidated | (Sub-) Consolidated | Solo and (Sub-) Consolidated | Solo and (Sub-) Consolidated | (Sub-) Consolidated | (Sub-) Consolidated | Solo and (Sub-) Consolidated | |
| Instrument type | Ordinary Shares | Ordinary Shares | Perpetual Unsecured Resettable Securities | Long-term subordinated loan facility | Long-term subordinated loan facility | Long-term subordinated loan facility | Long-term subordinated loan facility | Long-term subordinated loan facility | |
| Amount recognised in regulatory capital (\$MM) | USD 1,164MM | USD 0MM | USD 1,300MM | USD 7,485MM | USD 312MM [The amount of Sub-debt issued by subsidiaries that is given recognition in Tier 2 Capital in accordance with articles 87 and 480 of the CRR] | USD 1,300MM | USD 128MM ¹ | | |
| Nominal amount of instrument | Currency of issuance and reporting currency: USD 1,614,167,000 | Currency of issuance: GBP 2 reporting currency: USD 3 | Currency of issuance and reporting currency: USD 1,300,000,000 | Currency of issuance and reporting currency: USD 7,906,000,000 | Currency of issuance: GBP 250,000,000 reporting currency: USD 389,525,000 | Currency of issuance and reporting currency: USD 1,300,000,000 | Currency of issuance and reporting currency: USD 820,000,000 | Currency of issuance: GBP 100,000,000 reporting currency: USD 155,810,000 | |

18. Appendix I: Capital Instruments Main Features Template (Continued)

REPORTED IN USD UNLESS OTHERWISE STATED

| DESCRIPTION | COMMON EQUITY TIER 1 | | | ADDITIONAL TIER 1 | | | TIER 2 | | | |
|---|----------------------|----------------------|---|--------------------------|---|---|--------------------------|---|--|--|
| | A | B | C | D | E | F | G | H | | |
| Issue Price | 1,614,180,500 | 3 | 1,300,000,000 | 7,906,000,000 | 389,525,000 | 1,300,000,000 | 820,000,000 | 155,810,000 | | |
| Redemption Price | N/A | N/A | 1,300,000,000 | 7,906,000,000 | 389,525,000 | 1,300,000,000 | 820,000,000 | 155,810,000 | | |
| Accounting Classification | Shareholders' Equity | Shareholders' Equity | Shareholders' Equity | Liability—amortised cost | Liability—amortised cost | Liability—amortised cost | Liability—amortised cost | Liability—amortised cost | | |
| Original date of issuance | 13 November 1998 | 18 June 1998 | 15 December 2014 | 31 October 2005 | 30 October 2003 | 31 October 2003 | 31 January 2006 | 31 October 2003 | | |
| Perpetual or dated | Perpetual | Perpetual | Perpetual | Dated | Dated | Dated | Dated | Dated | | |
| Original maturity date | No maturity | No maturity | No maturity | 31 October 2025 | 31 July 2019 | 31 October 2021 | 31 October 2025 | 15 December 2021 | | |
| Issuer call subject to prior supervisory approval | No | No | Yes | No | Yes | Yes | No | Yes | | |
| Option call date, contingent call dates and redemption amount | N/A | N/A | Issuer call option date is 5 years after the issue date (15-Dec-2019), after which the issuer has the option to redeem in whole or in part. In the event of a taxation event: can be redeemed at the option of the issuer in whole, but not in part. In the event of a Capital Disqualification event, the issuer can redeem in whole. The redemption price is equal to the outstanding principal amount being redeemed | N/A | Borrower may repay, in whole or in part, the amount of the loan at any time, provided regulatory permission has been received | Borrower may repay, in whole or in part, the amount of the loan at any time, provided regulatory permission has been received | N/A | Borrower may repay, in whole or in part, the amount of the loan at any time, provided regulatory permission has been received | | |

