Morgan Stanley International Limited Group

Pillar 3 Regulatory Disclosures Report

As at 30 June 2022

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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 2022 and no significant change is expected.

As at 30 June 2022, Morgan Stanley & Co. International plc ("MSIP") and Morgan Stanley Europe Holding SE Group ("MSEHSE Group") are reported as large subsidiaries within the MSI Group. MSIP is authorised by the Prudential Regulation Authority ("PRA") and regulated by the PRA and Financial Conduct Authority ("FCA"). MSEHSE Group at a consolidated group level is under the direct supervision of the European Central Bank ("ECB") under the Single Supervisory Mechanism.

The Pillar 3 disclosures as at 30 June 2022 are prepared on the basis of the consolidated situation of the MSI Group. In addition, certain disclosures are required for MSIP as a large, listed subsidiary of MSI Group, and MSEHSE Group as a large non-listed subsidiary of MSI Group.

Directors Responsibility Statement

I confirm that I have taken all reasonable measures to ensure that the information included in this disclosure complies to the best of my knowledge with section 4 of the PRA rulebook on Disclosure (CRR) and has been prepared in accordance with the internal control procedures agreed upon at the management body level.

Anthony Mullineaux

Chief Financial Officer

Morgan Stanley International Limited

Key Metrics

Table 1a: Key Metrics (UK KM1) – MSI Group and MSIP

$MM MSI Group[1 2 3]	Q2'22	Q1'22	Q4'21	Q3'21	Q2'21
Available own funds					
Common Equity Tier 1 ("CET1") capital	22,055	21,614	22,238	22,544	21,657
Tier 1 ("T1") capital	26,355	25,114	25,738	26,044	25,157
Total capital	34,680	31,226	32,124	32,700	29,992
Risk-weighted exposure amounts					
Total risk-weighted exposure amount	166,499	177,213	164,374	170,087	168,003
Capital ratios (as a percentage of risk-weighted exposure amount)					
Common Equity Tier 1 ratio (%)	13.25%	12.20%	13.50%	13.30%	12.90%
Tier 1 ratio (%)	15.83%	14.17%	15.70%	15.30%	15.00%
Total capital ratio (%)	20.83%	17.62%	19.50%	19.20%	17.90%
Additional own funds requirements based on Supervisory Review and Evaluation Process ("SREP") (as a percentage of risk-weighted exposure amount)					
Additional CET1 SREP requirements (%)	1.68%	1.43%			
Additional AT1 SREP requirements (%)	0.56%	0.48%			
Additional Tier 2 ("T2") SREP requirements (%)	0.75%	0.63%			
Total SREP own funds requirements (%)	10.99%	10.54%			
Combined buffer requirement (as a percentage of risk-weighted exposure amount)					
Capital conservation buffer (%)	2.50%	2.50%			
Conservation buffer due to macro-prudential or systemic risk identified at the level of a Member State (%)	-	-			
Institution specific countercyclical capital buffer (%)	0.05%	0.04%			
Systemic risk buffer (%)	-	-			
Global Systemically Important Institution buffer (%)	-	-			
Other Systemically Important Institution buffer	-	-			
Combined buffer requirement (%)	2.55%	2.54%			
Overall capital requirements (%)	13.54%	13.08%			
CET1 available after meeting the total SREP own funds requirements (%)	7.07%	6.27%			
Leverage ratio					
Total exposure measure excluding claims on central banks	464,889	501,433	534,827	547,423	535,605
Leverage ratio excluding claims on central banks (%)	5.67%	5.01%	4.81%	4.76%	4.70%
Liquidity Coverage Ratio					
Total high-quality liquid assets ("HQLA") (Weighted value - average)	49,145	49,196	50,367	49,416	48,780
Cash outflows - Total weighted value	84,886	86,160	86,013	82,999	79,676
Cash inflows - Total weighted value	61,239	61,375	60,328	57,283	53,660
Total net cash outflows (adjusted value)	23,765	24,785	25,686	25,717	26,017
Liquidity coverage ratio (%)	206.79%	198.49%	196.09%	192.16%	187.50%

1. The MSI Group is required to maintain a minimum ratio of Own Funds to Risk Weighted Exposure Amounts ("RWAs"). As at 30 June 2022, the MSI Group is in compliance with the PRA capital requirements.
2. Based on the guidance provided by the PRA under PS21/21, the MSI Group, a Leverage Ratio Requirements ("LREQ") entity, shall be subject to additional leverage ratio disclosure requirements beginning 1 January 2023.
3. Based on the guidance provided by the PRA under PS22/21, the MSI Group, shall be subject to Net Stable Funding Ratio ("NSFR") disclosure requirements beginning 1 January 2023.

