Morgan Stanley International Limited Group

Pillar 3 Quarterly Disclosure Report

As at 30 June 2020

Table of Contents

1.	Overview and Key Metrics	4
2.	Regulatory Frameworks	
3.	Capital Management	
4.	Capital Resources	
5.	Total Loss-Absorbing Capacity	11
6.	Leverage	
7.	Capital Requirements and RWAs	
8.	Credit Risk	
9.	Counterparty Credit Risk	
10.	Market Risk	22
11.	Liquidity Coverage Ratio	27
12.	Appendix I: MSI Group and MSIP Capital Instruments and Eligible Liabilities	28
13.	Appendix II: MSI Group and MSIP Own Funds Disclosure Template	
14.		
15.	Appendix IV: Abbreviations	
Tab	ples	
Tabl	e 1: Key metrics	4
Tabl	e 2: Own funds	10
	e 3: Reconciliation of balance sheet total equity to regulatory capital	
Tabl	e 4: TLAC key metrics	11
Tabl	e 5: TLAC composition	11
Tabl	e 6: TLAC creditor ranking	12
	e 7: Reconciliation of accounting assets and leverage ratio exposures	
	e 8: Leverage ratio common disclosure	
	e 9: Split of on-balance sheet exposures (excluding derivatives, SFTs and exempted exposures)	
	e 10: Overview of RWAs (EU OV1)	
	e 11: Credit and counterparty risk RWA summary	
	e 12: Credit and counterparty credit risk summary	
	e 13: RWA flow statements of credit risk exposures under the IRB approach (EU CR8)	
	e 14: IRB (Specialised Lending and Equities) (EU CR10)	
	e 15: Analysis of the CCR exposure by approach (EU CCR1)	
	e 16: RWA flow statements of CCR exposures under the IMM (EU CCR7)	
	e 17: CVA capital charge (EU CCR2)	
	e 18: Impact of netting and collateral held on exposure values (EU CCR5-A)	
	e 19: Composition of collateral for exposures to CCR (EU CCR5-B)	
	e 20: Exposures to CCPs (EU CCR8)	
	e 21: Credit derivatives exposures (EU CCR6)	
	le 22: Market risk RWA summary	
	e 23: Market risk under the standardised approach (EU MR1)	
	e 24: Market risk under internal models approach (EU MR2-A)	
	e 25: RWA flow statements of market risk exposures under the IMA (EU MR2-B)	
	e 26: IMA values for trading portfolios (EU MR3)	
Tab	le 27: Liquidity coverage ratio	27

Table 28: MSI Group and MSIP capital instruments and eligible liabilities	28
Table 29: MSI Group and MSIP own funds disclosure template	30
Table 30: Credit quality of exposures by exposure class and instrument (EU CR1-A)	31
Table 31: Credit quality of exposures by industry or counterparty types (EU CR1-B)	32
Table 32: Credit quality of exposures by geography (EU CR1-C)	33
Table 33: Credit Quality of Performing and Non-Performing exposures by past due days	34
Table 34: Performing and Non-performing exposures and related provisions	35
Table 35: Changes in stock of general and specific credit risk adjustments (EU CR2-A)	36
Table 36: Changes in stock of defaulted and impaired loans and debt securities (EU CR2-B)	36
Table 37: Credit risk mitigation techniques – overview (EU CR3)	36
Table 38: Standardised approach – Credit risk exposure and credit risk mitigation (CRM) effective	cts (EU CR4) 37
Table 39: Standardised approach (EU CR5)	38
Table 40: Standardised approach EAD by credit quality step	38
Table 41: IRB approach – Effect on the RWAs of credit derivatives used as CRM techniques (E	U CR7)39
Table 42: IRB approach – Credit risk exposures by exposure class and PD range (EU CR6)	39
Table 43: Standardised approach – CCR exposures by regulatory portfolio and risk weight (EU	J CCR3)40
Table 44: IRB approach – CCR exposures by portfolio and PD scale (EU CCR4)	40

1. Overview and Key Metrics

The principal activity of Morgan Stanley International Limited ("MSI") together with its subsidiaries (the "MSI Group") is the provision of financial services to corporations, governments and financial institutions. There have not been any significant changes in the MSI Group's principal activities during the second quarter of 2020.

As at 30 June 2020, Morgan Stanley & Co. International plc ("MSIP") is a large subsidiary within the MSI Group. MSIP is authorised by the Prudential Regulation Authority ("PRA") and regulated by the PRA and Financial Conduct Authority ("FCA").

In addition, the MSI Group contains the MSIM sub-consolidated group ("MSIM Group"). For further information on the MSIM Group, please refer to the annual MSI Group disclosure which is located at https://www.morganstanley.com/about-us-ir/pillar-uk.html

Key Metrics

Table 1: Key metrics					
\$MM					
MSI Group ¹	Q2'20	Q1'20	Q4'19	Q3'19	Q2'19
Common Equity Tier 1 Capital	20,150	19,069	19,734	18,815	19,072
Additional Tier 1 Capital	3,500	3,500	3,500	3,500	3,500
Tier 1 Capital	23,650	22,569	23,234	22,315	22,572
Tier 2 Capital	5,361	5,362	5,383	5,358	5,369
Total Own Funds	29,011	27,931	28,617	27,673	27,941
Risk Weighted Assets	158,394	152,140	137,333	137,019	132,222
Common Equity Tier 1 Ratio	12.7%	12.5%	14.4%	13.7%	14.4%
Tier 1 Capital Ratio	14.9%	14.8%	16.9%	16.3%	17.1%
Total Capital Ratio	18.3%	18.4%	20.8%	20.2%	21.1%
Leverage Exposure	454,204	458,603	455,153	468,322	455,281
Leverage Ratio	5.2%	4.9%	5.1%	4.8%	5.0%
Liquidity buffer	46,883	48,508	48,541	48,298	46,846
Total net cash outflows	21,058	21,121	21,267	21,291	20,341
Liquidity Coverage Ratio ²	223%	230%	228%	227%	230%
MSIP ¹	Q2′20	Q1'20	Q4'19	Q3'19	Q2'19
Common Equity Tier 1 Capital	15,724	14,895	15,394	15,043	15,113
Additional Tier 1 Capital	3,500	3,500	3,500	3,500	3,500
Tier 1 Capital	19,224	18,395	18,894	18,543	18,613
Tier 2 Capital	5,000	5,000	5,000	5,000	5,000
Total Own Funds	24,224	23,395	23,894	23,543	23,613
Risk Weighted Assets	144,307	134,852	127,347	129,381	126,670
Common Equity Tier 1 Ratio	10.9%	11.0%	12.1%	11.6%	11.9%
Tier 1 Capital Ratio	13.3%	13.6%	14.8%	14.3%	14.7%
Total Capital Ratio	16.8%	17.3%	18.8%	18.2%	18.6%
Leverage Exposure	440,711	443,185	445,417	455,937	445,514
Leverage Ratio	4.4%	4.2%	4.2%	4.1%	4.2%

^{1.} The MSI Group and MSIP are required to maintain a minimum ratio of Own Funds to Risk Weighted Assets ("RWAs"). As at 30 June 2020, the MSI Group and MSIP are in compliance with the PRA capital requirements.

^{2.} Total weighted adjusted value (12 month average)

Basis of Consolidation

The MSI Group completes its prudential consolidation in compliance with Capital Requirements Regulation ("CRR") Part One, Title II Chapter 2, with all entities fully consolidated. The basis of consolidation for prudential purposes is the same as consolidation for accounting purposes. This disclosure is prepared for the MSI Group, rather than on an individual basis for each regulated entity, as permissible by CRD IV. 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. This disclosure comprehensively conveys the risk profile of the MSI Group and MSIP.

Morgan Stanley Group

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 is a "Financial Holding Company" as defined by the Bank Holding Company Act of 1956, as amended, and is subject to regulation and oversight of the Board of Governors of the Federal Reserve System.

The MSI Group is a wholly owned sub-group 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, liquidity, risk exposure and risk management policies should consult the public disclosures of Morgan Stanley Group.

Details of the latest Morgan Stanley Group Pillar 3 disclosure can be accessed at http://www.morganstanley.com/about-us-ir/pillar-us. Details of the latest Morgan Stanley Group Liquidity Coverage Ratio disclosure can be accessed at https://www.morganstanley.com/about-us-ir/lcr-disclosures-us.

Morgan Stanley is listed on the New York Stock Exchange and is required, by the US Securities and Exchange Commission, to file public disclosures, including Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q. These can be accessed at http://www.morganstanley.com/pub/content/msdotcom/en/about-us-ir/sec-filings.

2. Regulatory Frameworks

2.1 Regulatory Overview

The Basel Capital Accord provides a global regulatory framework for capital and liquidity. This was revised in 2010 following the financial crisis, through a number of reforms collectively known as Basel III. The revised Basel Capital Accord has been implemented in the EU via the Capital Requirements Directive ("CRD") and the CRR (collectively known as "CRD IV"). 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, operational and liquidity risk;
- Pillar 2 Supervisory review process: including a requirement for firms to undertake an Internal Capital Adequacy Assessment ("ICAAP") and Internal Liquidity Adequacy Assessment ("ILAAP");
- Pillar 3 Market discipline: requires expanded disclosures to allow investors and other market
 participants to understand capital and liquidity adequacy, particular risk exposures and risk
 management processes of individual firms.

Pillar 3 Disclosure

MSI Group Pillar 3 disclosures are prepared in accordance with the requirements of Part Eight of the CRR. For certain disclosures, these requirements are further detailed through the European Banking Authority ("EBA") Regulatory Technical Standards ("RTS") and Implementing Technical Standards ("ITS") which include a number of common templates. Where applicable, these templates are used within this disclosure.

The MSI Group has policies and procedures in place to assess the appropriateness of its Pillar 3 disclosure. One or more members of the management body are required to confirm that the disclosure has been prepared in accordance with internal control processes agreed upon at the management body level. The MSI Group's Pillar 3 disclosure is not required to be, and has not been, audited by the MSI Group's auditor. The MSI Group's Pillar 3 disclosure as at 30 June 2020 is based on its current understanding of CRD IV and related legislation, which may be subject to change as the MSI Group receives additional clarification and implementation guidance from regulators relating to CRD IV and as the interpretation of the final rules evolves over time.

2.2 Regulatory Development

Basel Committee on Banking Supervision ("BCBS") - finalizing Basel III reforms

In December 2017, the BCBS released the final part of its Basel III reform package. The key amendments provide updates to the standardised measures for calculating capital requirements and include an RWA floor, calculated at 72.5% of total standardised RWA.

In January 2019, the BCBS published its revised final standard on the minimum capital requirements for market risk, also known as the Fundamental Review of the Trading Book ("FRTB"). The new regime:

- Clarifies the boundary between the banking book and trading book;
- Provides capital requirements for non-modellable risk factors;
- Introduces an internal models approach that uses expected shortfall methods; and
- Establishes a more risk-sensitive standardised approach that acts as a fall-back for the internal models method

Given the above proposals will need to be transposed into national/EU law, the timing and impact of the final outcome remains uncertain.

Amendments to the CRR

In June 2019, the European Commission published the final rules, known as CRD V and CRR II, that amend the existing prudential regime (CRD IV and CRR), and the Bank Recovery and Resolution Directive ("BRRD"). These rules implement parts of the Basel III reform package finalised before December 2017.

The CRD V/CRR II package includes: Total Loss-Absorbing Capacity ("TLAC"), FRTB, Standardised Approach to Counterparty Credit Risk ("SA-CRR"), Net Stable Funding Ratio ("NSFR"), revised leverage ratio, revised Large Exposure Framework, Intermediate Parent Undertaking ("IPU") requirement, and revised Pillar 3 disclosure requirements.

Final rules are effective 27 June 2019; however, implementation dates are staggered over a four year period, with TLAC applying from 27 June 2019 and the majority of new requirements applying from 28 June 2021.

Following the transition period of the UK's withdrawal from the EU, the UK will endeavour to introduce all prudential requirements (i.e. CRDV / CRR II) not already transposed into UK law, with a largely consistent application date to that of the EU. However, as the framework for the updated prudential standards is being introduced through the Financial Service's ("FS") Bill, the specific timing and final scope of the introduction of this regime is still being considered and will be dependent on the Bill's passage through Parliament.

Investment Firm Regulation / Directive

In December 2019, the European Commission published the Investment Firm Regulation ("IFR") and Investment Firm Directive ("IFD") that introduce a tailored capital adequacy and liquidity framework for EU investment firms based on their size and type of business activity, and make changes to governance and remuneration requirements. Large systemic investment firms remain subject to existing requirements based on the CRR and CRD, whilst the new regime applies to other investment firms.

Final rules are effective 25 December 2019; however, implementation dates are staggered over an 18 month period, with the majority of the new requirements applying from 26 June 2021.

Following the transition period of the UK's withdrawal from the EU, the UK will endeavour to introduce the Investment Firms Prudential Regime ("IFPR") with a largely consistent application date with that of the EU's IFR/IFD. However, as the IFPR is being introduced through the FS Bill, the specific timing and final scope of the introduction of this regime is still being considered and will be dependent on the Bill's passage through Parliament.

UK withdrawal from the EU

On 31 January 2020, the UK withdrew from the EU under the terms of a withdrawal agreement between the UK and the EU. The withdrawal agreement provides for a transition period to the end of December 2020, during which time the UK will continue to apply EU law as if it were a member state, and UK firms' passporting rights to provide financial services in EU jurisdictions will continue. The annual Pillar 3 disclosure for the year ended 31 December 2019 provides more detailed disclosure on the UK's withdrawal from the EU and the Group's new operating model.

As of 1 August 2020, the Company has transferred its branch operations in Poland to MSESE and has taken steps to prepare the transfer of its existing branch operations in the Netherlands to MSESE. The Morgan Stanley Group expects that further clients of the Company, and activities currently transacted by the Company, including capital markets activities, will move from the Company to MSESE. The extent and timing of these moves will depend on

client preferences and on licensing rules, which in turn will depend on the form of any future trading agreement between the UK and the EU in relation to financial services.

Following the reorganisations mentioned, the Group's principal activity and risks remain unchanged and the majority of current profitability and balance sheet is expected to remain within the Group.

The Morgan Stanley Group has prepared its European operation to be able to do business with its clients in the EU regardless of whether or not equivalence (or an alternative arrangement for financial services) is granted. Changes have been made to European operations in an effort to ensure that the Morgan Stanley Group can continue to provide cross-border banking and investment and other services in EU member states from within the EU where necessary.

As a result of the ongoing political uncertainty, it is currently unclear what the final post-Brexit structure of European operations will be for the Morgan Stanley Group overall. Given the potential negative disruption to regional and global financial markets, results of Morgan Stanley's operations and business prospects could be negatively affected.

3. Capital Management

The MSI Group views capital as an important source of financial strength. It manages and monitors its capital in line with established policies and procedures and in compliance with local regulatory requirements. In line with Morgan Stanley Group capital management policies, the MSI Group manages its capital position based upon, among other things, business opportunities, risks, capital availability and rate of return together with, internal capital policies, regulatory requirements and rating agency guidelines. Therefore, in the future it may adjust its capital base in reaction to the changing needs of its businesses. The appropriate level of capital is determined at a legal entity level to safeguard that entity's ability to continue as a going concern and ensure that it meets all regulatory capital requirements. The key components of the capital management framework used by the MSI Group are set out in the MSI Group Capital Planning and Management Policy and include a point in time risk and leverage based capital assessment, forward looking capital projections and stress testing. The MSI Group conducts an ICAAP at least annually in order to meet its obligations under CRD IV.

The ICAAP is a key tool used to inform the MSI Board and the executive management on risk profile and capital adequacy. The MSI Group's 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; and
- Uses stress testing to size a capital buffer aimed at ensuring the MSI Group will continue to operate above regulatory requirements under a range of severe but plausible stress scenarios; and
- Assesses capital adequacy under normal and stressed operating environments over the three year capital planning horizon to ensure the MSI Group maintains a capital position in line with pre and post stress minimum levels.