18. Appendix I: Capital Instruments Main Features Template (Continued)

REPORTED IN USD UNLESS OTHERWISE STATED

| DESCRIPTION | COMMON EQUITY TIER 1 | | | ADDITIONAL TIER 1 | TIER 2 | | | |
|--|----------------------|---------------------|---|-------------------------|--|------------------------|-------------------------|------------------------|
| | A | B | C | D | E | F | G | H |
| Subsequent call dates, if applicable | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Fixed or floating dividend/coupon | Floating | Floating | Floating | Floating | Floating | Floating | Floating | Floating |
| Coupon rate and any related index | N/A | N/A | 31-January 2020. Subsequent rate of interest fixed for 5 years; USD 5 yr mid-swap rate + 7.074% | 3mth USD LIBOR + 1.475% | 3mth GBP LIBOR + 1.25%, capped at 5% per annum | 6mth USD LIBOR + 1.25% | 3mth USD LIBOR + 1.475% | 3mth GBP LIBOR + 1.25% |
| Existence of a dividend stopper | No | No | No | No | No | No | No | No |
| Fully discretionary, partially discretionary or mandatory (in terms of timing) | Fully Discretionary | Fully Discretionary | Fully Discretionary | Mandatory | Mandatory | Mandatory | Mandatory | Mandatory |
| Fully discretionary, partially discretionary or mandatory (in terms of amount) | Fully Discretionary | Fully Discretionary | Fully Discretionary | Mandatory | Mandatory | Mandatory | Mandatory | Mandatory |
| Existence of step up or other incentive to redeem | No | No | No | No | No | No | No | No |
| Noncumulative or cumulative | Noncumulative | Noncumulative | Noncumulative | Cumulative | Cumulative | Cumulative | Cumulative | Cumulative |
| Convertible or non-convertible | Nonconvertible | Nonconvertible | Nonconvertible | Nonconvertible | Nonconvertible | Nonconvertible | Nonconvertible | Nonconvertible |
| If convertible, conversion trigger(s) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| If convertible, fully or partially | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| If convertible, conversion rate | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

18. Appendix I: Capital Instruments Main Features Template (Continued)

REPORTED IN USD UNLESS OTHERWISE STATED

| DESCRIPTION | COMMON EQUITY TIER 1 | | | ADDITIONAL TIER 1 | | | TIER 2 | | | |
|---|--|--|--|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--|
| | A | B | C | D | E | F | G | H | | |
| If convertible, mandatory or optional conversion | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| If convertible, specify instrument type convertible into | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| If convertible, specify issuer of instrument it converts into | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Write-down features | No | No | Yes | No | No | No | No | No | No | |
| If write-down, write-down trigger(s) | N/A | N/A | Common Equity Tier 1 Capital Ratio of UK Group falls below 7.00% | N/A | N/A | N/A | N/A | N/A | N/A | |
| If write-down, full or partial | N/A | N/A | Always full | N/A | N/A | N/A | N/A | N/A | N/A | |
| If write-down, permanent or temporary | N/A | N/A | Permanent | N/A | N/A | N/A | N/A | N/A | N/A | |
| If temporary write-down, description of write-up mechanism | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument) | Perpetual Unsecured Resettable Securities [column C] | Perpetual Unsecured Resettable Securities [column C] | Long-term subordinated loan facility [columns D,E,F,G,H] | Other liabilities | |
| Non-compliant transitioned features | No | No | No | No | No | No | No | No | No | |
| If yes, specify non-compliant features | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |

1. Sub-debt issued by an unregulated entity is not eligible for recognition in consolidated own funds under article 87 (3) or the CRR. The amount of Sub-debt issued by subsidiaries that is given recognition in Tier 2 Capital is determined in accordance with articles 87 and 480 of the CRR.