$MM **MSIP**[1 2 3]	**Q2'22**	**Q1'22**	**Q4'21**	**Q3'21**	**Q2'21**
Available own funds					
Common Equity Tier 1 ("CET1") capital	17,266	16,836	17,022	17,195	16,419
Tier 1 ("T1") capital	21,566	20,336	20,522	20,695	19,919
Total capital	28,944	25,465	25,898	26,323	24,399
Risk-weighted exposure amounts					
Total risk-weighted exposure amount	137,181	151,654	136,748	142,027	145,033
Capital ratios (as a percentage of risk-weighted exposure amount)					
Common Equity Tier 1 ratio (%)	12.59%	11.10%	12.40%	12.10%	11.30%
Tier 1 ratio (%)	15.72%	13.41%	15.00%	14.60%	13.70%
Total capital ratio (%)	21.10%	16.79%	18.90%	18.50%	16.80%
Additional own funds requirements based on Supervisory Review and Evaluation Process ("SREP") (as a percentage of risk-weighted exposure amount)					
Additional CET1 SREP requirements (%)	1.65%	1.51%			
Additional AT1 SREP requirements (%)	0.55%	0.50%			
Additional Tier 2 ("T2") SREP requirements (%)	0.73%	0.68%			
Total SREP own funds requirements (%)	10.93%	10.69%			
Combined buffer requirement (as a percentage of risk-weighted exposure amount)					
Capital conservation buffer (%)	2.50%	2.50%			
Conservation buffer due to macro-prudential or systemic risk identified at the level of a Member State (%)	-	-			
Institution specific countercyclical capital buffer (%)	0.05%	0.05%			
Systemic risk buffer (%)	-	-			
Global Systemically Important Institution buffer (%)	-	-			
Other Systemically Important Institution buffer	-	-			
Combined buffer requirement (%)	2.55%	2.55%			
Overall capital requirements (%)	13.48%	13.24%			
CET1 available after meeting the total SREP own funds requirements (%)	6.44%	5.09%			
Leverage ratio					
Total exposure measure excluding claims on central banks	427,375	461,429	496,231	509,199	502,756
Leverage ratio excluding claims on central banks (%)	5.05%	4.41%	4.14%	4.06%	3.96%
Liquidity Coverage Ratio					
Total high-quality liquid assets ("HQLA") (Weighted value - average)	41,980	41,519	40,982	40,017	39,286
Cash outflows - Total weighted value	80,648	80,932	79,717	76,729	73,280
Cash inflows - Total weighted value	59,739	59,933	59,248	56,638	53,153
Total net cash outflows (adjusted value)	21,159	21,346	20,896	20,630	20,615
Liquidity coverage ratio (%)	198.41%	194.51%	196.13%	193.98%	190.56%

1. MSIP is required to maintain a minimum ratio of Own Funds to RWAs. As at 30 June 2022, MSIP is in compliance with the PRA capital requirements.
2. Based on the guidance provided by the PRA under PS21/21, MSIP a LREQ entity, shall be subject to additional leverage ratio disclosure requirements beginning 1 January 2023.
3. Based on the guidance provided by the PRA under PS22/21, MSIP shall be subject to NSFR disclosure requirements beginning 1 January 2023.