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

The PRA reviews the MSI Group ICAAP through its Supervisory Review and Evaluation Process ("SREP") and sets a Total Capital Requirement ("TCR"), comprising Pillar 1 and Pillar 2A, which establishes the minimum level of regulatory capital for the MSI Group and MSIP. During Q2 2020 the PRA announced it would set Pillar 2A

requirements as a nominal amount in the 2020 and 2021 SREPs, and firms who do not have a SREP due in 2020 could apply for a conversion of the current P2A requirement into a nominal amount. As of 30 June 2020 the MSI Group TCR was \$17.3Bn, equivalent to 10.9% of RWAs. If required, the PRA also sets a buffer in addition to the Basel Combined Buffers, which is available to support the MSI Group in a stressed market environment.

The Capital Conservation Buffer ("CCB") requires banks to build up a capital buffer that can be utilised to absorb losses during period of stress, whilst remaining compliant with minimum requirements, and must be met with Common Equity Tier 1 ("CET1") capital. The CCB was fully phased in on 1 January 2019 at 2.5%.

The Countercyclical Capital Buffer ("CCyB") was introduced to ensure that excessive growth in specific countries is accounted for by increasing minimum capital ratios by between 0% and 2.5%, and must be met with CET1 Capital. The CCyB for the MSI Group stood at 0.04% as of 30 June 2020. On 11 March 2020, the Financial Policy Committee ("FPC") reduced the UK CCyB to 0% with immediate effect. The FPC expects that the 0% rate will be effective until at least March 2022. Regulators in other jurisdictions have implemented similar actions.

MSI Group capital is managed to ensure risk and leverage based requirements assessed through the ICAAP and SREP are met. Internal capital ratio minima are set by the MSI Board to ensure the MSI Group and its subsidiaries have sufficient capital to meet their regulatory requirements at all times.

The capital managed by the MSI Group broadly includes share capital, Additional Tier 1 ("AT1") capital instruments, subordinated debt and reserves. In order to maintain or adjust its capital structure, the MSI Group may pay dividends, return capital to its shareholders, issue new shares, or issue or repay AT1 capital instruments or subordinated debt.

On 29 September, the PRA granted both MSI Group and MSIP permission to include the interim profits for the period beginning 1 January 2020 and ending on 30 June 2020 in Common Equity Tier 1 capital.

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 subsidiaries.

COVID-19 Regulatory Measures

In response to the significant economic impact of the COVID-19 pandemic, global regulators have released a suite of regulatory updates and programs to facilitate market continuation and to provide incentives for banks to continue lending to business and consumers. The regulatory responses to COVID-19 differ by jurisdictions and continue to evolve.

In the EU, effective from 27 June 2020, targeted amendments were made to the CRR and the revised CRR ("CRR2"). The amendments include revised capital and liquidity requirements to address the impact of higher market volatility. For example, they allow flexibility for competent authorities to exclude certain back-testing exceptions observed during the COVID-19 pandemic period if certain conditions are met, which will reduce institutions' Value-at-Risk ("VaR") multiplier and capital requirements for market risk calculated using internal models.

In the UK, the Bank of England reduced countercyclical buffer requirements. Other guidance has also been provided, for example on the use of capital and liquidity buffers.

The impact of these regulatory measures is included in the Capital Resources section and the roll offs are included within regular forward looking capital planning activities.

4. Capital Resources

The capital resources of the MSI Group and MSIP are set out in Table 2. All capital resources included in Tier 1 and Tier 2 capital are of standard form and the main terms and conditions of the capital instruments are disclosed in Appendix II.

Table 2: Own funds		
\$MM	MSI Group	MSIP
Capital instruments eligible as CET1 capital	2,337	12,978
Retained earnings	13,253	2,812
Accumulated other comprehensive income	(748)	(131)
Other reserves	7,461	1,403
Adjustments to CET1 due to prudential filters	(1,274)	(1,204)
Other intangible assets	(688)	(2)
Internal Ratings Based shortfall of credit risk adjustments to expected losses	(171)	(132)
Defined-benefit pension fund assets	(20)	0
CET1 capital	20,150	15,724
Additional Tier 1 capital	3,500	3,500
Tier 1 capital	23,650	19,224
Capital instruments and subordinated loans eligible as Tier 2 capital	5,361	5,000
Instruments issued by subsidiaries that are given recognition in Tier 2 capital	-	-
Tier 2 capital	5,361	5,000
Total own funds	29,011	24,224

Over the first half of 2020, the MSI Group Own Funds have increased, due to an increase in retained earnings.

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 CRD IV, additional valuation adjustments are applied to capital over and above those that are taken in order to comply with the accounting requirements. The regulatory adjustments are referred to in the above table as prudential filters. The capital resources of the MSI Group and MSIP are based on unaudited financial information. Table 3 provides a reconciliation of shareholders' equity to regulatory capital.

Table 3: Reconciliation of balance sheet total equity to regulat	ory capital							
\$MM		MSI Gr	oup			MSI	P	
		CET1	AT1	Tier 2		CET1	AT1	Tier 2
		capital	capital	capital		capital	capital	capital
Equity instruments	5,816	2,316	3,500	-	15,965	12,465	3,500	-
Share premium	21	21	-	-	513	513	-	-
Other reserves	7,461	7,461	-	-	1,403	1,403	-	-
Other comprehensive income	(748)	(748)	-	-	(131)	(131)	-	-
Retained earnings	14,058	14,058	-	-	3,589	3,589	-	-
Non-controlling interest	104	104	-	-	-	-	-	-
Balance sheet total equity	26,712	23,212	3,500	-	21,339	17,839	3,500	-
Add:								
Tier 2 instruments classified as debt and other borrowings	5,361	-	-	5,361	5,000	-	-	5,000
Less:								
Qualifying own funds subordinated debt instruments not								
included in consolidated Tier 2 capital	_	_	_	_	_	_	_	_
Part of interim or year-end profit not eligible	(805)	(805)	-	-	(777)	(777)	-	-
Minority interests (amount not allowed in consolidated CET1)	(104)	(104)	-	-	-	-	-	-
Additional value adjustments	(1,274)	(1,274)	-	-	(1,223)	(1,223)	-	-
Negative amounts resulting from the calculation of expected loss amounts	(171)	(171)	-	-	(132)	(132)	-	-
Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	0	0	-	-	19	19	-	-
Intangible assets (net of related tax liability)	(688)	(688)	-	-	(2)	(2)	-	-
Defined-benefit pension fund assets	(20)	(20)	-	-	-	-	-	-
Total own funds (transitional rules and fully loaded position)	29,011	20,150	3,500	5,361	24,224	15,724	3,500	5,000

5. Total Loss-Absorbing Capacity

MSI Group is subject to internal TLAC requirements via CRR II. These requirements are designed to enhance the resilience of the financial system by ensuring firms have sufficient capital to absorb losses and recapitalise under resolution. The minimum capacity requirements are set at 16% of risk weighted assets and 6% of leverage exposure, scaled at 90% for MSI Group as the subsidiary of a non-EU Global Systemically Important Institution ("G-SII").

Morgan Stanley's preferred resolution strategy is a Single Point of Entry ("SPOE") strategy. Further information on resolution strategy can be found in Morgan Stanley Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q. The MSI Group TLAC key metrics are provided in Table 4.

Table 4: TLAC key metrics					
\$MM					
MSI Group	Q2'20	Q1'20	Q4'19	Q3'19	Q2'19
Total loss absorbing capacity (TLAC) available	35,011	33,931	34,617	30,173	30,441
Total RWA at the level of the resolution group	158,394	152,140	137,333	137,019	132,222
TLAC as a percentage of RWA (row 1/row2) (%) ¹	22.1%	22.3%	25.2%	22.0%	23.0%
Leverage ratio exposure measure at the level of the resolution group	454,204	458,603	455,153	468,322	455,281
TLAC at a percentage of leverage ratio exposures measure $(row1/row4)$ (%) ¹	7.7%	7.4%	7.6%	6.4%	6.7%

^{1.} As at 30 June 2020, the MSI Group is in compliance with the TLAC requirements.

Table 5 provides details of the composition of the MSI Group's TLAC.

Table 5: TLAC composition	
\$MM	
MSI Group	Q2′20
Common Equity Tier 1 Capital (CET1)	20,150
Additional Tier 1 Capital (AT1) before TLAC adjustments	3,500
AT1 ineligible as TLAC as issued out of subsidiaries to third parties	-
Other adjustments	-
AT1 instruments eligible under the TLAC framework	3,500
Tier 2 Capital (T2) before TLAC adjustments	5,361
Amortised portion of T2 instruments where remaining maturity >1 year	-
T2 Capital ineligible as TLAC as issued out of subsidiaries to third parties	-
Other adjustments	-
T2 instruments eligible under the TLAC framework	5,361
TLAC arising from regulatory capital	29,011
TLAC instruments subordinated to excluded liabilities	6,000
TLAC arising from non-regulatory capital instruments before adjustments	6,000
TLAC before deductions	35,011
Deduction of investments in own other TLAC liabilities	-
Other adjustments to TLAC	-
TLAC after deductions	35,011
Total risk-weighted assets adjusted as permitted under the TLAC regime	158,393
Leverage exposure measure	454,204
TLAC (as a percentage of risk-weighted assets adjusted as permitted under the TLAC regime)	22.1%
TLAC (as a percentage of leverage exposure)	7.7%
Institution-specific buffer requirement	2.54%
Of which: capital conservation buffer requirement	2.50%
Of which: bank specific countercyclical buffer requirement	0.04%

Table 6 provides a breakdown of eligible instruments in the creditor hierarchy of the MSI Group.

Table 6: TLAC creditor ranking					
			Creditor ranking		
\$MM	1	2	3	4	
MSI Group	(most junior)			(most senior)	Total
Description of creditor ranking	Ordinary Shares ¹	AT1 instruments	Subordinated loans	Senior Subordinated loans	
Total capital and liabilities	2,316	3,500	5,361	6,000	17,177
Excluded liabilities ²	-	-	-	-	-
Total capital and liabilities less excluded liabilities	2,316	3,500	5,361	6,000	17,177
Eligible as TLAC	2,316	3,500	5,361	6,000	17,177
with 1 year ≤ residual maturity < 2 years	-	-		6,000	6,000
with 2 years ≤ residual maturity < 5 years	-	-	-	-	-
with 5 years ≤ residual maturity < 10 years	-	-	5,361	-	5,361
with residual maturity ≥ 10 years	-	-	-	-	-
perpetual securities	2,316	3,500	-	-	5,816

Ordinary Shares excludes the value of share premium and reserves.

6. Leverage

The Basel III framework introduced a simple, transparent, non-risk based leverage ratio to act as a supplementary measure to the risk-based capital requirements. The Basel Committee is of the view that a simple leverage ratio framework is critical and complementary to the risk-based capital framework and that a credible leverage ratio ensures broad and adequate capture of both the on and off-balance sheet sources of banks' leverage.

The MSI Group and MSIP leverage ratios as at 30th June 2020 exceed the minimum requirement of 3% that will apply once European legislation comes into effect on 28 June 2021. MSI Group manages its risk of excessive leverage through the application of business unit leverage exposure limits and leverage ratio early warning trigger levels. Limits are calibrated in line with legal entity capacity and ensure that leverage exposure remains within the MSI Board's risk appetite. MSI Group and MSIP's leverage exposures are calculated monthly and weekly, respectively, and reported to EMEA ALCO who monitor this, as well as maturity mismatches and asset encumbrance metrics, to ensure that any excessive risk is highlighted, assessed and mitigated appropriately.

The MSI Group leverage ratio and MSIP leverage ratio have increased 0.3% and 0.2% respectively from 31 March 2020 to 30 June 2020, primarily due to an increase in Tier1 Capital.

The disclosures in the tables below have been made in accordance with the EU Delegated Act and are disclosed on a fully phased in basis. Table 7 provides a reconciliation between total assets in the financial statements and the leverage exposure measure for MSI Group and MSIP as at 30 June 2020.

Table 7: Reconciliation of accounting assets and leverage ratio exposures		
\$MM	MSI Group	MSIP
Total assets as balance sheet ¹	562,704	545,089
Adjustments for derivative financial instruments	(135,059)	(130,680)
Adjustments for securities financing transactions	16,411	16,408
Adjustment for off-balance sheet items (i.e. conversion to credit equivalent amounts of off-balance sheet exposures)	12,185	11,597
(Adjustment for intragroup exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (7) of Regulation (EU) No 575/2013)	-	(462)
Other adjustments	(2,037)	(1,241)
Total leverage ratio exposure	454,204	440,711

^{1.} MSI Group does not publish financial statements and the reported balances are reconciled to unaudited financial information.

^{2.} As at 30 June 2020 MSI Group has no excluded liabilities as defined in CRR II Article 72a (2).

Table 8 provides a detailed breakdown of the components of the leverage ratio exposure for MSI Group and MSIP as at 30 June 2020.

Table 8: Leverage ratio common disclosure		
\$MM	MSI Group	MSIP
On-balance sheet exposures (excluding derivatives and SFTs)		
On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	220,955	201,388
(Asset amounts deducted in determining Tier 1 capital)	(2,153)	(1,357)
Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets)	218,802	200,031
Derivative exposures		
Replacement cost associated with <i>all</i> derivatives transactions (i.e. net of eligible cash variation margin)	27,074	24,943
Add-on amounts for PFE associated with all derivatives transactions (mark-to-market method)	141,654	137,751
Gross-up for derivatives collateral provided where deducted from the balance sheet pursuant to the applicable accounting framework ${\bf r}$	8,788	7,876
(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	(36,620)	(34,388)
(Exempted CCP leg of client-cleared trade exposures)	(11,603)	(6,988)
Adjusted effective notional amount of written credit derivatives	213,286	205,166
(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	(204,719)	(196,605)
Total derivative exposures	137,860	137,755
Securities financing transaction exposures		
Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	144,133	150,569
(Netted amounts of cash payables and cash receivables of gross SFT assets)	(67,886)	(67,886)
Counterparty credit risk exposure for SFT assets	9,110	9,107
Total securities financing transaction exposures	85,357	91,790
Other off-balance sheet exposures		
Off-balance sheet exposures at gross notional amount	21,481	20,325
(Adjustments for conversion to credit equivalent amounts)	(9,296)	(8,728)
Total other off-balance sheet exposures	12,185	11,597
Exempted exposures in accordance with CRR Article 429 (7) and (14) (on and off balance sheet) (Intragroup exposures (solo basis) exempted in accordance with Article 429(7) and (14) of	0	(462)
Regulation (EU) No 575/2013 (on and off balance sheet))		
Capital and total exposure measure	22.650	10 224
Tier 1 capital	23,650	19,224
Total leverage ratio exposures	454,204	440,711
Leverage ratio	5.2%	4.4%
Choice on transitional arrangements for the definition of the capital measure	Fully phased in	Fully phased in

Table 9 provides a breakdown of the on-balance sheet exposures into trading and non-trading book exposures for MSI Group and MSIP as at 30 June 2020.

Table 9: Split of on-balance sheet exposures (excluding derivatives, SFTs and exempted exposures)		
\$MM	MSI Group	MSIP
Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:	220,955	201,388
Trading Book exposures	172,436	163,872
Non-Trading Book exposures, of which:	48,519	37,516
Exposures treated as sovereigns	19,920	14,116
Regional government, MDB, international organisations and PSE not treated as sovereigns	6	6
Institutions	21,132	18,942
Corporate	4,615	3,737
Exposures in default	97	22
Other exposures (e.g. equity, securitisations, and other non-credit obligation assets)	2,749	693

7. Capital Requirements and RWAs

RWAs reflect both on- and off-balance sheet risk, as well as capital charges attributable to the risk of loss arising from the following.