19. Appendix II: Own Funds Transitional Template

| | TRANSITIONAL RULES \$MM | FULLY LOADED POSITION \$MM |
|--|----------------------------|-------------------------------|
| Capital instruments and the related share premium accounts | 1,614 | 1,614 |
| Paid up capital instruments | 1,614 | 1,614 |
| Share premium | 0 | 0 |
| Retained earnings | 10,034 | 10,034 |
| Accumulated other comprehensive income (and other reserves, to include unrealised gains and losses under the applicable accounting standards) | 7,019 | 7,019 |
| Common Equity Tier 1 (CET1) capital before regulatory adjustments | 18,667 | 18,667 |
| Additional value adjustments (negative amount) | (1,172) | (1,172) |
| Negative amounts resulting from the calculation of expected loss amounts | (258) | (258) |
| Gains or losses on liabilities valued at fair value resulting from changes in own credit standing | 157 | 157 |
| Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative | (85) | (85) |
| Losses for the current financial year (negative amount) | (234) | (234) |
| Total regulatory adjustments to Common equity Tier 1 (CET1) | (1,592) | (1,592) |
| Common Equity Tier 1 (CET1) capital | 17,075 | 17,075 |
| Capital instruments and the related share premium accounts | 1,300 | 1,300 |
| Additional Tier 1 (AT1) capital | 1,300 | 1,300 |
| Tier 1 capital (T1 = CET1 + AT1) | 18,375 | 18,375 |
| Capital instruments and the related share premium accounts | 1,300 | 1,300 |
| Qualifying own funds instruments included in consolidated T2 capital (including minority interests and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties | 7,925 | 5,951 |
| Of which: Instruments issued by subsidiaries subject to phase out | 1,974 | – |
| Tier 2 (T2) capital before regulatory adjustments | 9,225 | 7,251 |
| Tier 2 (T2) capital | 9,225 | 7,251 |
| Total capital (TC = T1 + T2) | 27,600 | 25,626 |
| Total risk weighted assets | 143,630 | 143,630 |
| Common Equity Tier 1 (as a percentage of risk exposure amount) | 11.9% | 11.9% |
| Tier 1 (as a percentage of risk exposure amount) | 12.8% | 12.8% |
| Total capital (as a percentage of risk exposure amount) | 19.2% | 17.8% |
| Institution specific buffer requirement (CET1 requirement in accordance with article 92 (1) (a) plus capital conservation and countercyclical buffer requirements, plus systemic risk buffer, plus the systemically important institution buffer (G-SII or O-SII buffer), expressed as a percentage of risk exposure amount) | – | 2.5% |
| Of which: Capital conservation buffer requirement | – | 2.5% |
| Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount) | 7.9% | 7.4% |
| Direct and indirect holdings of the capital of financial sector entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions) | 478 | 478 |
| Direct and indirect holdings by the institution of the CET 1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 10% threshold and net of eligible short positions) | – | – |

20. Appendix III: Reconciliation of Balance Sheet Total Equity to Regulatory Capital

| | \$MM | COMMON EQUITY TIER 1 (CET1) CAPITAL \$MM | ADDITIONAL TIER 1 (AT1) CAPITAL \$MM | TIER 2 (T2) CAPITAL \$MM |
|--|---------------|--|--|--------------------------------|
| MSI Group Management accounts | | | | |
| Ordinary share capital | 2,914 | 1,614 | 1,300 | – |
| Share premium account | 0 | 0 | – | – |
| Other reserves | 7,460 | 7,461 | – | – |
| Noncumulative preference shares | 0 | 0 | – | – |
| Other Comprehensive Income | (441) | (441) | – | – |
| Profit/(loss) brought forward | 10,042 | 10,042 | – | – |
| Profit/(loss) for the period | (242) | (242) | – | – |
| Non-controlling interest | 1,856 | 1,856 | – | – |
| Balance sheet total equity | 21,589 | 20,289 | 1,300 | 0 |
| Add: | | | | |
| Tier 2 instruments classified as other liabilities | 10,571 | | | 10,571 |
| Less: | | | | |
| Qualifying own funds subordinated debt instruments not included in consolidated T2 capital | (1,346) | – | – | (1,346) |
| Minority interests (amount not allowed in consolidated CET1) | (1,856) | (1,856) | – | – |
| Additional value adjustments (negative amount) | (1,172) | (1,172) | – | – |
| Negative amounts resulting from the calculation of expected loss amounts | (258) | (258) | – | – |
| Gains or losses on liabilities valued at fair value resulting from changes in own credit standing | 157 | 157 | – | – |
| Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative | (85) | (85) | – | – |
| Total Own Funds (Transitional Rules) | 27,600 | 17,075 | 1,300 | 9,225 |
| Less: | | | | |
| Qualifying own funds subordinated debt instruments issued by subsidiaries subject to phase out | (1,974) | – | – | (1,974) |
| Total Own Funds (Fully Loaded Position) | 25,626 | 17,075 | 1,300 | 7,251 |