Table 1b: Key metrics (EU KM1) – MSEHSE Group

$MM[1] MSEHSE Group[2 3]	Q2'22	Q1'22	Q4'21	Q3'21	Q2'21
Available own funds (amounts)					
Common Equity Tier 1 ("CET1") capital	4,425	4,020	3,885	3,715	3,826
Tier 1 capital	5,473	4,684	4,568	4,410	4,537
Total capital	6,522	5,791	5,707	5,569	5,722
Risk-weighted exposure amounts					
Total risk exposure amount	30,052	24,191	24,163	24,433	22,336
Capital ratios (as a percentage of risk-weighted exposure amount)					
Common Equity Tier 1 ratio (%)	14.72%	16.6%	16.1%	15.2%	17.1%
Tier 1 ratio (%)	18.21%	19.4%	18.9%	18.0%	20.3%
Total capital ratio (%)	21.70%	23.9%	23.6%	22.8%	25.6%
Additional own funds requirements to address risks other than the risk of excessive leverage (as a percentage of risk-weighted exposure amount)					
Additional own funds requirements to address risks other than the risk of excessive leverage (%)	2.75%	2.75%	2.75%		
of which: to be made up of CET1 capital (percentage points)	1.55%	1.55%	1.55%		
of which: to be made up of Tier 1 capital (percentage points)	2.06%	2.06%	2.06%		
Total SREP own funds requirements (%)	10.75%	10.75%	10.75%		
Combined buffer and overall capital requirement (as a percentage of risk-weighted exposure amount)					
Capital conservation buffer (%)	2.50%	2.50%	2.50%		
Conservation buffer due to macro-prudential or systemic risk identified at the level of a Member State (%)	-	-	-		
Institution specific countercyclical capital buffer (%)	0.04%	0.05%	0.04%		
Systemic risk buffer (%)	-	-	-		
Global Systemically Important Institution buffer (%)	-	-	-		
Other Systemically Important Institution buffer (%)	-	-	-		
Combined buffer requirement (%)	2.54%	2.55%	2.54%		
Overall capital requirements (%)	13.29%	13.30%	13.29%		
CET1 available after meeting the total SREP own funds requirements (%)	8.68%	10.57%	10.03%		
Leverage Ratio					
Total exposure measure	81,630	81,392	65,339	69,695	66,358
Leverage ratio (%)	6.71%	5.8%	7.0%	6.3%	6.8%
Additional own funds requirements to address the risk of excessive leverage (as a percentage of total exposure measure)					
Additional own funds requirements to address the risk of excessive leverage (%)	-	-	-		
of which: to be made up of CET1 capital (percentage points)	-	-	-		
Total SREP leverage ratio requirements (%)	3.00%	3.00%	3.00%		
Leverage ratio buffer and overall leverage ratio requirement (as a percentage of total exposure measure)					
Leverage ratio buffer requirement (%)	-	-	-		
Overall leverage ratio requirement (%)	3.00%	3.00%	3.00%		
Liquidity Coverage Ratio					
Total high-quality liquid assets ("HQLA") (Weighted value - average)	8,458	8,958	9,522	9,522	9,056
Cash outflows - Total weighted value	16,969	14,822	12,696	9,812	7,863
Cash inflows - Total weighted value	12,886	10,056	6,574	3,688	1,932
Total net cash outflows (adjusted value)	4,747	5,295	6,475	6,237	5,931
Liquidity coverage ratio (%)	178.19%	169.16%	147.06%	152.66%	152.69%
Net Stable Funding Ratio					
Total available stable funding	12,437	14,225	13,670	10,925	10,041
Total required stable funding	9,666	7,723	6,587	7,284	7,038
NSFR ratio (%)	128.66%	184.19%	207.53%	149.99%	142.67%

1. MSEHSE Group quantitative Month End data for 30 June 2022 has been converted from EUR to USD at a rate of 1.0481. The quarterly Liquidity Coverage Ratio ("LCR") balances reflects the average of the last 12-month period, which have been converted from EUR to USD at respective month-end FX rate
2. MSEHSE Group is required to maintain a minimum ratio of Own Funds to RWAs. As at 30 June 2022, MSEHSE Group is in compliance with the regulatory capital requirements.
3. MSEHSE Group NSFR is disclosed semi-annually.

Basis of Consolidation

The MSI Group completes its prudential consolidation in compliance with Capital Requirements Regulation ("CRR") Part One, Title II Chapter 2 as amended, PRA Rulebook on Groups and the PRA's Supervisory Statement on Groups (SS15/13), with all entities fully consolidated. The basis of consolidation for prudential purposes is materially 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 the CRR. The most significant subsidiaries of the MSI Group are MSIP and MSEHSE Group, the results of which are material to the MSI Group. This disclosure comprehensively conveys the risk profile of the MSI Group.