Credit and Counterparty Credit Risk ("CCR") 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 RWAs, determined using approved internal modelling approaches – the Foundation Internal Ratings Based approach ("IRB") for credit risk and the Internal Models Method ("IMM") for counterparty risk – as well as the Standardised Approach ("SA") and Mark-to-Market Method ("MTMM") for exposures not covered by internal models.

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

Securitisations exposures are a transaction or scheme, whereby the credit risk associated with an exposure or pool of exposures is tranched, having the following characteristics. Payments in the transaction or scheme are dependent upon the performance of the exposure or pool of exposures. Also, the subordination of tranches determines the distribution of losses during the ongoing life of the transaction or scheme.

Market risk refers to the risk that a change in the level of one or more market prices, rates, indices, implied volatilities (the price volatility of the underlying instrument imputed from option prices), correlations or other market factors, such as market liquidity, will result in losses for a position or portfolio. The Market Risk capital requirements comprise of capital associated with the Internal Modelling Approaches ("IMA") approved by the PRA and those associated with the Standardised Approach.

Large exposures refer to the capital requirement that covers the risk due to concentrated exposures to a single counterparty or group of connected counterparties.

Operational risk refers to the risk of loss, or of damage to reputation, resulting from inadequate or failed processes, people and systems or from external events (e.g. fraud, theft, legal and compliance risks, cyberattacks or damage to physical assets). Capital requirements for operational risk are currently calculated under the Basic Indicator Approach ("BIA").

Amounts below the thresholds for deduction correspond to items not deducted from Own Funds, as they are below the applicable thresholds for deduction, in accordance with the CRR.

The MSI Group enhances its risk management strategy and incorporates improvements in modelling techniques while maintaining compliance with the regulatory requirements.

Table 10 summarises RWAs and minimum capital requirements ("MCR") for MSI Group and MSIP by risk type. MSI Group and MSIP calculate Pillar 1 capital requirements as 8% of RWAs in accordance with CRD IV.

	RWAs	RWAs	MCF
MSI Group	Q2'20	Q1'20	Q2'20
Credit risk (excluding CCR)	12,255	14,209	980
Of which standardised approach	3,249	4,062	260
Of which foundation IRB (FIRB) approach	6,783	5,725	542
Of which advanced IRB (AIRB) approach	-	-	
Of which equity IRB under the simple risk-weighted approach or the IMA	2,223	4,422	178
CCR	56,356	56,714	4,508
Of which mark-to-market	8,560	9,494	685
Of which original exposure	-	-	
Of which standardised approach	236	1,102	19
Of which internal model method	23,808	24,506	1,904
Of which Financial collateral comprehensive method (for SFTs)	8,087	7,151	647
Of which risk exposure amount for contributions to the default fund of a CCP	982	1,027	79
Of which CVA	14,683	13,434	1,174
Settlement risk	71	300	4-
Securitisation exposures in banking book (after cap) ¹	215	225	17
Of which IRB	-	-	
Of which IRB supervisory formula approach (SFA)	-	-	
Of which standardised approach (IAA)	-	-	
Of which standardised approach Market risk	69,577	60 E70	5,566
Of which standardised approach	14,170	60,579 12,411	1,133
Of which Standardised approach Of which IMA	55,407	48,168	4,433
Large exposures	7,419	7,903	594 594
Operational risk	12,094	12,094	968
Of which basic indicator approach	12,094	12,094	968
Of which standardised approach	12,054	12,054	300
Of which advanced measurement approach	-	_	
Amounts below the thresholds for deduction (subject to 250% risk weight)	407	116	33
Floor adjustment	-	-	
Total	158,394	152,140	12,672
MSIP			
Credit risk (excluding CCR)	9,208	11,252	737
			120
Of which standardised approach	1,728	2,494	135
	1,728 5,400	2,494 4,411	
Of which standardised approach	•	=	
Of which standardised approach Of which foundation IRB (FIRB) approach	•	=	432
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach	5,400 -	4,411 -	139 432 166 4,378
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA	5,400 - 2,080	4,411 - 4,347	432 166
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR	5,400 - 2,080 54,724	4,411 - 4,347 54,209	432 166 4,37 8
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market	5,400 - 2,080 54,724	4,411 - 4,347 54,209	432 166 4,37 8
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure	5,400 - 2,080 54,724 8,202	4,411 - 4,347 54,209 9,117	432 166 4,378 656
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure Of which standardised approach	5,400 - 2,080 54,724 8,202 - 217	4,411 - 4,347 54,209 9,117 - 1,072	43. 166 4,378 656 18 1,850
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure Of which standardised approach Of which internal model method	5,400 - 2,080 54,724 8,202 - 217 23,124	4,411 - 4,347 54,209 9,117 - 1,072 23,612	432 166 4,378 656
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure Of which standardised approach Of which internal model method Of which Financial collateral comprehensive method (for SFTs)	5,400 - 2,080 54,724 8,202 - 217 23,124 8,451	4,411 - 4,347 54,209 9,117 - 1,072 23,612 6,951	43. 166 4,378 656 18 1,850 676 53
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure Of which standardised approach Of which internal model method Of which Financial collateral comprehensive method (for SFTs) Of which risk exposure amount for contributions to the default fund of a CCP Of which CVA Settlement risk	5,400 - 2,080 54,724 8,202 - 217 23,124 8,451 666 14,064 50	4,411 - 4,347 54,209 9,117 - 1,072 23,612 6,951 662 12,795 278	43. 166 4,37 8 656 1,850 670 53 1,129
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure Of which standardised approach Of which internal model method Of which Financial collateral comprehensive method (for SFTs) Of which risk exposure amount for contributions to the default fund of a CCP Of which CVA Settlement risk Securitisation exposures in banking book (after cap) ¹	5,400 - 2,080 54,724 8,202 - 217 23,124 8,451 666 14,064	4,411 - 4,347 54,209 9,117 - 1,072 23,612 6,951 662 12,795	43. 166 4,37 8 656 1,856 670 53 1,129
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure Of which standardised approach Of which internal model method Of which Financial collateral comprehensive method (for SFTs) Of which risk exposure amount for contributions to the default fund of a CCP Of which CVA Settlement risk Securitisation exposures in banking book (after cap) ¹	5,400 - 2,080 54,724 8,202 - 217 23,124 8,451 666 14,064 50	4,411 - 4,347 54,209 9,117 - 1,072 23,612 6,951 662 12,795 278	43. 166 4,37 8 656 1,856 670 53 1,129
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure Of which standardised approach Of which internal model method Of which Financial collateral comprehensive method (for SFTs) Of which risk exposure amount for contributions to the default fund of a CCP Of which CVA Settlement risk Securitisation exposures in banking book (after cap) ¹ Of which IRB Of which IRB supervisory formula approach (SFA)	5,400 - 2,080 54,724 8,202 - 217 23,124 8,451 666 14,064 50	4,411 - 4,347 54,209 9,117 - 1,072 23,612 6,951 662 12,795 278	43. 166 4,376 656 17 1,856 676 57 1,122
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure Of which standardised approach Of which internal model method Of which Financial collateral comprehensive method (for SFTs) Of which risk exposure amount for contributions to the default fund of a CCP Of which CVA Settlement risk Securitisation exposures in banking book (after cap)¹ Of which IRB Of which IRB supervisory formula approach (SFA) Of which internal assessment approach (IAA)	5,400 - 2,080 54,724 8,202 - 217 23,124 8,451 666 14,064 50	4,411 - 4,347 54,209 9,117 - 1,072 23,612 6,951 662 12,795 278	43. 166 4,376 656 17 1,856 676 57 1,122
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure Of which standardised approach Of which internal model method Of which Financial collateral comprehensive method (for SFTs) Of which risk exposure amount for contributions to the default fund of a CCP Of which CVA Settlement risk Securitisation exposures in banking book (after cap)¹ Of which IRB Of which IRB supervisory formula approach (SFA) Of which internal assessment approach (IAA) Of which standardised approach	5,400 - 2,080 54,724 8,202 - 217 23,124 8,451 666 14,064 50 215	4,411 - 4,347 54,209 9,117 - 1,072 23,612 6,951 662 12,795 278 225	43. 166 4,376 656 18 1,856 670 53 1,129
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure Of which standardised approach Of which internal model method Of which Financial collateral comprehensive method (for SFTs) Of which risk exposure amount for contributions to the default fund of a CCP Of which CVA Settlement risk Securitisation exposures in banking book (after cap)¹ Of which IRB Of which IRB supervisory formula approach (SFA) Of which internal assessment approach (IAA) Of which standardised approach Market risk	5,400 - 2,080 54,724 8,202 - 217 23,124 8,451 666 14,064 50 215 60,253	4,411 - 4,347 54,209 9,117 - 1,072 23,612 6,951 662 12,795 278 225 - -	43. 166 4,376 656 1: 1,856 670 5: 1,12: 4,826
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure Of which standardised approach Of which internal model method Of which Financial collateral comprehensive method (for SFTs) Of which risk exposure amount for contributions to the default fund of a CCP Of which CVA Settlement risk Securitisation exposures in banking book (after cap)¹ Of which IRB Of which IRB supervisory formula approach (SFA) Of which internal assessment approach (IAA) Of which standardised approach Market risk Of which standardised approach	5,400 - 2,080 54,724 8,202 - 217 23,124 8,451 666 14,064 50 215 60,253 8,835	4,411 4,347 54,209 9,117 1,072 23,612 6,951 662 12,795 278 225 - - - 52,297 6,625	43. 166 4,376 656 18 1,856 670 53 1,129 4,820 700
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure Of which standardised approach Of which internal model method Of which Financial collateral comprehensive method (for SFTs) Of which risk exposure amount for contributions to the default fund of a CCP Of which CVA Settlement risk Securitisation exposures in banking book (after cap)¹ Of which IRB Of which IRB supervisory formula approach (SFA) Of which internal assessment approach (IAA) Of which standardised approach Market risk Of which IMA	5,400 - 2,080 54,724 8,202 - 217 23,124 8,451 666 14,064 50 215 60,253 8,835 51,418	4,411 4,347 54,209 9,117 1,072 23,612 6,951 662 12,795 278 225 - - - 52,297 6,625 45,672	433 166 4,373 656 1,856 670 53 1,129 4 4,820 700 4,113
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure Of which standardised approach Of which internal model method Of which Financial collateral comprehensive method (for SFTs) Of which risk exposure amount for contributions to the default fund of a CCP Of which CVA Settlement risk Securitisation exposures in banking book (after cap)¹ Of which IRB Of which IRB supervisory formula approach (SFA) Of which internal assessment approach (IAA) Of which standardised approach Market risk Of which IMA Large exposures	5,400 - 2,080 54,724 8,202 - 217 23,124 8,451 666 14,064 50 215 60,253 8,835 51,418 10,626	4,411 -4,347 54,209 9,117 -1,072 23,612 6,951 662 12,795 278 225 	43. 166 4,37; 656 1: 1,856 676 5: 1,122 4,826 70 4,11: 856
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure Of which standardised approach Of which internal model method Of which Financial collateral comprehensive method (for SFTs) Of which risk exposure amount for contributions to the default fund of a CCP Of which CVA Settlement risk Securitisation exposures in banking book (after cap)¹ Of which IRB Of which IRB supervisory formula approach (SFA) Of which internal assessment approach (IAA) Of which standardised approach Market risk Of which IMA Large exposures Operational risk	5,400 - 2,080 54,724 8,202 - 217 23,124 8,451 666 14,064 50 215 60,253 8,835 51,418 10,626 8,799	4,411 4,347 54,209 9,117 1,072 23,612 6,951 662 12,795 278 225 - - 52,297 6,625 45,672 7,504 8,823	43 16 4,37 65 1 1,85 67 5 1,12 1 4,82 70 4,11 85 70
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure Of which standardised approach Of which internal model method Of which Financial collateral comprehensive method (for SFTs) Of which risk exposure amount for contributions to the default fund of a CCP Of which CVA Settlement risk Securitisation exposures in banking book (after cap)¹ Of which IRB Of which IRB supervisory formula approach (SFA) Of which internal assessment approach (IAA) Of which standardised approach Market risk Of which Standardised approach Of which IMA Large exposures Operational risk Of which basic indicator approach	5,400 - 2,080 54,724 8,202 - 217 23,124 8,451 666 14,064 50 215 60,253 8,835 51,418 10,626	4,411 -4,347 54,209 9,117 -1,072 23,612 6,951 662 12,795 278 225 	43. 166 4,376 656 1: 1,856 676 5: 1,12: 4,820 700 4,11: 856 706
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure Of which standardised approach Of which internal model method Of which Financial collateral comprehensive method (for SFTs) Of which risk exposure amount for contributions to the default fund of a CCP Of which CVA Settlement risk Securitisation exposures in banking book (after cap)¹ Of which IRB Of which IRB supervisory formula approach (SFA) Of which internal assessment approach (IAA) Of which standardised approach Market risk Of which standardised approach Of which IMA Large exposures Operational risk Of which basic indicator approach Of which standardised approach	5,400 - 2,080 54,724 8,202 - 217 23,124 8,451 666 14,064 50 215 60,253 8,835 51,418 10,626 8,799	4,411 4,347 54,209 9,117 1,072 23,612 6,951 662 12,795 278 225 - - 52,297 6,625 45,672 7,504 8,823	433 166 4,373 656 11 1,856 676 53 1,129 4 13 4,820 700 4,111 856 704
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure Of which standardised approach Of which internal model method Of which Financial collateral comprehensive method (for SFTs) Of which risk exposure amount for contributions to the default fund of a CCP Of which CVA Settlement risk Securitisation exposures in banking book (after cap)¹ Of which IRB Of which IRB supervisory formula approach (SFA) Of which internal assessment approach (IAA) Of which standardised approach Market risk Of which standardised approach Of which IMA Large exposures Operational risk Of which basic indicator approach Of which standardised approach Of which standardised approach	5,400 - 2,080 54,724 8,202 - 217 23,124 8,451 666 14,064 50 215 - 60,253 8,835 51,418 10,626 8,799 8,799	4,411 -4,347 54,209 9,117 -1,072 23,612 6,951 662 12,795 278 225 52,297 6,625 45,672 7,504 8,823 8,823	432 166 4,378 656 1,856 676 53 1,129 4 17 4,820 700 4,113 850 704
Of which standardised approach Of which foundation IRB (FIRB) approach Of which advanced IRB (AIRB) approach Of which advanced IRB (AIRB) approach Of which equity IRB under the simple risk-weighted approach or the IMA CCR Of which mark-to-market Of which original exposure Of which standardised approach Of which internal model method Of which Financial collateral comprehensive method (for SFTs) Of which risk exposure amount for contributions to the default fund of a CCP Of which CVA Settlement risk Securitisation exposures in banking book (after cap)¹ Of which IRB Of which IRB supervisory formula approach (SFA) Of which internal assessment approach (IAA) Of which standardised approach Market risk Of which standardised approach Of which IMA Large exposures Operational risk Of which basic indicator approach Of which standardised approach	5,400 - 2,080 54,724 8,202 - 217 23,124 8,451 666 14,064 50 215 60,253 8,835 51,418 10,626 8,799	4,411 4,347 54,209 9,117 1,072 23,612 6,951 662 12,795 278 225 - - 52,297 6,625 45,672 7,504 8,823	43. 166 4,378 656 18 1,850 676

^{1.} As of 1 Jan 2020, these positions were subject to the hierarchy of methods laid down in the revised securitisation framework.

Over the second quarter RWAs increased, primarily driven by Market Risk due to increases in VaR based measures; partially offset by Credit Risk due to Equity IRB and Large Exposures.

8. Credit Risk

8.1 Credit and Counterparty 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 is exposed to Credit Risk from the extension of credit to clients through lending commitments, derivatives, securities financing and prime brokerage activities. The MSI Group primarily incurs credit risk exposure to Corporates, Institutions, Central Governments and Central Banks through its Institutional Securities business segment.