1. Prudential filter and deduction categories where the MSI Group has no filter to apply or deduction to make are not shown in the table.
2. Due to the exemption allowed under section 401 of the Companies Act 2006 MSI Group does not publish its own consolidated accounts. Internal MSI Group consolidated accounts are therefore used as the basis for the above reconciliation. Included within these consolidated accounts, but not separately disclosed above, are the fully reconciled and audited results of the individual regulated entities.

21. Appendix IV: List of Abbreviations

| TERM | DEFINITION |
|----------------------|---|
| APR | All Price Risk |
| BASEL II | International Convergence of Capital Measurement and Capital Standards: A Revised Framework— Comprehensive version June 2006 |
| CDS | Credit Default Swaps |
| CQS | Credit Quality Step |
| CRD | Capital Requirements Directive |
| CRDIII | Capital Requirements Directive—EU implementation of Basel 2.5 |
| CRDIV | Capital Requirements Directive—EU implementation of Basel 3 |
| CRM | Credit Risk Management |
| CRR | Capital Requirements Regulation |
| CVA | Credit Valuation Adjustment |
| EAD | Exposure at Default |
| EBA | European Banking Authority |
| ECAI | External Credit Assessment Institutions |
| EEA | European Economic Area |
| EMEA ALCO | EMEA Asset and Liability Management Committee |
| EMEA RC | EMEA Risk Committee |
| FCA | Financial Conduct Authority |
| Federal Reserve | Board of Governors of the Federal Reserve System |
| G-SIIs | Global Systemically Important Institutions |
| ICAAP | Internal Capital Adequacy Assessment Process |
| ICG | Individual Capital Guidance |
| IRB | Internal Ratings Based |
| IFRS | International Financial Reporting Standards |
| IRC | Incremental Risk Charge |
| ISDA | International Swaps and Derivatives Association |
| IMM | Internal Model Method |
| LGD | Loss Given Default |
| Morgan Stanley Group | Morgan Stanley, a Delaware corporation, together with its consolidated subsidiaries |
| MRD | Market Risk Department |
| MSBIL | Morgan Stanley Bank International Limited |
| MSCL | Morgan Stanley & Co. Limited |
| MSI | Morgan Stanley International Limited |

21. Appendix IV: List of Abbreviations (Continued)

| TERM | DEFINITION |
|-------------|---|
| MSI Group | Morgan Stanley International Limited (and its subsidiaries) |
| MSIM | Morgan Stanley Investment Management Limited |
| MSIM ACD | Morgan Stanley Investment Management (ACD) Limited |
| MSIP | Morgan Stanley & Co. International plc |
| MSIP Group | Morgan Stanley & Co. International plc and its subsidiaries |
| MSSL | Morgan Stanley Securities Limited |
| OTC | Over-the-counter |
| PD | Probability of Default |
| PRA | Prudential Regulation Authority |
| RWA | Risk Weighted Assets |
| SEC | US Securities and Exchange Commission |
| SPV | Special Purpose Vehicles |
| SREP | Supervisory Review Process |
| S&P | Standard and Poor's |
| TRS | Total Return Swaps |
| RST | Reverse Stress Testing |
| UK GAAP | United Kingdom Generally Accepted Accounting Practices |
| VaR | Value-at-Risk |

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