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. For further information on the MSI Group, please refer to the annual disclosure at Pillar 3 Disclosures - UK - Investor Relations | Morgan Stanley.

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

Additional Regulatory Supervision

MSIP, a London-based broker-dealer subsidiary is also conditionally registered with the SEC as a security-based swap dealer and provisionally registered with the Commodity Future Trading Commission ("CFTC") as a swap dealer. Currently MSIP is complying with home country capital requirements in lieu of SEC and CFTC capital requirements pursuant to applicable substituted compliance rules and interim no-action relief.

Within the MSEHSE Group, Morgan Stanley Europe SE ("MSESE") as a Germany-based broker dealer is also conditionally registered with the SEC as a security-based swap dealer and provisionally registered with the CFTC as a swap dealer. Currently MSESE is complying with home-country capital requirements in lieu of SEC and CFTC capital requirements pursuant to interim no-action relief.

2. Regulatory Frameworks

2.1 Regulatory Overview

Basel Committee on Banking Supervision ("BCBS") sets the standard for international banking prudential regulation in a series of accords ("Basel Accords"). It is a forum for regular cooperation on the supervision of the banking system and is made up of national banks and supervisory authorities from 28 countries. The Basel Accords are not directly applicable legislation, and they apply only to internationally active banks. The Basel Accords have been updated a number of times, most recently through a series of reforms known collectively as Basel III. The Basel Accords are implemented in the United Kingdom ("UK") via the Capital Requirements Directive ("CRD") and the CRR, both as amended.

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 the section 4 of the PRA rulebook on Disclosure (CRR) section applicable to CRR Firms. For certain disclosures, requirements are onshored by PRA specific policy statements and guidelines and few disclosure 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.

Both MSIP and MSEHSE Group are considered large subsidiaries of the MSI Group for Pillar 3 disclosures.

MSESE as a large subsidiary of the MSI Group is exempted from the application of Article 6(1) of the CRR, pursuant to Article 7 of the CRR and section 2a para. 2 of the German Banking Act (Kreditwesengesetz – KWG). As a result, for 'large subsidiary' disclosure purposes, the MSEHSE Group is disclosed instead.

2.2 Regulatory Development

Finalising Basel III reforms

A number of remaining standards of the Basel III reform package have still to be implemented. These standards, referred to by the BCBS and international regulators as the 'Finalisation of Basel III', provide updates to key components of the capital framework. These include revised market RWA requirements through the Fundamental Review of the Trading Book, new Credit Valuation Adjustments ("CVA") RWA requirements, revisions to the credit RWA calculations covering both standardised and advanced treatments, and a new RWA requirement for operational risk. They also introduce an aggregate floor for RWAs generated by the internal models, which will be set at 72.5% of total standardised RWAs. The output floor will be phased in over five years. Banks will also need to disclose their RWAs based upon the standardised approaches.

Following the impact of the COVID-19 pandemic and its impact on the global banking system, the BCBS deferred the remaining standards of the Basel III reform package by one year to 1 January 2023.

However, no draft rules have yet been proposed by the PRA, so the final timing and impact in the UK remains uncertain, although the new requirements are not expected to apply before 1 January 2025. The same uncertainty on timing exists in the European Union ("EU"), where the European Commission published draft rules in October 2021.

3. Capital Management

The MSI Group manages capital in accordance with regulatory requirements and the results of its ICAAP. Further details on the MSI Group's capital management can be found in the MSI and MSIP annual reports.

As at 30 June 2022, the MSI Group Total Capital Requirement ("TCR") was $18.3Bn, equivalent to 11.0% of RWAs. The Combined Buffer as at 30 June 2022 was 2.55%, comprising the Capital Conservation Buffer of 2.5% and a Countercyclical Capital Buffer ("CCyB") of 0.05%.

Russia and Ukraine War

The MSI Group is monitoring the war in Ukraine and its impact on both the Ukrainian and Russian economies, as well as related impacts on other world economies and the financial markets. During the period, the MSI Group recognised expected credit losses in relation to cash and margin deposited with exchanges in Russia. Following the recognition of these expected credit losses, the MSI Group's direct exposure to both Russia and Ukraine is limited.