The MSI Group Credit Risk Management department is an independent risk oversight group headed by the Chief Credit Officer who reports directly to the EMEA Chief Risk Officer. The MSI Group Credit Risk Management department is responsible for managing and overseeing the credit risk profile of the UK Group, including the design and oversight of the credit risk and limits framework covering the independent identification, analysis, monitoring, reporting and escalation of credit risks. In order to help protect the MSI Group from losses resulting from its business activities, Credit Risk Management establishes practices to evaluate, monitor and control credit risk exposure at the transaction, obligor and portfolio levels. Credit Risk Management 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.

8.2 Counterparty and Credit Risk Capital Requirements

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

RWAs 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, typically for certain business units which are non-significant and certain exposure classes or types of exposures which are immaterial in terms of size and perceived risk profile.

The standardised approach assigns fixed risk weights to the following exposures classes in accordance with the CRR: Central Governments and Central Banks, Corporates, Institutions, Multilateral Development Banks, International Organisations, Regional Governments and Local Authorities.

The exception to this is exposures to European Central Governments denominated in local currency which are risk-weighted at 0%.

Table 11 shows Credit Risk and Counterparty Credit Risk for MSI Group and MSIP as at 30 June 2020.

Table 11: Credit and counterparty risk RWA summary						
\$MM	N	ISI Group			MSIP	
	RWAs	RWAs	MCR	RWAs	RWAs	MCR
	Q2'20	Q1'20	Q2'20	Q2'20	Q1'20	Q2'20
Credit risk	12,255	14,209	980	9,208	11,252	737
Of which FIRB	6,783	5,725	542	5,400	4,411	432
Counterparty credit risk (excluding CVA)	41,673	43,280	3,334	40,660	41,414	3,253
Of which IMM	23,808	24,506	1,904	23,124	23,612	1,850
Securitisation ¹	215	225	17	215	225	17
Amounts below the thresholds for deduction	407	116	33	432	264	35
Total (excluding CVA)	54,551	57,830	4,364	50,515	53,155	4,042
CVA	14,683	13,434	1,174	14,064	12,795	1,125
Total	69,234	71,264	5,538	64,579	65,950	5,167

^{1.} As of 1 Jan 2020, these positions were subject to the hierarchy of methods laid down in the revised securitisation framework.

Table 12 shows the Credit Risk and Counterparty Credit Risk for MSI Group and MSIP as at 30 June 2020, for each exposure class as per the classification set out in the CRR.

Table 12: Credit and counterparty credit risk summary							
\$MM	N	MSI Group			MSIP		
	EAD ²	RWAs	MCR	EAD	RWAs	MCR	
IRB ¹							
Central governments or central banks	30,246	2,468	197	24,009	1,985	159	
Corporates	58,312	28,377	2,270	54,097	26,457	2,117	
Equity	726	2,223	178	781	2,337	187	
Institutions	56,142	14,704	1,176	57,741	15,268	1,221	
Total (IRB)	145,426	47,772	3,821	136,628	46,047	3,684	
Standardised ¹							
Central governments or central banks	420	139	11	400	135	11	
Corporates	2,076	2,395	192	1,739	2,105	168	
High Risk	-	-	-	-	-	-	
Institutions	22,980	1,227	98	24,040	1,130	90	
Multilateral development banks	11	-	-	11	-	-	
International organisations	-	-	-	-	-	-	
Public sector entities	-	-	-	-	-	-	
Regional government or local authorities	1	-	-	1	-	-	
Other items	1,576	1,821	146	112	217	17	
Total (standardised)	27,064	5,582	447	26,303	3,587	286	
Total (CCP default fund) ³	1,231	982	79	819	666	53	
Total ⁴	173,721	54,336	4,347	163,750	50,300	4,023	

Exposure classes which have no exposure are not shown in the table.

Credit Risk RWA flow statements

Table 13 summarises the movements of RWAs and MCR for MSI Group and MSIP's credit risk exposures under the IRB approach.

Table 13: RWA flow statements of credit risk exposures under the IR \$MM	MSI Gro	oup	MSIP	
	RWAs	MCR	RWAs	MCR
RWAs at the end of the previous reporting period ¹	5,725	458	4,411	353
Asset size	1,061	84	976	78
Asset quality	(3)	0	13	1
Model updates	-	-	-	-
Methodology and policy	-	-	-	-
Acquisitions and disposals	-	-	-	-
Foreign exchange movements	-	-	-	-
Other	=	-	-	-
RWAs at the end of the reporting period	6,783	542	5,400	432

Previous reporting period was Q1'20.

Over the second quarter, MSI Group and MSIP asset size increased primarily due to cash and intercompany exposures.

^{2.} EAD figures are post credit risk mitigation ("CRM") and post Credit Conversion Factor ("CCF")

^{3.} CCP Default Fund requirements have been included in the table to reflect the full population of Credit and CCR. CCP Default Fund exposures are shown in Table CCR8.

^{4.} Exposures calculated under the FIRB approach account for 84% and the Standardised Approach account for 16%.

8.3 Non-Trading Book Equity Exposure and Specialised Lending

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. A Specialised Lending Slotting methodology is used in capital calculation for loans secured by Income Producing Real Estate.

Table 14 shows the MSI Group's specialised lending and equity exposures using the simple risk-weighted approach.

Table 14: IRB (Specialised Lending and Equities) (EU	CR10)					
MSI Group ¹		Sp	ecialised Lending				
Regulatory Categories	Remaining Maturity	On-balance sheet amount \$MM	Off-balance sheet amount \$MM	Risk weight %	Exposure amount \$MM	RWAs \$MM	Expected losses \$MM
	Less than 2.5 years	-	-	50%	-	-	-
Category 1	Equal to or more than 2.5 years	-	-	70%	-	-	-
6-1	Less than 2.5 years	-	-	70%	-	-	-
Category 2	Equal to or more than 2.5 years	63	-	90%	63	57	-
C-t	Less than 2.5 years	-	-	115%	-	-	-
Category 3	Equal to or more than 2.5 years	-	-	115%	-	=	-
Catagori A	Less than 2.5 years	-	-	250%	-	-	-
Category 4	Equal to or more than 2.5 years	-	-	250%	-	=	-
Category 5	Less than 2.5 years	-	-	-	-	-	-
	Equal to or more than 2.5 years	-	-	-	-	-	=
	Less than 2.5 years	-	-	-	-	-	-
Total	Equal to or more than 2.5 years	63	-	-	63	57	-
	Equities	under the simple	risk-weight appr	oach			
		On-balance sheet amount	Off-balance sheet amount	Risk weight	Exposure amount	RWAs	Capital requirements
MSI Group		\$MM	\$MM	%	\$MM	\$MM	\$MM
Private equity	•	-	-	190%	-	-	-
•	ed equity exposures	187	391	290%	578	1,676	134
Other equity e	xposures	148	-	370%	148	547	44
Total		335	391	-	726	2,223	178
MSIP							
Private equity	exposures	-	-	190%	-	-	-
Exchange-trad	ed equity exposures	183	353	290%	535	1,552	124
Other equity e	xposures	143		370%	143	528	42
Total		326	353	-	678	2,080	166

MSIP has no specialised lending.

Over the first half of 2020, there have been no material changes.

8.4 Credit Risk Mitigation

The MSI Group may seek to mitigate credit risk from its lending and trading activities in multiple ways, including netting, collateral, 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.

9. Counterparty Credit Risk

9.1 Counterparty Credit Exposures

The MSI Group uses the IMM and the MTMM 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.

Table 15 shows a comprehensive view of the methods used to calculate CCR regulatory requirements and the main parameters used within each method for the MSI Group as at 30 June 2020.

Table 15: Analysis of the CCR exposure by approach	(EU CCR1)						
\$MM	Notional	Replacement	Potential	Effective	Multiplier	EAD	RWAs
		cost/current	future	expected		post	
		market	exposure	positive		CRM	
MSI Group		value		exposure			
Mark-to-market		4,400	24,467			22,864	8,243
Original exposure	-					-	-
Standardised approach		519			-	315	236
IMM (for derivatives and SFTs)				31,846	1.4	45,819	23,808
Of which securities financing transactions				-	-	-	-
Of which derivatives & long settlement transactions				31,846	1.4	45,819	23,808
Of which from contractual cross product netting				-	-	-	-
Financial collateral simple method (for SFTs)						-	-
Financial collateral comprehensive method (for SFTs)						44,186	8,025
VaR for SFTs						-	
Total				_			40,312

Table 16 summarises the movements of RWAs and MCR for MSI Group and MSIP's counterparty credit risk exposures under the IMM Model as at 30 June 2020.

Table 16: RWA flow statements of CCR exposures under the IMM (EU CCR7)							
\$MM	MSI	iroup	MSIP				
	RWAs	MCR	RWAs	MCR			
RWAs at the end of the previous reporting period ¹	24,506	1,960	23,612	1,889			
Asset size	(1,345)	(108)	(1,148)	(92)			
Credit quality of counterparties	647	52	660	53			
Model updates (IMM only)	-	-	-	-			
Methodology and policy (IMM only)	-	-	-	-			
Acquisitions and disposals	-	-	-	-			
Foreign exchange movements	-	-	-	-			
Other	-	-	-	-			
RWAs at the end of the reporting period	23,808	1,904	23,124	1,850			

Previous reporting period was Q1'20.

Over the second quarter, the decrease from Asset Size was mainly driven by portfolio and market movements. The increase in RWA due to credit quality deterioration was mainly due to counterparty rating migrations and transaction maturity profile changes.

9.2 Credit Valuation Adjustment

CVA is the capital requirement that covers the risk of mark-to-market losses on the counterparty risk of OTC derivatives. It is calculated using a combination of an advanced approach based on using internal modelling approaches and a standardised approach.

Table 17 shows CVA by approach for the MSI Group as at 30 June 2020.

Table 17: CVA capital charge (EU CCR2)		
\$MM	Exposure value	RWAs
MSI Group		
Total portfolios subject to the advanced method	28,341	9,400
(i) VaR component (including the 3× multiplier)		3,542
(ii) Stressed VaR component (including the 3× multiplier)		5,858
All portfolios subject to the standardised method	19,496	5,283
Based on the original exposure method	-	-
Total subject to the CVA capital charge	47,837	14,683

Over the first half of 2020, the increase in exposures is due to market movements.

9.3 Derivatives and SFTs credit exposure

Table 18 shows the impact of netting and collateral held on exposures on derivative and SFTs held as at 30 June 2020 for the MSI Group.

Table 18: Impact of netting and collateral held on exposure values (EU CCR5-A)									
\$MM MSI Group	Gross positive fair value or net carrying amount	Netting benefits	Netted current credit exposure	Collateral held	Net credit exposure				
Derivatives ¹	387,741	331,303	56,437	44,301	12,137				
SFTs ²	571,305	-	571,305	508,006	63,299				
Total	959,046	331,303	627,742	552,307	75,436				

Derivatives exposures are predominately driven by OTC derivatives.

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 received has been applied.

Table 19 shows the breakdown of all types of collateral posted or received by banks to support or reduce CCR exposures related to derivative transactions or to SFTs, including transactions cleared through a Central Counterparty ("CCP") as at 30 June 2020 for the MSI Group.

Table 19: Composition of collateral for exposures to CCR (EU CCR5-B)								
\$MM	<u>C</u>	ollateral used in der	ivative transact	<u>ions</u>	Collateral use	Collateral used in SFTs		
	co	Fair value of ollateral received		Fair value of collateral posted	Fair value of collateral	Fair value of collateral		
MSI Group	Segregated	Unsegregated	Segregated	Unsegregated	received	posted		
Cash	2,422	77,328	6,381	50,304	353,699	362,357		
Corporate bonds	1,367	1,562	1,288	999	10,637	8,642		
Equity securities	631	5,727	1,890	2	113,806	88,930		
Government agency debt	1,741	1,442	-	22	15,632	9,239		
Sovereign debt	2,677	9,434	2,000	5,316	145,272	129,065		
Total	8,838	95,493	11,559	56,643	639,046	598,233		

Over the first half of 2020, there have been no material movements.

SFTs carrying amount reflects netting benefit. MSI Group does not engage in any cross product netting.

9.4 Exposures to CCPs

Table 20 shows the breakdown of the exposures by qualifying and non-qualifying CCPs as at 30 June 2020 for the MSI Group.

Table 20: Exposures to CCPs (EU CCR8)		
\$MM	EAD post CRM	RWAs
MSI Group		
Exposures to Qualifying CCPs ("QCCP") (total)		1,600
Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	15,841	317
(i) OTC derivatives	2,924	58
(ii) Exchange-traded derivatives	9,824	196
(iii) SFTs	3,093	63
(iv) Netting sets where cross-product netting has been approved		
Segregated initial margin	-	
Non-segregated initial margin	15,039	301
Prefunded default fund contributions	1,057	224
Alternative calculation of own funds requirements for exposures		758
Exposures to non-QCCPs (total)		17
Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions); of which	87	17
(i) OTC derivatives	-	-
(ii) Exchange-traded derivatives	87	17
(iii) SFTs	-	-
(iv) Netting sets where cross-product netting has been approved		
Segregated initial margin	-	
Non-segregated initial margin	-	-
Pre-funded default fund contributions	-	-
Unfunded default fund contributions		

Over the first half of 2020, increase is driven by market movements and portfolio changes.

Credit Derivative Transactions

Table 21 shows the extent of an institution's exposures to credit derivative transactions broken down between derivatives bought or sold for the MSI Group.

Table 21: Credit derivatives exposures (EU CCR6)			
\$MM	Credit deriva	ative hedges	
MSI Group ¹	Protection bought	Protection sold	Other credit derivatives
Notionals			
Credit Derivative Products used for own credit portfolio			
Single-name credit default swaps	-	-	1,705
Index credit default swaps	-	-	-
Total return swaps	-	-	645
Credit options	-	-	-
Other credit derivatives	-	-	302
Total Notionals used for own credit portfolio	-	-	2,652
Credit Derivative Products used for intermediation			
Single-name credit default swaps	-	-	232,652
Index credit default swaps	-	-	146,157
Total return swaps	-	-	17,953
Credit options	-	-	26,224
Other credit derivatives	-	-	31,956
Total Notionals used for intermediation	-	-	454,942
Total credit derivative notionals	-	-	457,594
Fair values			
Positive fair value (asset)	-	-	9,382
Negative fair value (liability)	-	-	(8,789)
Credit Derivatives are not used as a CRM technique for RWA benefit	ts.		

Over the first half of 2020, credit derivative products used for intermediation increased, primarily on index and single-name credit default swaps.

10. Market Risk

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

The MSI Group manages the market risk associated with its trading activities at both a division, business area and individual product level, and includes consideration of market risk at the legal entity level.

Sound market risk management is an integral part of the Morgan Stanley Group culture. The MSI Group is responsible for ensuring that market risk exposures are well-managed and monitored. The MSI Group Market Risk Department ("MRD") is responsible for ensuring transparency of material market risks, monitors compliance with established limits, and escalates risk concentrations to appropriate senior management. MRD is an independent risk oversight group headed by the EMEA and MSI Head of Market Risk, who reports directly to both the EMEA Chief Risk Officer and the Global Head of Market Risk.

To execute these responsibilities, MRD monitors the market risk against limits on aggregate risk exposures and performs a variety of risk analysis. This includes monitoring VaR, stress testing and scenario analyses, routine reporting of risk exposures, and maintenance of the VaR and scenario analysis methodologies. The material risks identified by these processes are summarised and reported to senior management.

An IMA permission has been granted to MSIP on an individual basis and on the consolidated situation of MSI Group, in relation to exposures incurred by MSIP, MSESE and MSBAG.

IMA Models are applied consistently across all sub-portfolios; with the population in scope defined according to permission criteria. Models are independently reviewed on an annual basis by Model Risk Management, and changes to methodologies are approved by the Model Oversight Committee ("MOC"). 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.

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

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, including outright and basis risks, 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

Data Quality

MRD has a data quality control process to monitor, validate, remediate, escalate and report data quality issues that impact market risk and capital reporting. The Market Risk Middle Office team is responsible for coordinating data quality control with the aim of providing MRD with high quality data that is accurate, complete and delivered in a timely manner. Threshold based checks are performed on input data for IMA models. Large moves are validated and data adjustments are made where necessary, along with the appropriate escalation to ensure

ongoing remediation. Completeness, accuracy and timeliness Key Performance Indicators ("KPIs") for market risk metrics are reported to the Senior Management risk committees.

10.1 Market Risk Capital Requirements

The market risk capital requirements of the MSI Group comprises of capital which is calculated using IMA in accordance with regulatory approved models, and of capital which is calculated under the Standardised approach. Table 22 summarises the capital requirements under the respective approaches for the MSI Group. Testing to ensure that the capital assessment meets the required soundness standard is carried out on a quarterly basis with the results reported to the PRA.

Table 22: Market risk RWA summary			
\$MM	RWAs	RWAs	MCR
MSI Group	Q2′20	Q1'20	Q2'20
Standardised approach	14,170	12,411	1,133
Internal models approach	55,407	48,168	4,433
Total	69,577	60,579	5,566

Standardised Approach

Table 23 shows the market risk capital requirements for the MSI Group as at 30 June 2020, calculated in accordance with the standardised approach and categorised by component type.

Table 23: Market risk under the standardised approach (EU MR1)		
\$MM	RWAs	MCR
MSI Group		
Outright products		
Interest rate risk (general and specific)	2,291	183
Equity risk (general and specific)	18	1
Foreign exchange risk	4,245	340
Commodity risk	833	67
Securitisation (specific risk)	3,840	307
Options		
Simplified approach	-	-
Delta-plus method	2,943	235
Scenario approach		
Total	14,170	1,133

Over the first half of 2020, despite some offsetting movements within, the total standardised charge remained broadly flat for the period.

IMA Approach

The VaR-based capital and the SVaR-based capital are determined by the higher of the 60-day average of the 10-day VaR / 10-day SVaR numbers, multiplied by the regulatory Internal Model multiplication factor as prescribed by the PRA, and the 10-day VaR/ 10-day SVaR for the relevant day. The Incremental Risk Charge ("IRC") and Comprehensive Risk Measure charges are determined by the higher of the average of the latest 12 weeks IRC/CRM and the IRC/CRM charge for the relevant day.

Table 24 shows the VaR and SVaR, as well as the IRC and CRM measures for the MSI Group, for the quarter ending 30 June 2020. The VaR, SVaR and IRC capital measures presented in Table 25 were based on the 60 day averages, as they were higher than the daily measures as at 30 June 2020.

Table 24:	Market risk under internal models approach (EU MR2-A)		,
\$MM		RWAs	MCR
MSI Grou	p		
VaR (high	er of values a and b)	13,138	1,051
(a)	Previous day's VaR (Article 365(1) (VaRt-1))	3,268	261
(b)	Average of the daily VaR (Article 365(1)) of the CRR on each of the preceding 60 business days (VaRavg) x multiplication factor (mc) in accordance with Article 366 of the CRR	13,138	1,051
SVaR (hig	her of values a and b)	14,696	1,176
(a)	Latest SVaR (Article 365(2) (sVaRt-1))	3,514	281
(b)	Average of the SVaR (Article 365(2) of the CRR) during the preceding 60 business days (SVaRavg) x multiplication factor (ms) (Article 366 of the CRR)	14,696	1,176
IRC (high	er of values a and b)	4,569	366
(a)	Most recent IRC value (incremental default and migration risks calculated in accordance with Article 370 and Article 371 of the CRR)	3,365	269
(b)	Average of the IRC number over the preceding 12 weeks	4,569	366
Compreh	ensive risk measure (higher of values a, b and c)	1	0
(a)	Most recent risk number for the correlation trading portfolio (Article 377 of the CRR)	0	0
(b)	Average of the risk number for the correlation trading portfolio over the preceding 12 weeks	1	0
(c)	8% of the own funds requirement in the standardised approach on the most recent risk number for the correlation trading portfolio (Article 338(4) of the CRR)	0	0
Other		23,003	1,840
Total		55,407	4,433

Table 25 summarises the key drivers of RWAs MCR for MSI Groups and MSIP's market risk exposures under the Internal IMA Model.

\$MM	VAR	Stressed VAR	IRC	Comprehensive risk measure	Other ⁴	RWAs	MCR
MSI Group				TISK THEASUTE			
RWAs at previous quarter end ¹	6,171	12,355	6,395	38	23,209	48,168	3,853
Regulatory adjustment ²	(929)	(6,918)	-	-	(7,501)	(15,348)	(1,227)
RWAs at end of day previous quarter end	5,242	5,437	6,395	38	15,708	32,820	2,626
Movement in risk levels	(2,218)	(1,348)	(2,812)	(38)	1,490	(4,926)	(394)
Model updates/changes	-	-	(200)	-	662	462	37
Methodology and policy	-	-	-	-	-	-	-
Acquisitions and disposals	-	-	-	-	-	-	-
Foreign exchange movements	-	-	-	-	-	-	-
Other ³	244	(575)	(18)	-	-	(349)	(28)
RWAs at end of day current quarter end	3,268	3,514	3,365	-	17,860	28,007	2,241
Regulatory adjustment ²	9,870	11,182	1,204	1	5,143	27,400	2,192
RWAs at end of reporting period	13,138	14,696	4,569	1	23,003	55,407	4,433
MSIP							
RWAs at previous quarter end ¹	5,909	11,758	6,206	38	21,761	45,672	3,654
Regulatory adjustment ²	(868)	(6,693)	-	-	(6,585)	(14,146)	(1,133)
RWAs at end of day previous quarter end	5,041	5,065	6,206	38	15,176	31,526	2,521
Movement in risk levels	(2,174)	(1,327)	(2,822)	(38)	1,254	(5,107)	(408)
Model updates/changes	-	-	(200)	-	662	462	37
Methodology and policy	-	-	-	-	-	-	-
Acquisitions and disposals	-	-	-	-	-	-	-
Foreign exchange movements	-	-	-	-	-	-	-
Other ³	244	(575)	(18)	-	-	(349)	(28)
RWAs at end of day current quarter end	3,111	3,163	3,166	-	17,092	26,532	2,122
Regulatory adjustment ²	9,489	10,455	1,204	1	3,736	24,885	1,991
RWAs at end of reporting period	12,600	13,618	4,370	1	20,828	51,417	4,113

Regulatory adjustment accounts for the difference between the RWA calculated based on the end-of-day position, compared with the RWA calculated based on the 60-day average position in the case of VaR/SVaR, and 12-week average position in the case of IRC and CRM. The regulatory adjustments also account for the multiplication factors mc and ms, per Article 366 of the CRR, for the VaR, SVaR and Other respectively.

Other (flow driver) represents low impact data and implementation changes including time series updates and periodic parameter updates to the respective models.

Other (risk measure) represents Risks not in VaR ("RNIV").

Over the quarter to 30 June 2020, increase in Market Risk RWA under IMA was primarily driven by increased market volatility observed in March and April, partially offset by risk reductions in Equities and Fixed Income.

Table 26 provides a summary of the maximum, minimum, average and period-end values over the six months to 30 June 2020, for the MSI Group, resulting from the different types of models approved to be used for computing the regulatory capital charge.

Table 26: IMA values for trading portfolios (EU MR3)	
MSI Group	\$MM
VaR (10 day 99%)	
Maximum value	428
Average value	195
Minimum value	76
Period end	261
SVaR (10 day 99%)	
Maximum value	456
Average value	278
Minimum value	125
Period end	281
IRC (99.9%)	
Maximum value	753
Average value	433
Minimum value	199
Period end	269
Comprehensive Risk capital charge (99.9%)	
Maximum value	3
Average value	0
Minimum value	0
Period end	0

Over the first half of 2020, average and period end VaR and Stressed VaR increased, primarily due to significant market volatility observed in March and April. IRC trended higher during Q1 before reducing towards the end of Q2, mainly driven by trading activities.

10.2 Backtesting

Morgan Stanley performs regulatory backtesting for MSIP Group on a daily basis at various levels of the business hierarchy to validate the accuracy of the VaR model. Backtesting is performed against the VaR model in accordance with requirements under the regulation, and per the Firm's Backtesting Policy and Procedures. As of 30 June 2020, 80% of total MSIP Market Risk Capital requirements are covered by the internal models. VaR represents a subset of total model based Market Risk capital requirements for MSIP.

Backtesting compares the profit and loss for trade date N against the 99%/one-day Regulatory Trading VaR for N-1. As per the requirements of the CRR rules, backtesting uses 'Actual' and 'Hypothetical' definitions of the profit and loss. 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 profit and loss exclude non risk based fees (i.e. service fees), commissions, and net interest income. For the purposes of the Regulatory backtest, Actual profit and loss incorporates liquidity and model-driven fair value adjustments whist Hypothetical profit and loss retains only the latter.

Performance is measured across a rolling 250 business day period and is expressed by the number of MSIP Group level exceptions observed (instances where MSIP Group Actual or Hypothetical losses exceed 99% VaR). These exceptions are reported to the PRA by close of business N+2. Firms observing five or more exceptions within the measurement period are required to set aside additional Market Risk Capital based on a sliding scale.

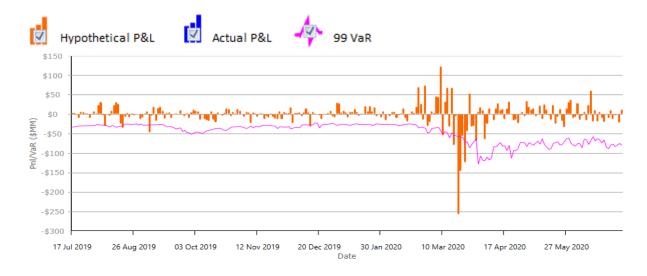
Any adverse results at the MSIP Group or sub-portfolio level that may point to weaknesses in model performance or data inaccuracies, are reported, analysed and discussed by the firm's MSI Group Market Risk Backtesting Review Forum. Findings or recommendations from this forum are escalated to UK firm senior management Model Oversight and Risk Committees who are responsible for authorising any further model analysis or model remediation efforts.

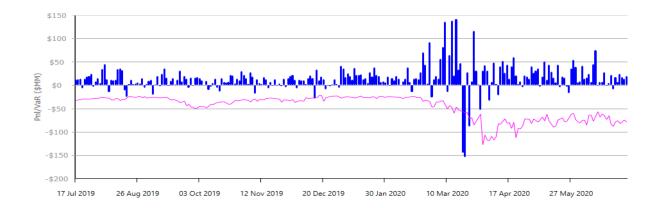
The results of backtesting and model performance monitoring are reported to the PRA on a periodic basis. For the measurement period ended 30 June 2020, ten Hypothetical profit and loss exceptions and four Actual profit and loss exceptions were observed for MSIP Group. Exception counts of this order equate to the PRA Red zone (greater than nine exceptions). Regarding the ten Hypothetical profit and loss exceptions, two occurred in August 2019, one in September 2019, one in December 2019 and six were observed in March 2020. The Firm's analysis of these exceptions concluded that they were largely driven by significant directional market moves in risk factors that were captured in the VaR model with sufficient granularity or from risks that were covered via Risk not in VaR (RNIV) Buffers. As per the PRA's agreement to grant temporary relief to the Firm for the six exceptions that occurred during the COVID market volatility period in March, the resulting capital multiplier increases were offset via RNIV capital adjustments.

The plots of Actual and Hypothetical profit and loss, covering 250 business days of backtesting monitoring to 30 June 2020, are displayed below.

Figure 1: Comparison of VaR Estimates with Gains/Losses (EU MR4)

The graphs below show the 1 day Regulatory Trading VaR against Actual and Hypothetical profit and loss for MSIP, values in millions of dollars:





11. Liquidity Coverage Ratio

The Liquidity Coverage Ratio ("LCR"), as per the Commission Delegated Regulation (EU) 2015/61, requires credit institutions to maintain an amount of unencumbered high quality liquid assets that is sufficient to meet their estimated total net cash outflows over a prospective 30 calendar-day period of significant stress. MSI Group is compliant with the minimum required LCR of 100%.

The weighted adjusted value of the liquidity buffer is the value of the total high quality liquid assets after the application of both haircuts and any applicable cap. The weighted adjusted value of net cash outflows is calculated after the inflows and outflows rates are applied and after any applicable cap on inflows.

The liquidity buffer disclosed covers both Pillar I and Pillar II liquidity risk.

Table 27: Liquidity coverage ratio								
MSI Group	Q2'20	Q1'20	Q4'19	Q3'19	Q2'19			
Number of data points used in the calculation of averages	12	12	12	12	12			
	Total weighted adjusted value (12 month aver							
	\$MM	\$MM	\$MM	\$MM	\$MM			
Liquidity buffer	46,883	48,508	48,541	48,298	46,846			
Total net cash outflows	21,058	21,121	21,267	21,291	20,341			
Liquidity Coverage Ratio	223%	230%	228%	227%	230%			

Appendix I: MSI Group and MSIP Capital Instruments and Eligible Liabilities 12.

	Commor	Equity	Addi	tional	Su	bordinate	ed	Senior Subo	rdinated
	Tie			er 1		Debt		Deb	t
MSI Group	Α	В	С	D	E	F	G	Н	1
Issuer			l	Morgan Stanley International Limited					
Unique Identifier					N/A				
Governing law(s) of the instrument	Companies				Eı	nglish Law			
Transitional CRR rules	CE.			T1		Tier 2		Eligible Liability	
Post-transitional CRR rules	CE.	Γ1	A	T1		Tier 2		Eligible Li	iability
Eligible at solo/(sub-) consolidated/solo&(sub-) consolidated					Consolidate				
Instrument type	Ordii Sha		Perpetual Unsecured Fixed Rate Securities		_	erm subord rrency loar		Subordii non-T2	
Amount recognised in	USD	USD	USD	USD	USD	USD	USD	USD	USD
regulatory capital \$MM	2,316MM	0MM	1,300MM	2,200MM	5,000MM	51MM	310MM	5,000MM	1,000MN
Currency of issuance and	USD	GBP	USD	USD	USD	USD	GBP	USD	USD
Nominal amount of instrument	2,316MM	2	1,300MM	2,200MM	5,000MM	51MM	250MM	5,000MM	1,000MN
Reporting Currency and	USD	USD	USD	USD	USD	USD	USD	USD	USD
Nominal amount of instrument	2,316MM	3	1,300MM	2,200MM	5,000MM	51MM	310MM	5,000MM	1,000MN
Issue Price	USD	GBP	USD	USD	USD	USD	GBP	USD	USD
	2,337MM	2	1,300MM	2,200MM	5,000MM	51MM	250MM	5,000MM	1,000MN
Redemption Price	N/	'Λ	USD	USD	USD	USD	GBP	USD	USD
Redemption File	IN/	A	1,300MM	2,200MM	5,000MM	51MM	250MM	5,000MM	1,000MN
Accounting Classification		Shareho	lders' Equity			Liabi	lity - amortis	sed cost	
Original date of issuance	13/11/98	18/06/98		23/08/18	08/02/17	21/12/15	21/12/15	19/12/18	27/11/18
Perpetual or dated			rpetual		. ,		Dated		
Original maturity date			Maturity		21/12/25	21/12/25	21/12/25	395 days from	m issuance
Issuer call subject to prior supervisory approval	N/			'es	22/22/23	21, 12, 23	N/A	000 0070	
Option call date, contingent call dates	N/		15/12/19	30/11/23			N/A		
Option can date, contingent can dates	IN/	A					IN/A		
Redemption amount			100% plus tax and regulatory calls at 100%				N/A N/A		
Subsequent call dates, if applicable	N/			nereafter					
Fixed or floating dividend / coupon	Floa	ting	Fi	xed	Floating				
Coupon rate and any related index	N/	'A	9.0% / 5%		OBFR + 2.086%	SONIA + 2.121%	Proxy		
Existence of a dividend stopper					No				
Fully discretionary, partially discretionary or mandatory (in terms of timing)		Fully Di	scretionary				Mandator	у	
Fully discretionary, partially discretionary or mandatory (in terms of amount)		Fully Di	scretionary		Mandatory				
Existence of step up or other incentive to redeem					No				
Noncumulative or cumulative		Nonce	umulative		Cumulative				
Convertible or non-convertible		NOTIC	uniuiative	NI	-convertible		Cumulativ		
				NON-	-convertible				
If convertible,									
conversion trigger(s)					N/A				
fully or partially					N/A				
conversion rate					N/A				
mandatory or optional conversion					N/A				
specify instrument type convertible into					N/A				
specify issuer of instrument it converts into					N/A				
Write-down features	N	0	\ \ \	'es		No		Yes	S
If write-down, write-down trigger(s)	Contractual write dov CET1 Capital Ratio of Group falls below 7%. as the UK Resolutio		I Ratio of MSI pelow 7%. BoE Resolution ty has the o trigger the own of the nt upon the of statutory	Authority trigger th instrument	e write do	ithority to wn of the exercise of	BoE as t Resolution Au the authority the write do instrument contractual to deem the ent or likely to fa MS resoluti	othority has y to trigger own of the under the erms if they ity is failing ail, or if the ion entity	
			po	wers				enters a re	solution
If write-down, full or partial	N/	Ά	F	ull		N/A		Part	ial
If write-down, permanent or temporary	N/	Ά	Perm	nanent		N/A		Perma	nent
If temporary write-down, description of write-up									
mechanism					N/A				
Position in subordination hierarchy in liquidation (specify instrument type immediately senior to	· ·				Othe				
instrument)	[column C, D] [columns E, F, G] [columns H and I]				Liabili	ues			
Non-compliant transitioned features					No				
If yes, specify non-compliant features					N/A				

All capital instruments issued by the MSI Group are issued within Morgan Stanley and are not marketable instruments.