Morgan Stanley's activities in Russia are limited to helping global clients address and close out pre-existing obligations.

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.

Table 2: Own funds – MSI Group and MSIP

$MM	MSI Group	MSIP
Capital instruments eligible as CET1 capital	2,417	12,977
Prior Year Retained earnings	16,068	4,774
Independently reviewed interim profits net of any foreseeable charge or dividend	-	-
Accumulated other comprehensive income	(1,177)	(186)
Other reserves	7,461	1,403
Adjustments to CET1 due to prudential filters	(1,617)	(1,450)
Other intangible assets	(724)	(2)
Internal Ratings Based shortfall of credit risk adjustments to expected losses	(334)	(249)
Defined-benefit pension fund assets	(15)	-
Insufficient coverage for non-performing exposures	(2)	(1)
Deferred tax assets that rely on future profitability and do not arise from temporary differences net of associated tax liabilities	(22)	-
CET1 capital	**22,055**	**17,266**
Additional Tier 1 ("AT1") capital	4,300	4,300
T1 capital	**26,355**	**21,566**
Capital instruments and subordinated loans eligible as T2 capital	8,325	7,378
Instruments issued by subsidiaries that are given recognition in T2 capital	-	-
T2 capital	**8,325**	**7,378**
Total own funds	**34,680**	**28,944**

Over the first half of 2022, the MSI Group Own Funds have increased due to issuance of T2 capital instruments, AT1 capital instruments and recognition of H2 2021 profit post year end audit.

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 the CRD, 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 are based on unaudited consolidated non-statutory financial information and MSIP's capital resources are based on audited financial statements.

Table 3 provides a reconciliation of audited shareholders' equity to regulatory capital.

Table 3: Reconciliation of balance sheet total equity to regulatory capital – MSI Group and MSIP

$MM	MSI Group				MSIP			
		CET1 capital	AT1 capital	T2 capital		CET1 capital	AT1 capital	T2 capital
Equity instruments	6,678	2,378	4,300	-	16,765	12,465	4,300	-
Share premium	38	38	-	-	513	513	-	-
Other reserves	7,461	7,461	-	-	1,403	1,403	-	-
Other comprehensive income	(1,177)	(1,177)	-	-	(186)	(186)	-	-
Retained earnings	17,081	17,081	-	-	5,546	5,546	-	-
Non-controlling interest	422	422	-	-	-	-	-	-
Balance sheet total equity	**30,503**	**26,203**	**4,300**	**-**	**24,041**	**19,741**	**4,300**	**-**
Add:								
Tier 2 instruments classified as debt and other borrowings	**9,953**	**-**	**-**	**9,953**	**8,898**	**-**	**-**	**8,898**
Less:								
Qualifying own funds subordinated debt instruments not included in consolidated T2 capital	-	-	-	-	-	-	-	-
Amortised portion of subordinated debt instruments not included in T2 capital	(1,628)	-	-	(1,628)	(1,520)	-	-	(1,520)
Part of interim or year-end profit not eligible	(1,012)	(1,012)	-	-	(773)	(773)	-	-
Minority interests (amount not allowed in consolidated CET1)	(422)	(422)	-	-	-	-	-	-
Additional value adjustments	(1,464)	(1,464)	-	-	(1,377)	(1,377)	-	-
Negative amounts resulting from the calculation of expected loss amounts	(334)	(334)	-	-	(249)	(249)	-	-
Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	(153)	(153)	-	-	(73)	(73)	-	-
Intangible assets (net of related tax liability)	(724)	(724)	-	-	(2)	(2)	-	-
Defined-benefit pension fund assets	(15)	(15)	-	-	-	-	-	-
Deferred tax assets that rely on future profitability and do not arise from temporary differences net of associated tax liabilities	(22)	(22)	-	-	-	-	-	-
Insufficient coverage for non-performing exposures	(2)	(2)	-	-	(1)	(1)		
Unaudited Reserve not eligible								
Total own funds (transitional rules and fully loaded position)	**34,680**	**22,055**	**4,300**	**8,325**	**28,944**	**17,266**	**4,300**	**7,378**

5. Total Loss-Absorbing Capacity

The MSI and MSEHSE Groups are subject to internal Total Loss Absorbing Capacity ("TLAC") requirements under the CRR. These requirements are designed to enhance the resilience of the financial system by ensuring firms have sufficient capital and eligible liabilities to absorb losses and recapitalise in resolution. As at 30 June 2022, the minimum capacity requirements were set at 18% of RWAs and 6.75% of leverage exposure, scaled at 90% for both groups as material subsidiaries, on a consolidated basis, of a non-UK/non-EU Global Systemically Important Institution ("G-SII"). The MSEHSE Group will be subject to an internal Minimum Required Eligible Liabilities ("MREL") requirement from 1 January 2024.

Morgan Stanley's preferred resolution strategy is a Single Point of Entry ("SPOE") strategy. Further information on the 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 – MSI Group
$MM

MSI Group[1]	Q2'22	Q1'22	Q4'21	Q3'21	Q2'21
TLAC available	**42,608**	**41,193**	**40,127**	**40,432**	**39,553**
Total RWAs at the level of the resolution group	**166,499**	**177,213**	**164,374**	**170,087**	**168,003**
TLAC as a percentage of RWA (row 1/row2) (%)	25.59%	23.2%	24.4%	23.8%	23.5%
Leverage ratio exposure measure at the level of the resolution group	464,889	501,433	534,827	547,423	535,605
TLAC at a percentage of leverage ratio exposures measure (row1/row4) (%)	9.17%	8.2%	7.5%	7.4%	7.4%

1. As at 30 June 2022, the MSI Group is in compliance with the TLAC requirements.

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

Table 5a: TLAC composition – MSI Group
$MM

MSI Group	Q2'22
CET1 capital	22,055
AT1 capital before TLAC adjustments	4,300
AT1 ineligible as TLAC as issued out of subsidiaries to third parties	-
Other adjustments	-
AT1 instruments eligible under the TLAC framework	4,300
T2 capital before TLAC adjustments	8,325
Amortised portion of T2 instruments where remaining maturity >1 year	1,628
T2 Capital ineligible as TLAC as issued out of subsidiaries to third parties	-
Other adjustments	-
T2 instruments eligible under the TLAC framework	9,953
TLAC arising from regulatory capital	**36,308**
TLAC instruments subordinated to excluded liabilities	6,300
TLAC arising from non-regulatory capital instruments before adjustments	**6,300**
TLAC before deductions	**42,608**
Deduction of investments in own other TLAC liabilities	-
Other adjustments to TLAC	-
TLAC after deductions	**42,608**
Total risk-weighted assets adjusted as permitted under the TLAC regime	166,499
Leverage exposure measure	464,889
TLAC (as a percentage of risk-weighted assets adjusted as permitted under the TLAC regime)	25.59%
TLAC (as a percentage of leverage exposure)	9.17%
CET1 capital (as a percentage of RWA) available after meeting the resolution group's Minimum Capital Requirement ("MCR") and TLAC requirement	7.07%
Institution-specific buffer requirement	**2.55%**
Of which: capital conservation buffer requirement	2.50%
Of which: bank specific countercyclical buffer requirement	0.05%

Table 5b provides details of the composition of the MSEHSE Group's iTLAC.

Table 5b: TLAC composition (EU iTLAC)– MSEHSE Group

$MM MSEHSE Group[1]	Non-EU G-SII requirement for own funds and eligible liabilities (internal TLAC)
Common Equity Tier 1 capital (CET1)	4,425
Eligible Additional Tier 1 instruments	419
Eligible Tier 2 instruments	-
Eligible own funds	**4,844**
Eligible liabilities	1,572
Own funds and eligible liabilities items after adjustments	**6,416**
Total risk exposure amount and total exposure measure	
Total risk exposure amount	30,052
Total exposure measure	81,630
Ratio of own funds and eligible liabilities	
Own funds and eligible liabilities (as a percentage of RWA)	21.4%
Own funds and eligible liabilities (as a percentage of leverage exposure)	7.86%
CET1 (as a percentage of RWA) available after meeting the entity's requirements	3.46%
Institution-specific combined buffer requirement	2.54%
Requirements	
Requirement expressed as a percentage of the total risk exposure amount	16.20%
Internal TLAC expressed as percentage of the total exposure measure	6.08%
Memorandum items	
Total amount of excluded liabilities referred to in Article 72a(2) CRR	85,519