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

The repayment date can be extended by 395 days on each business day but no later than 49 years from utilisation date, and unless a term-out notice is sent.

Description		nmon Equity Ti			nal Tier 1	Subordinated Debt				
MSIP	A B C D E F									
Issuer			Morgan :	Stanley & Co. Interna	ational plc					
Unique Identifier				N/A						
Governing law(s) of the instrument	Cor	mpanies Act 20	006		English Law					
Transitional CRR rules		CET1		A	T1	Tier 2				
Post-transitional CRR rules		CET1		A	T1	Tier 2				
Eligible at solo/(sub-) consolidated/solo&(sub-) consolidated			Solo	and (Sub-) Consolic						
Instrument type	C	Ordinary Shares	S	Perpetual Unse Secu	Long-term subordinated multicurrency loan facility					
Amount recognised in regulatory capital \$MM	USD USD USD 10,935MM 30MM 1,500MM			USD 1,300MM	USD 2,200MM	USD 5,000MM				
Currency of issuance and Nominal amount of	USD	GBP	USD	USD	USD	USD				
instrument	10,935MM	18MM	1,500MM	1,300MM	2,200MM	5,000MM				
Reporting Currency and Nominal amount of	USD	USD	USD	USD	USD	USD				
instrument	10,935MM	29MM	1,500MM	1,300MM	2,200MM	5,000MM				
Issue Price	USD 10,935MM	GBP 18MM	USD 1,500MM	USD 1,300MM	USD 2,200MM	USD 5,000MM				
Dodowntian Drice				USD	USD	USD				
Redemption Price		N/A		1,300MM	2,200MM	5,000MM				
Accounting Classification			Shareholder	s' Equity		Liability - amortised cost				
Original date of issuance	01/02/94	28/10/86	22/12/11	15/12/14	23/08/18	08/02/17				
Perpetual or dated	,,		Perpet			Dated				
Original maturity date			No mati			21/12/25				
Issuer call subject to prior supervisory approval		N/A		Y	N/A					
Option call date, contingent call dates		N/A		15/12/19	30/11/23	N/A				
Redemption amount		N/A		100% plus tax and	I regulatory calls at	N/A				
Subsequent call dates, if applicable		N/A			ereafter	N/A				
Fixed or floating dividend / coupon		Floating			ked	Floating				
Coupon rate and any related index		N/A		9.0%	OBFR + 2.300%					
Existence of a dividend stopper		IN/A		No	7.5%	OBI N + 2.30076				
Fully discretionary, partially discretionary or			Fully Discre			Mandatory				
mandatory (in terms of timing) Fully discretionary, partially discretionary or			Fully Discre	tionary		Mandatory				
mandatory (in terms of amount)			r uny Discre	.c.o.nar y		ividildatory				
Existence of step up or other incentive to redeem				No						
Noncumulative or cumulative			Noncumu	lative		Cumulative				
Convertible or non-convertible				Nonconvertible						
If convertible										
conversion trigger(s)				N/A						
fully or partially				N/A						
conversion rate				N/A						
mandatory or optional conversion				N/A						
specify instrument type convertible into				N/A						
specify issuer of instrument it converts into				N/A						
Write-down features		No		Y	es	No				
If write-down, write-down trigger(s)		N/A		Ratio of MSIP or M 7%. BoE as the Authority has the the write down	down if CET1 Capital SI Group falls below to UK Resolution authority to trigger of the instrument of statutory powers	BoE as the UK Resolution Authority has the authority to trigger the write down of the instrument upon the exercise of				
If weite down full or norti-1		NI/A		-		statutory powers				
If write-down, full or partial		N/A			ull	N/A				
If write-down, permanent or temporary		N/A		Perm	anent	N/A				
If temporary write-down, description of write-up mechanism				N/A						
Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)		petual Unsecu ed Rate Securit		Long-term s	Senior Subordinated Facility					
Non-compliant transitioned features				No						

All capital instruments issued by the MSI Group are issued within Morgan Stanley and are not marketable instruments.

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

The repayment date can be extended by 395 days on each business day but no later than 49 years from utilisation date, and unless a term-out notice is sent.

13. Appendix II: MSI Group and MSIP Own Funds Disclosure Template

Table 29: MSI Group and MSIP own funds disclosure template		
\$MM	MSI Group	MSIP
Capital instruments and the related share premium accounts	2,337	12,978
Paid up capital instruments	2,316	12,465
Of which: Ordinary shares	2,316	10,965
Of which: Class A Ordinary shares (non-voting)	-	1,500
Share premium	21	513
Retained earnings	13,253	2,812
Accumulated other comprehensive income (and other reserves, to include unrealised gains and losses under the applicable accounting standards)	6,713	1,272
Independently reviewed interim profits net of any foreseeable charge or dividend	0	0
Common Equity Tier 1 (CET1) capital before regulatory adjustments	22,303	17,062
Additional value adjustments (negative amount)	(1,274)	(1,222)
Intangible assets (net of related tax liability) (negative amount)	(688)	(2)
Negative amounts resulting from the calculation of expected loss amounts	(171)	(132)
Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	0	19
Defined-benefit pension fund assets (negative amount)	(20)	-
Total regulatory adjustments to Common equity Tier 1 (CET1)	(2,153)	(1,338)
Common Equity Tier 1 (CET1) capital	20,150	15,724
Capital instruments and the related share premium accounts	3,500	3,500
Of which: classified as equity under applicable accounting standards	3,500	3,500
Additional Tier 1 (AT1) capital	3,500	3,500
Tier 1 capital (T1 = CET1 + AT1)	23,650	19,224
Capital instruments and the related share premium accounts	5,361	5,000
Qualifying own funds instruments included in consolidated Tier 2 capital (including minority interests and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties	-	-
Of which: Instruments issued by subsidiaries subject to phase out	-	-
Tier 2 capital before regulatory adjustments	5,361	5,000
Tier 2 capital	5,361	5,000
Total capital (TC = T1 + T2)	29,011	24,224
Total risk weighted assets	158,393	144,306
Common Equity Tier 1 (as a percentage of risk exposure amount)	12.7%	10.9%
Tier 1 (as a percentage of risk exposure amount)	14.9%	13.3%
Total capital (as a percentage of risk exposure amount)	18.3%	16.8%
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)	7.04%	7.04%
Of which: Capital conservation buffer requirement	2.50%	2.50%
Of which: Countercyclical buffer requirement	0.04%	0.04%
Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)	8.2%	6.4%
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)	933	943
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)	-	103
Deferred tax assets arising from temporary differences (amount below 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met)	163	70

14. Appendix III: Additional Credit and Counterparty Credit Risk Tables

Table 30 shows the credit quality of exposures by exposure class and instruments as at 30 June 2020 for the MSI Group and MSIP.

CRARA.							
\$MM	Gross carryin						
		Non-defaulted	Specific	General	Accumulated	Credit risk	Ne
MSI Group	exposures	exposures	credit risk adjustment	credit risk	write-offs	adjustment	value
Central governments or central banks		19,349	adjustment -	adjustment -		charges -	19,349
•	-		-	-	-	-	
Institutions	- 07	10,753	-	-	-		10,753
Corporates	97	8,273	-	-	-	-	8,370
Of which: Specialised lending	-	63	-	-	-	-	63
Equity	- 07	726	-		<u>-</u>	-	726
Total IRB approach	97	39,101	-			-	39,198
Central governments or central banks	-	381	-	-	-	-	383
Regional government or local authorities	-	-	-	-	-	-	
Public sector entities	-	-	-	-	-	-	
Multilateral development banks	-	6	-	-	-	-	(
International organisations	-	-	-	-	-	-	
Institutions	5	598	5	-	-	1	598
Corporates	5	1,034	5	-	-	3	1,034
Secured by mortgages on immovable property	-	-	-	-	-	-	
Exposures in default	-	-	-	-	-	-	
Items associated with particularly high risk	-	-	-	-	-	-	
Covered bonds	-	-	-	-	-	-	
Claims on institutions and corporates with a	-	-	-	-	-	-	
short- term credit assessment							
Collective investments undertakings (CIU)	-	-	-	-	-	-	
Equity exposures	-	4.576	-	-	-	-	4.530
Other exposures	- 10	1,576		-	-		1,576
Total standardised approach	10 107	3,595	10 10	-	-	4	3,595 42,793
Total Of which Leans and advances	107	42,696	10	-	<u>-</u>	4	33,720
Of which: Loans and advances Of which: Off-balance sheet	107	33,623 8,159	-	-	-	-	8,159
	_	726	_	_	_	_	726
Of which: Equity	-	188	-	-	_	-	188
Of which: Debt securities	<u> </u>	100	-	-	<u>-</u>	<u> </u>	100
MSIP							
Central governments or central banks	-	13,669	-	-	-	-	13,669
Institutions	-	10,108	-	-	-	-	10,108
Corporates	22	6,357	-	-	-	-	6,379
Of which: Specialised lending	-	-	-	-	-	-	
Equity	-	678	-	-	-	-	678
Total IRB approach	22	30,812	-	-	-	-	30,834
Central governments or central banks	-	360	-	-	-	-	360
Regional government or local authorities	-	-	-	-	-	-	
Public sector entities	-	-	-	-	-	-	
Multilateral development banks	-	6	-	-	-	-	6
International organisations	-	-	-	-	-	-	
Institutions	4	629	4	-	-	1	629
Corporates	5	855	5	-	-	3	855
Secured by mortgages on immovable property	-	-	-	-	-	-	
Exposures in default	-	-	-	-	-	-	
Items associated with particularly high risk	-	-	-	-	-	-	
Covered bonds	-	-	-	-	-	-	
Claims on institutions and corporates with a							
short- term credit assessment	_	_	_	_	_	_	
Collective investments undertakings (CIU)	-	-	-	-	-	-	
Equity exposures	-	-	-	-	-	-	
Other exposures		112	<u> </u>				112
Total standardised approach	9	1,962	9	-	-	4	1,962
Total	31	32,774	9	-	-	4	32,796
Of which: Loans and advances	31	24,972	9	-	-	4	24,994
Of which: Off-balance sheet	-	6,957	-	-	-	-	6,957
Of which: Equity	-	678	-	-	-	-	678
Of which: Debt securities	_	167	_	-	_	_	167

Over the first half of 2020, there was an increase in cash deposits with Central Banks for liquidity management.

Table 31 shows the credit quality of on-balance-sheet and off-balance-sheet by industry as at 30 June 2020 for MSI Group and MSIP.

Table 31: Credit quality of exposures by indus	stry or counte	party types	(EU CR1-B)				
\$MM	Gross carryir	g values of					
MSI Group	Defaulted exposures	Non- defaulted exposures	Specific credit risk adjustment	General credit risk adjustment	Accumulated write-Offs	Credit risk adjustment charge	Net values ¹
Public Administration and Defence; Compulsory Social Security	-	19,589	-	-	-	-	19,589
Financial and Insurance Activities	9	15,050	5	-	-	1	15,054
Manufacturing	2	1,507	1	-	-	-	1,508
Information and Communication	1	1,353	1	-	-	-	1,353
Electricity, Gas, Steam and Air Conditioning Supply	-	830	-	-	-	-	830
Professional, Scientific and Technical Activities	-	689	-	-	-	-	689
Transportation and Storage	1	412		-	-	-	413
Other	94	3,266	3	-	-	3	3,357
Total	107	42,696	10	-	-	4	42,793
MSIP							
Public Administration and Defence; Compulsory Social Security	-	13,871	-	-	-	-	13,871
Financial and Insurance Activities	9	13,528	5	-	-	1	13,532
Information and Communication	1	1,279	1	-	-	-	1,279
Manufacturing	1	1,223	1	-	-	-	1,223
Professional, Scientific and Technical Activities	-	688	-	-	-	-	688
Electricity, Gas, Steam and Air Conditioning Supply	-	529	-	-	-	-	529
Other	20	1,656	2	-	-	3	1,674
Total	31	32,774	9	-	-	4	32,796

^{1.} Net value is the total of defaulted, non defaulted exposures, less specific credit risk adjustments.

Over the first half of 2020, MSI Group and MSIP exposures to Public Administration and Defence, Compulsory Social Security increased due to cash deposits with Central Banks for liquidity management.

Table 32 shows the credit quality of on-balance-sheet and off-balance-sheet by geography as at 30 June 2020 for the MSI Group and MSIP.

\$MM	C		0 10			0 10 11	
	Gross carrying Defaulted	Non-defaulted	Specific credit risk	General credit risk	A	Credit risk	NI-4
MSI Group ¹	exposures	exposures	adjustment	adjustment	Accumulated write-offs	adjustment charges	Net values
EMEA	101	32,937	9	- aujustinent	- witte-ons	3	33,029
France	1	14,507	1	_	_	(1)	14,507
United Kingdom	20	8,315	4	_	_	1	8,331
Germany	-	4,713	-	_	_	-	4,713
Switzerland	_	1,048	_	_	_	_	1,048
Spain	1	988	1	_	_	1	988
Italy	70	744	-	_	_	-	814
Luxembourg	1	711	1	_	_	1	711
Other countries	8	1,911	2	_	_	1	1,917
Asia		3,749					3,749
Japan		1,382	_		_	_	1,382
Hong Kong	_	779	_	_	_	_	779
China	_	617	_	_	_	_	617
Other Countries	_	971	_	_	_	_	971
Americas	6	6,004	1			1	6,009
United States	-	5,685	-	_	_	1	5,685
Other countries	6	319	1	_	_	_	324
Other geographical areas	-	6	-	-	_	_	6
Total	107	42,696	10			4	42,793
	107	42,030	10			4	42,755
MSIP ¹							
EMEA	25	24,434	8	-	-	3	24,451
France	-	13,126	-	-	-	(1)	13,126
United Kingdom	22	6,817	5	-	-	1	6,834
Germany	-	255	-	-	-	-	255
Switzerland	-	797	-	-	-	-	797
Spain	1	991	1	-	-	1	991
Italy	-	399	-	-	-	-	399
Luxembourg	1	428	1	-	-	1	428
Other countries	1	1,621	1	-	-	1	1,621
Asia	-	2,890	-	-	-	-	2,890
Japan	-	1,378	-	-	-	-	1,378
Hong Kong	-	770	-	-	-	-	770
China	-	128	-	-	-	-	128
Other Countries	-	614	-	-	-	-	614
Americas	6	5,444	1	-	-	1	5,449
United States	-	5,130	-	-	-	-	5,130
Other countries	6	314	1	-	-	1	319
Other geographical areas	-	6	-	-	-	-	6
Total	31	32,774	9	-	-	4	32,796

^{1.} A threshold based on the Gross Carrying Value or credit risk exposure is applied to identify material geographical areas.

Over the first half of 2020, MSI Group and MSIP IRB exposures on EMEA increased due to cash deposits with Central Banks for liquidity management.

Table 33 provides a breakdown of performing and non-performing exposures by portfolio, exposure class and days past due as at 30 June 2020 for the MSI Group and MSIP.

Table 33: Credit Quality o	f Perforn	ning and	Non-Perfori	ming	exposures by	past due d	lays					
					Gross carr	ying amoun	t/nominal a					
	Performing exposures Non-performing exposures											
\$MM		Not past due or past due	Past due >		Unlikely to pay that are not past due	Past due	Past due	Past due > 1 year	Past due > 2years		Past due	
		≤ 30	30 days ≤		or are past	> 90 days	> 180 days	≤ 2	≤ 5	years ≤	> 7	Of which
MSI Group ^{1,2}		days	90 days		due ≤ 90 days	≤ 180 days	≤1 year	years	years	7 years	years	defaulted
Loans and advances	114,768	114,722	46	59	-	42	6	1	1	9	-	59
Central banks	20,121	20,118	3	4	-	2	-	-	-	2	-	4
General governments	3,138	3,138	-	1	-	1	-	-	-	-	-	1
Credit institutions	27,624	27,618	6	9	-	6	-	-	-	3	-	9
Other financial corporations	62,683	62,660	23	25	-	17	4	1	-	4	-	25
Non-financial corporations	1,202	1,188	14	20	-	16	2	-	1	-	-	20
Of which SMEs	-	-	-	-	-	-	-	-	-	-	-	-
Households	-	-	-	-	-	-	-	-	-	-	-	-
Debt securities	-	-	-	-	-	-	-	-	-	-	-	-
Central banks	-	-	-	-	-	-	-	-	-	-	-	-
General governments	-	-	-	-	-	-	-	-	-	-	-	-
Credit institutions	-	-	-	-	-	-	-	-	-	-	-	-
Other financial corporations	-	-	-	-	-	-	-	-	-	-	-	-
Non-financial corporations	-	-	-	-	-	-	-	-	-	-	-	-
Off-balance-sheet exposures	2,854	-	-	-	-	-	-	-	-	-	-	-
Central banks	-	-	-	-	-	-	-	-	-	-	-	-
General governments	-	-	-	-	-	-	-	-	-	-	-	-
Credit institutions	61	-	-	-	-	-	-	-	-	-	-	-
Other financial corporations	550	-	-	-	-	-	-	-	-	-	-	-
Non-financial corporations	2,243	-	-	-	-	-	-	-	-	-	-	-
Households	-	-	-	-	-	-	-	-	-	-	-	-
Total	117,622	114,722	46	59	-	42	6	1	1	9	-	59
MSIP ¹												
Loans and advances	103,302	103,262	40	54	-	37	6	1	1	9	-	54
Central banks	14,481	14,479	2	4	-	2	-	-	-	2	-	4
General governments	2,614	2,614	-	1	-	1	-	-	-	-	-	1
Credit institutions	25,646	25,641	5	9	-	5	-	-	-	3	-	9
Other financial corporations	59,652	59,634	18	21	-	13	4	1	-	4	-	21
Non-financial corporations	909	894	15	19	-	16	2	-	1	-	-	19
Of which SMEs	_	_	_	-	-	_	_	_	_	_	_	-
Households	-	-	-	-	-	-	-	-	-	-	-	-
Debt securities	-	-	-	_	-	-	-	-	-	-	-	-
Central banks	_	_	_	-	-	_	_	_	_	_	_	-
General governments	-	-	-	-	-	-	-	-	-	-	-	-
Credit institutions	_	_	_	-	-	_	_	_	_	_	_	-
Other financial corporations	_	_	_	-	-	_	_	_	_	_	_	-
Non-financial corporations	-	-	-	_	-	_	-	_	_	_	-	_
Off-balance-sheet exposures	1,877	-	-	-	-	-	-	-	-	-	-	-
Central banks	· -	-	-	-	-	-	-	-	-	-	-	-
General governments	-	-	-	-	-	_	-	_	_	_	_	_
Credit institutions	60	-	-	-	-	_	-	_	_	_	_	-
Other financial corporations	382	-	-	-	-	_	-	_	_	_	_	-
Non-financial corporations	1,435	-	-	-	-	-	-	-	-	-	-	-
Households	-	-	-	-	-	_	-	-	-	-	-	-
Total	105 179	103,262	40	54	_	37	6	1	1	9	_	54

The Gross Non-Performing Loan ("NPL") ratio as of 30 June 2020 was 0.07%. The MSI Group has no forborne exposures.

Over the first half of 2020, performing exposures have increased due to cash balances at central banks, in addition to higher loans and advances.

Table 34 shows an overview of performing and non-performing exposures and the related provisions as at 30 June 2020 for the MSI Group and MSIP.

4								Accum	nulated	impaiı	rment,			Collateral a	nd financia	
\$MM	Gross	carrying a	mount/n	ominal	l amou	nt			d nega					guarantees received		
							value due to credit risk and provisions Non-performing							On	On non-	
							exposures –					_		performing		
							Performing			accumulated				exposures		
				Non	perfor	mina	ex	posure	s –	im	pairme	ent,	Accumulated			
	Perfor	ming expo	sures		perior	_	acc	umula	ted	acc	umula	ted	partial			
					(posui)	C3	impa	irmen	t and	_	tive ch	_	write-off			
							рі	rovisio	ns		ir valu					
											edit ris					
		Of	Of		Of	Of		Of	Of	pr	ovisio Of	ns Of				
		which	which		which	which		which	which		which					
1		stage	stage		stage	stage		stage	stage		stage	stage				
MSI Group ¹		1	2		2	3		1	2		2	3				
Loans and advances	114,768	68,573	46,195	59	19	40	(4)	(1)	(4)	(6)	-	(6)	-			
Central banks	20,121	19,263	858	4	-	4	-	-	-	-	-	-	-			
General governments	3,138	23	3,115	1	-	1	-	-	-	-	-	-	-	-		
Credit institutions	27,624	19,256	8,368	9	1	8	-	-	-	-	-	-	-	-		
Other financial corporations	62,683	29,982	32,701	25	13	12	-	(1)	-	(4)	-	(4)	-	-		
Non-financial corporations	1,202	49	1,153	20	5	15	(4)	-	(4)	(2)	-	(2)	-	-		
Of which SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-			
Households	_	_	_	_	_	_	-	-	_	_	_	_	-	-		
Debt securities	_	_	_	_	_	_	-	-	_	_	_	_	-	-		
Central banks	_	_	_	_	_	_	_	_	_	_	_	_	_			
General governments	_	_	_	_	_	_	_	_		_	_	_	_	_		
Credit institutions																
Other financial corporations	_	_	_	_	_	_	_	_	_	_	_	=	_	-		
	_	_	_	_	_	_	_	_	_	_	_	=	_	-		
Non-financial corporations	2.054	2.602	220	-	-	-	-	-	-	-	-	-	-		•	
Off-balance-sheet exposures	2,854	2,603	239	-	-	-	2	1	1	-	-	-	-	1	•	
Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	•	•	
General governments	-	-	-	-	-	-	-	-	-	-	-	-	-			
Credit institutions	61	61	-	-	-	-	-	-	-	-	-	-	-	-	•	
Other financial corporations	550	366	172	-	-	-	-	-	-	-	-	-	-	1		
Non-financial corporations	2,243	2,176	67	-	-	-	2	1	1	-	-	-	-	-		
Households	-	-	-	-	-	-	-	-	-	-	-	-	-			
Total	117,622	71,176	46,434	59	19	40	(2)	-	(3)	(6)	-	(6)	-	1		
MSIP																
Loans and advances	103,302	60,920	42,382	54	19	35	(4)	-	(4)	(5)	-	(5)	-			
Central banks	14,481	13,668	813	4	-	4	-	-	-	-	-	-	-	-		
General governments	2,614	17	2,597	1	-	1	-	-	-	-	-	-	-	-		
Credit institutions	25,646	18,078	7,568	9	1	8	-	-	-	-	-	-	-			
Other financial corporations	59,652	29,131	30,521	21	13	8	-	-	-	(4)	-	(4)	-	-		
Non-financial corporations	909	26	883	19	5	14	(4)	-	(4)	(1)	-	(1)	-	-		
Of which SMEs	-	-	-	-	_	-	-	-	-	-	-	. ,	-	-		
Households	_		-	_	_	_	_	_	_	_	_	_	_			
Debt securities	_	_	_	_	_	_	_	_	_	_	_	_	_			
Central banks	_	-	_	_	_	_	_	_	_	_	_	_	_			
General governments	_	_	-	_	_	_	_	_	_	_		_	_			
Credit institutions	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Other financial corporations	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
·	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Non-financial corporations	4.0==	4 654	-	-	-	-	-	-	-	-	-	-	-	-	•	
Off-balance-sheet exposures	1,877	1,651	214	-	-	-	1	-	1	-	-	-	-	•		
Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
General governments	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Credit institutions	60	60	-	-	-	-	-	-	-	-	-	-	-	-		
	382	213	157	_	_	_	-	-	-	-	-	-	-	-		
Other financial corporations																
Other financial corporations Non-financial corporations Households	1,435	1,378	57	-	-	-	1	-	1	-	-	-	-	-		

The MSI Group has no foreclosed assets obtained from non-performing exposures.

Over the first half of 2020, performing exposures have increased due to cash balances at central banks, in addition to higher loans and advances.

Table 35 shows the changes in stock of general and specific credit risk adjustments held against loans and debt securities that are defaulted or impaired as at 30 June 2020 for the MSI Group and MSIP.

Table 35: Changes in stock of general and specific credit risk adjustments (El	J CR2-A)				
\$MM	MSI	Group	MSIP		
	Accumulated	Accumulated	Accumulated	Accumulated	
	specific credit	general credit	specific credit	general credit	
	risk	risk	risk	risk	
	adjustment	adjustment	adjustment	adjustment	
Opening balance	15	-	15	-	
Increases due to amounts set aside for estimated loan losses during the period	4	-	2	-	
Decreases due to amounts reversed for estimated loan losses during the period	(4)	-	(4)	-	
Decreases due to amounts taken against accumulated credit risk adjustments	-	-	-	-	
Transfers between credit risk adjustments	3	-	3	-	
Impact of exchange rate differences	-	-	-	-	
Business combinations, including acquisitions and disposals of subsidiaries	-	-	-	-	
Other adjustments	(8)	-	(7)	-	
Closing balance	10	-	9	-	
Recoveries on credit risk adjustments recorded directly to the statement of profit or loss	-	-	-	-	
Specific credit risk adjustments recorded directly to the statement of profit or loss	-	-	-	-	

Over the first half of 2020, there have been no material changes.

Table 36 shows the changes in stock of defaulted loans and debt securities as at 30 June 2020 for the MSI Group and MSIP.

Table 36: Changes in stock of defaulted and impaired loans and debt securities (EU CR2-B)							
\$MM	MSI Group	MSIP					
	Gross carrying value	Gross carrying value defaulted					
	defaulted exposures	exposures					
Opening balance	54	52					
Loans and debt securities that have defaulted or impaired since the last reporting period	-	-					
Returned to non-defaulted status	8	6					
Amounts written off	-	-					
Other changes	(3)	(4)					
Closing balance	59	54					

Over the first half of 2020, there have been no material changes.

Table 37 shows the extent of the use of CRM techniques as at 30 June 2020 for the MSI Group and MSIP.

\$MM	Exposures unsecured:	Exposures secured:	Exposures secured by	Exposures secured	Exposures secured
MSI Group	carrying amount	carrying amount	collateral	by financial guarantees	by credit derivatives
Total loans	33,463	257	257	-	-
Total debt securities	188	-	-	-	-
Equity exposures	335	-	-	-	-
Total exposures	33,986	257	257	-	-
Of which defaulted	107	-	-	-	-
MSIP					
Total loans	24,735	258	258	-	-
Total debt securities	167	-	-	-	-
Equity exposures	325	-	-	-	-
Total exposures	25,227	258	258	-	-
Of which defaulted	31	-	-	-	-

Over the first half of 2020, MSI Group total loans increased due to cash deposits with central banks.

Table 38 shows the effect of all CRM techniques as at 30 June 2020 for the MSI Group and MSIP.

	Exposures bef CR		Exposures po CRI	M		nd RWA sity	
	On-balance	Off-balance	On-balance	Off-balance	RWAs	RWA	
	sheet	sheet	sheet	sheet		density	
MSI Group	amount \$MM	amount \$MM	amount \$MM	amount \$MM	\$MM	%	
Central governments or central banks	381	ŞIVIIVI	381	ŞIVIIVI -	100	26%	
Regional government or local authorities	501	_	301	_	-	0%	
Public sector entities	_		_	_	_	0%	
Multilateral development banks	6	_	6		_	0%	
•	-	_	-			0%	
International organisations Institutions	112	486	112	228	292	86%	
	1,034	480	1,034	228	1,444	140%	
Corporates	1,034	-	1,034	-	1,444		
Retail	-	-	-	-	-	0%	
Secured by mortgages on immovable property	-	-	-	-	_	0%	
Exposures in default	-	-	-	-		0%	
Higher-risk categories	-	-	-	-	-	0%	
Covered bonds	-	-	-	-	-	0%	
Institutions and corporates with a short term credit assessment	-	-	-	-	-	0%	
Collective investment undertakings	-	-	-	-	-	0%	
Equity	-	-	-	-	-	0%	
Other items	1,576	-	1,576	-	1,821	116%	
Total	3,109	486	3,109	228	3,657	110%	
MSIP							
Central governments or central banks	360	-	360	-	97	27%	
Regional government or local authorities	-	-	-	-	-	0%	
Public sector entities	-	-	-	-	-	0%	
Multilateral development banks	6	-	6	-	-	0%	
International organisations	-	-	-	-	-	0%	
Institutions	144	486	144	228	328	88%	
Corporates	855	-	855	-	1,262	148%	
Retail	-	-	-	-	-	0%	
Secured by mortgages on immovable property	-	-	-	-	-	0%	
Exposures in default	-	-	-	-	-	0%	
Higher-risk categories	-	-	-	-	-	0%	
Covered bonds	-	-	-	-	-	0%	
Institutions and corporates with a short term credit assessment	-	-	-	-	-	0%	
Collective investment undertakings	-	-	-	-	-	0%	
Equity	-	-	-	-	-	0%	
Other items	112	-	112	-	217	194%	
Total	1,477	486	1,477	228	1,904	112%	

Over the first half of 2020, there have been no material changes.

Table 39 shows the breakdown of exposures under the standardised approach by asset class and risk weight as at 30 June 2020 for the MSI Group.

Table 39: Standardised approach (EU CR5)																		
		Risk Weight																
\$MM																		
														%	S	Deducted	Total	Of which unrated
	%0	7%	4%	10%	50%	35%	20%	%02	75%	100%	150%	250%	370%	1250%	Others	edu		
MSI Group	8	6	4	Ħ	7	æ	25	Z	2	17	13	25	3	13	Ö	۵		
Central governments or central banks	19	-	-	-	317	-	18	-	-	24	2	-	-	-	-	-	380	-
Regional government or local authorities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Public sector entities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Multilateral development banks	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-
International organisations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Institutions	-	228	-	-	7	-	39	-	-	48	-	-	-	17	-	-	339	19
Corporates	3	-	-	-	11	-	87	-	-	860	34	-	-	39	-	-	1,034	44
Retail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Secured by mortgages on immovable property	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exposures in default	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Higher-risk categories	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Covered bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Institutions and corporates with a short term credit assessment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Collective investment undertakings																		
Equity	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other items	-	-	-	-	-	-	-	-	-	- 1,412	-	163	-	-	-	-	1,575	-
Total	-																	
IUlai	28	228	-	-	335	-	144	-	-	2,344	36	163	-	56	-	-	3,334	63

Over the first half of 2020, there have been no material changes.