1. As at 30 June 2022, the MSEHSE Group is in compliance with the iTLAC requirements.

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

Table 6a: TLAC creditor ranking – MSI Group

$MM MSI Group	Creditor ranking 1 (most junior)	2	3	4 (most senior)	Total
Description of creditor ranking	Ordinary Shares[1]	AT1 instruments	Subordinated loans	Senior Subordinated loans	
Total capital and liabilities	**2,378**	**4,300**	**9,954**	**6,300**	**22,932**
Excluded liabilities [2]	-	-	-	-	-
Total capital and liabilities less excluded liabilities	2,378	4,300	9,954	6,300	22,932
Eligible as TLAC	2,378	4,300	9,954	6,300	22,932
with 1 year ≤ residual maturity < 2 years	-	-	-	6,300	6,300
with 2 years ≤ residual maturity < 5 years	-	-	5,356	-	5,356
with 5 years ≤ residual maturity < 10 years	-	-	4,598	-	4,598
with residual maturity ≥ 10 years	-	-	-	-	-
perpetual securities	2,378	4,300	-	-	6,678

1. Ordinary Shares excludes the value of share premium and reserves.
2. As at 30 June 2022 MSI Group has no excluded liabilities as defined in CRR II Article 72a (2).

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

Table 6b: Creditor ranking - Entity that is not a resolution entity (EU TLAC2b) – MSEHSE Group

$MM MSEHSE Group	Insolvency ranking 1 (most junior)	2	3	4 (most senior)	Total
Description of insolvency ranking	Ordinary Shares	AT1 instruments	Subordinated loans	Senior Subordinated loans	
Own funds and eligible liabilities for the purpose of internal TLAC	839	419	-	1,572	2,830
of which residual maturity ≥ 1 year < 2 years	-	-	-	1,572	1,572
of which residual maturity ≥ 2 year < 5 years	-	-	-	-	-
of which residual maturity ≥ 5 years < 10 years	-	-	-	-	-
of which residual maturity ≥ 10 years, but excluding perpetual securities	-	-	-	-	-
of which perpetual securities	839	419	-	-	1,258

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 30 June 2022 exceed the proposed minimum requirement of 3.25% that will apply once new legislation comes into effect from 1 January 2023. MSEHSE Group leverage ratio is also in excess of its 3% minimum requirement. 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. Leverage exposures for MSI Group as well as MSIP are regularly calculated and reported to EMEA Asset and Liability Committee ("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 leverage ratios of MSI Group and MSIP have increased from 31 March 2022 to 30 June 2022 by 0.7% and 0.6% respectively due to a decrease in leverage exposure.

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 2022.

Table 7: Summary reconciliation of accounting assets and leverage ratio exposures (UK LR1) – MSI Group and MSIP

	Applicable Amounts	
$MM	**MSI Group**	**MSIP**
Total assets as per published financial statements[1]	673,972	602,351
Adjustment for entities which are consolidated for accounting purposes but are outside the scope of prudential consolidation	-	-
(Adjustment for securitised exposures that meet the operational requirements for the recognition of risk transference)	-	-
(Adjustment for exemption of exposures to central banks)	(31,483)	(22,597)
(Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting framework but excluded from the total exposure measure in accordance with point (i) of Article 429a(1) of the CRR)	-	-
Adjustment for regular-way purchases and sales of financial assets subject to trade date accounting[2]	-	-
Adjustment for eligible cash pooling transactions	-	-
Adjustments for derivative financial instruments	(146,304)	(133,187)
Adjustments for Securities Financing Transactions ("SFTs")	17,516	17,529
Adjustment for off-balance sheet items (i.e., conversion to credit equivalent amounts of off-balance sheet exposures)[3]	6,029	2,989
(Adjustment for prudent valuation adjustments and specific and general provisions which have reduced tier 1 capital (leverage))	-	-
(Adjustment for exposures excluded from the total exposure measure in accordance with point (c) of Article 429a(1) of the CRR)	-	(488)
(Adjustment for exposures excluded from the total exposure measure in accordance with point (j) of Article 429a(1) of the CRR)	-	-
Other adjustments	(54,841)	(39,222)
Total exposure measure	**464,889**	**427,375**