Table 40 shows the exposures for the MSI Group, calculated using the Standardised approach for each exposure class and broken down by CQS.

Table 40: Standardised approach EAD	by credit qual	ity step								
\$MM		CQS1	CQS2	CQS3	CQS4	CQS5	CQS6	Other ²	Unrated	Total
MSI Group ¹										
Central Governments or Central Banks	GROSS EAD	156	7	27	7	2	1	15	205	420
Central Governments of Central Banks	EAD	156	7	27	7	2	1	15	205	420
Corporates	GROSS EAD	21	63	86	4	4	1	2	1,895	2,076
Lorporates	EAD	21	63	86	4	4	1	2	1,895	2,076
High viels	GROSS EAD	-	-	-	-	-	-	-	-	-
High risk	EAD	-	-	-	-	-	-	-	-	-
Institutions	GROSS EAD	5,941	4,257	35	96	393	3	13,991	651	25,367
institutions	EAD	5,345	4,257	35	96	393	3	12,200	651	22,980
Multilateral developments banks	GROSS EAD	11	-	-	-	-	-	-	-	11
viultilateral developments banks	EAD	11	-	-	-	-	-	-	-	11
Public sector entities	GROSS EAD	-	-	-	-	-	-	-	-	-
Public sector entitles	EAD	-	-	-	-	-	-	-	-	-
D = i = - A - th = - iti	GROSS EAD	1	-	-	-	-	-	-	-	1
Regional government or Local Authorities	EAD	1	-	-	-	-	-	-	-	1
	GROSS EAD	-	-	-	-	-	-	-	-	-
International Organisations	EAD	-	-	-	-	-	-	-	-	-
	GROSS EAD	-	-	192	-	3	-	24	-	219
Securitisation	EAD	-	-	192	-	3	-	24	-	219
	GROSS EAD	68	-	-	-	-	-	-	1,508	1,576
Other Items	EAD	68	-	-	-	-	-	-	1,508	1,576
	GROSS EAD	6,198	4,327	340	107	402	5	14,032	4,259	29,670
Total	EAD	5,602	4,327	340	107	402	5	12,241	4,259	27,283

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 an ECAI, which are then mapped to a CQS. The unrated segment represents exposure for which no ECAI credit assessment
is available.

^{2.} The OTHER segment represents exposures where alternative rules to the CQS treatment described in the note above apply. The majority of exposures in this segment are exposures to central counterparties to which a fixed risk weight is applied.

Table 41 shows the breakdown of exposures under the standardised approach by asset class and risk weight as at 30 June 2020 for the MSI Group and MSIP. Credit Derivatives are not used as a CRM technique for RWA benefits.

Table 41: IRB approach – Effect on the RWAs of credit derivatives used as CRM techniques (EU CR7)								
\$MM	MSI Group	MSIP						
	Pre-credit derivatives RWAs	Actual RWAs	Pre-credit derivatives RWAs	Actual RWAs				
Exposures under Foundation IRB	6,782	6,782	5,400	5,400				
Central governments and central banks	1,141	1,141	785	785				
Institutions	2,051	2,051	1,880	1,880				
Corporates – SME	-	-	-	-				
Corporates - specialised lending	57	57	-	-				
Corporates – other	3,533	3,533	2,735	2,735				
Exposures under Advanced IRB	-	-	-	-				
Total	6,782	6,782	5,400	5,400				

Table 42 shows the parameters used for the calculation of capital requirements for IRB models as at 30 June 2020 for the MSI Group.

	Original on-balance sheet gross exposure	Off-balance sheet exposures pre-CCF	Average CCF	EAD post- CRM and post-CCF	Average PD	Number of obligors	Average LGD	Average maturity	RWAs	RWA density	EL	Value adjustments and provisions
MSI Group	\$MM	\$MM	%	\$MM	%	#	%	Years	\$MM	%	\$MM	\$MM
0.00 to <0.15	19,312	-	20.00%	19,312	0.02%	9	45.00%	1	1,122	6%	2	
0.15 to <0.25	-	-	0.00%	-	-	-	-	-	-	-	-	
0.25 to <0.50	37	-	0.00%	37	0.42%	2	45.00%	1	18	49%	-	
0.50 to <0.75	-	-	0.00%	-	-	-	-	-	-	-	-	
0.75 to <2.50	-	-	0.00%	-	-	-	-	-	-	-	-	
2.50 to <10.00	-	-	0.00%	-	-	-	-	-	-	-	-	
10.00 to <100.00	-	-	0.00%	-	-	-	-	-	-	-	-	
100.00 (Default)	-	-	0.00%	-	-	-	-	-	-	-	-	
Central governments or central banks	19,349	-	20.00%	19,349	0.02%	11	45.00%	1	1,140	6%	2	-
0.00 to <0.15	7,897	2,317	90.76%	9,993	0.06%	92	45.00%	1	1,681	17%	3	
0.15 to <0.25	269	1	20.00%	269	0.20%	19	45.00%	1	116	43%	-	
0.25 to <0.50	5	46	20.00%	15	0.29%	33	45.00%	0	3	20%	-	
0.50 to <0.75	135	31	76.74%	159	0.71%	8	45.00%	2	168	106%	1	
0.75 to <2.50	14	-	0.00%	14	1.18%	7	45.00%	1	15	107%	-	
2.50 to <10.00	32	3	0.00%	32	7.56%	46	45.00%	3	67	209%	1	
10.00 to <100.00	-	-	0.00%	-	-	-	-	-	-	-	-	
100.00 (Default)	-	-	0.00%	-	-	-	-	-	-	-	-	
nstitutions	8,352	2,398	89.15%	10,482	0.10%	205	45.00%	1	2,050	20%	5	
0.00 to <0.15	2,079	2,550	75.56%	4,006	0.08%	74	45.00%	2	1,401	35%	2	
0.15 to <0.25	91	780	71.72%	650	0.20%	33	45.00%	3	321	49%	1	
0.25 to <0.50	121	426	70.83%	423	0.33%	61	45.00%	2	276	65%	1	
0.50 to <0.75	46	14	20.00%	49	0.71%	14	45.00%	2	42	86%	-	
0.75 to <2.50	111	1,271	6.50%	194	1.20%	20	45.00%	3	221	114%	1	
2.50 to <10.00	393	230	36.46%	477	7.40%	108	45.00%	3	1,011	212%	16	
10.00 to <100.00	95	3	95.95%	98	27.91%	14	45.00%	3	261	266%	12	
100.00 (Default)	97	-	0.00%	97	100.00%	16	45.00%	4	-	0%	44	
Corporates	3,033	5,274	79.07%	5,994	2.35%	340	45.00%	2	3,533	59%	77	
Total	30,734	7,672	82.22%	35,825	0.50%	556	45.00%	1	6,723	19%	84	-

Over the first half of 2020, the increase in exposures to Central Governments or Central Banks is due to cash deposits with for liquidity management.

Table 43 shows the all relevant parameters used for the calculation of CCR and risk-weighting under the standardised approach as at 30 June 2020 for the MSI Group.

Table 43: Standardised approach – CCR (exposures by regulatory portfolio and risk weight (EU CCR3) Risk weight													
MSI Group	%0	2%	4%	10%	20%	20%	%02	75%	100%	150%	1250%	Others	Total	Of which unrated
Central governments or central banks	1	-	-	-	-	-	-	-	38	-	-	-	39	22
Regional government or local authorities	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Public sector entities	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Multilateral development banks	6	-	-	-	-	-	-	-	-	-	-	-	6	-
International organisations	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Institutions	-	17,742	4,218	-	337	2	-	-	339	3	-	-	22,641	309
Corporates	-	-	-	-	87	45	-	-	907	3	-	-	1,042	429
Retail	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Items	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total standardised approach	7	17,742	4,218	-	424	47	-	-	1,284	6	-	-	23,728	760

Table 44 shows the all relevant parameters used for the calculation of CCR capital requirements for IRB models as at 30 June 2020 for the MSI Group.

PD scale (EL Average PD % 0.066% 0.20% 0.29% 0.71% 2.32% 5.46% 	Number of obligors # 197 168 5 13 4 1 6 10,363 4,742	Average LGD % 40.64% 40.40% 45.00% 45.00% 45.00% 45.00% 45.00% 45.89% 45.88%	Average maturity Years 1 1 1 5 0 1 3 2 2	\$MM 1,327 960 110 195 2 8 52 - - - 24,786 9,270	RWA density % 12% 9% 37% 82% 67% 114% 153% 49% 29%
% 0.06% 0.03% 0.20% 0.29% 0.71% 2.32% 5.46%	# 197 168 5 13 4 1 6 10,363	% 40.64% 40.40% 45.00% 45.00% 45.00% 45.00% 45.00%	Years 1 1 1 5 0 1 3 -	1,327 960 110 195 2 8 52 -	% 12% 9% 37% 82% 67% 114% 153%
0.06% 0.03% 0.20% 0.29% 0.71% 2.32% 5.46%	197 168 5 13 4 1 6 10,363 4,742	40.64% 40.40% 45.00% 45.00% 45.00% 45.00% 	1 1 1 5 0 1 3 -	1,327 960 110 195 2 8 52 -	12% 9% 37% 82% 67% 114% 153%
0.03% 0.20% 0.29% 0.71% 2.32% 5.46% 	168 5 13 4 1 6 - - 10,363 4,742	40.40% 45.00% 45.00% 45.00% 45.00% 45.00%	1 1 5 0 1 3 -	960 110 195 2 8 52 -	9% 37% 82% 67% 114% 153% - -
0.20% 0.29% 0.71% 2.32% 5.46% 	5 13 4 1 6 - - - 10,363 4,742	45.00% 45.00% 45.00% 45.00% - - - - 45.89%	1 5 0 1 3 -	110 195 2 8 52 - -	37% 82% 67% 114% 153% - -
0.29% 0.71% 2.32% 5.46% 	13 4 1 6 - - - 10,363 4,742	45.00% 45.00% 45.00% 45.00% - - - 45.89%	5 0 1 3 - -	195 2 8 52 - - -	82% 67% 114% 153% - - -
0.71% 2.32% 5.46% - - - 0.57% 0.08%	10,363 4,742	45.00% 45.00% 45.00% - - - 45.89%	0 1 3	2 8 52 - - - 24,786	67% 114% 153% - - -
2.32% 5.46% - 0.57% 0.08%	1 6 - - - 10,363 4,742	45.00% 45.00% - - - 45.89%	2	24,786	114% 153% - - - 49%
5.46% - - - - - - 0.57% 0.08%	10,363 4,742	45.00% - - - 45.89%	2	52 - - - 24,786	153% - - - 49%
0.57%	10,363 4,742	45.89%	2	24,786	49%
0.08%	4,742		2	•	
0.08%	4,742		2	•	
0.08%	4,742			•	
0.08%	4,742			•	
	,	45.2070	_	3,270	2370
0.20%	415	51.78%	3	3,265	60%
0.34%	2,724	45.00%	2	5,312	59%
0.71%	318	45.00%	2	1,644	90%
1.60%	196	45.00%	2	759	112%
5.08%	1,477	45.00%	1	3,780	160%
27.91%	489	45.08%	1	756	256%
100.00%	2	45.00%	5	-	-
					28%
	245	45.35%	1		23%
	49	45.13%	3	530	67%
0.31%	93	45.15%	2	685	60%
0.71%	41	45.36%	2	376	106%
1.39%	54	45.00%	1	229	111%
5.56%	93	56.53%	2	1,226	250%
27.91%	2	45.00%	3	-	
-		-	<u>-</u>	-	-
0.34%	11,137	45.18%	1	38,764	36%
2	3 0.15% 2 0.08% 5 0.20% 9 0.31% 5 0.71% 5 1.39% 1 5.56% 27.91%	2 0.08% 245 5 0.20% 49 9 0.31% 93 5 0.71% 41 5 1.39% 54 1 5.56% 93 - 27.91% 2	2 0.08% 245 45.35% 5 0.20% 49 45.13% 6 0.31% 93 45.15% 6 0.71% 41 45.36% 6 1.39% 54 45.00% 1 5.56% 93 56.53% 27.91% 2 45.00%	2 0.08% 245 45.35% 1 3 0.20% 49 45.13% 3 4 0.31% 93 45.15% 2 5 0.71% 41 45.36% 2 5 1.39% 54 45.00% 1 1 5.56% 93 56.53% 2 2 27.91% 2 45.00% 3	2 0.08% 245 45.35% 1 9,605 3 0.20% 49 45.13% 3 530 4 0.31% 93 45.15% 2 685 5 0.71% 41 45.36% 2 376 5 1.39% 54 45.00% 1 229 1 5.56% 93 56.53% 2 1,226 2 27.91% 2 45.00% 3 -

Over the first half of 2020 there was a decrease in SFT exposures within institutions, partially offset by an increase in Central Governments SFT exposures, mainly driven by Repo and Stock loan activity.

15. Appendix IV: Abbreviations

Term	Definition
AT1	Additional Tier 1
BCBS	Basel Committee on Banking Supervision
BIA	Basic Indicator Approach
BRRD	Bank Recovery and Resolution Directive
CCB	Capital Conservation Buffer
CCP	Central Counterparty
CCR	Counterparty Credit Risk
ССуВ	Countercyclical Capital Buffer
CET1	Common Equity Tier 1 Capital
CRD	Capital Requirements Directive
CRD IV	Capital Requirements Directive — EU implementation of Basel III
CRR	Capital Requirements Regulation
CVA	Credit Valuation Adjustment
EBA	European Banking Authority
EMEA ALCO	EMEA Asset and Liability Committee
EU	European Union
FCA	Financial Conduct Authority
FRTB	Fundamental Review of the Trading Book
FS	Financial Service's
ICAAP IFD	Internal Capital Adequacy Assessment Process Investment Firm Directive
IFR	Investment Firm Regulation
IFPR	Investment Firms Prudential Regime
ILAAP	Internal Liquidity Adequacy Assessment Process
IPU	Intermediate Parent Undertaking
IRB	Foundation Internal Ratings Based
IRC	Incremental Risk Charge
IMA	Internal Modelling Approach
IMM	Internal Models Method
ITS	Implementing Technical Standards
LCR	Liquidity Coverage Ratio
MCR	Minimum Capital Requirements
MM	Millions
MRD	Market Risk Department
MSBAG	Morgan Stanley Bank AG
MSBIL	Morgan Stanley Bank International Limited
MSESE	Morgan Stanley Europe S.E
MSI	Morgan Stanley International Limited
MSI Group MSIM	Morgan Stanley International Limited (and its subsidiaries)
MSIM ACD	Morgan Stanley Investment Management Limited Morgan Stanley Investment Management (ACD) Limited
MSIM Group	Morgan Stanley Investment Management Sub-Consolidated Group
MSIP	Morgan Stanley & Co. International plc
MSIP Group	Morgan Stanley & Co. International plc (and its subsidiaries)
MTMM	Mark-to-Market Method
NSFR	Net Stable Funding Ratio
ОТС	Over-the-counter
PRA	Prudential Regulation Authority
RTS	Regulatory Technical Standards
RWAs	Risk Weighted Assets
SA	Standardised Approach
SA-CRR	Standardised Approach to Counterparty Credit Risk
SFTs	Securities Financing Transactions
SREP	Supervisory Review and Evaluation Process
SVaR	Stressed Value at Risk
TCR	Total Capital Requirement
TLAC	Total Loss-Absorbing Capacity
UK	United Kingdom
US VaR	United States Value at Risk
v al\	value at man