1. MSI Group does not publish financial statements and the reported balances are reconciled to unaudited financial statements.
2. As MSI Group follows settlement date accounting, no exposure is reported under regular-way purchases and sales subject to trade date accounting
3. Regular-way purchases and sales subject to settlement date accounting are treated as Off-Balance sheet items.

Table 8 provides a detailed breakdown of the components of the leverage ratio exposure for MSI Group and MSIP as at 30 June 2022.

Table 8: Leverage ratio common disclosure (UK LR2) – MSI Group and MSIP

MSI Group[1] $MM	Leverage ratio exposures Q2'22	Q4'21
On-balance sheet exposures (excluding derivatives and SFTs)		
On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	239,173	237,232
Gross-up for derivatives collateral provided, where deducted from the balance sheet assets pursuant to the applicable accounting framework	4,391	
(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	(52,372)	
(Adjustment for securities received under securities financing transactions that are recognised as an asset)	-	
(General credit risk adjustments to on-balance sheet items)	-	
(Asset amounts deducted in determining tier 1 capital (leverage))	(2,561)	(2,102)
Total on-balance sheet exposures (excluding derivatives and SFTs)	**188,631**	**235,130**
Derivative exposures		
Replacement cost associated with SA-CCR derivatives transactions (i.e., net of eligible cash variation margin)	55,545	32,067
Derogation for derivatives: replacement costs contribution under the simplified standardised approach	-	
Add-on amounts for potential future exposure associated with SA-CCR derivatives transactions	110,626	176,138
Derogation for derivatives: potential future exposure contribution under the simplified standardised approach	-	
Exposure determined under the original exposure method	-	-
(Exempted CCP leg of client-cleared trade exposures) (SA-CCR)	(4,716)	(15,674)
(Exempted CCP leg of client-cleared trade exposures) (simplified standardised approach)	-	
(Exempted CCP leg of client-cleared trade exposures) (original exposure method)	-	
Adjusted effective notional amount of written credit derivatives	318,058	311,210
(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	(306,985)	(302,274)
Total derivative exposures[2]	**172,528**	**162,774**
Securities financing transaction (SFT) exposures		
Gross SFT assets (with no recognition of netting), after adjustments for sales accounting transactions	178,799	169,708
(Netted amounts of cash payables and cash receivables of gross SFT assets)	(59,968)	(47,099)
Counterparty credit risk exposure for SFT assets	10,353	8,936
Derogation for SFTs: counterparty credit risk exposure in accordance with Articles 429e(5) and 222 of the CRR	-	-
Agent transaction exposures	-	-
(Exempted CCP leg of client cleared SFT exposures)	-	-
Total securities financing transaction exposures	**129,184**	**131,545**
Other off-balance sheet exposures		
Off-balance sheet exposures at gross notional amount	17,554	13,133
(Adjustments for conversion to credit equivalent amounts)	(11,525)	(7,755)
(General provisions deducted in determining tier 1 capital (leverage) and specific provisions associated with off-balance sheet exposures)	-	
Off-balance sheet exposures	**6,029**	**5,378**
Excluded exposures		
(Exposures excluded from the total exposure measure in accordance with point (c) of Article 429a(1) of the CRR)	-	-
(Exposures exempted in accordance with point (j) of Article 429a(1) of the CRR (on- and off- balance sheet))	-	-
(Excluded excess collateral deposited at triparty agents)	-	
(Total exempted exposures)	-	-
Capital and total exposure measure		
Tier 1 capital (leverage)	26,355	25,738
Total exposure measure including claims on central banks	496,372	534,827
(-) Claims on central banks excluded	(31,483)	
Total exposure measure excluding claims on central banks	**464,889**	**534,827**
Leverage ratio		
Leverage ratio excluding claims on central banks (%)	5.67%	4.81%
Fully loaded ECL accounting model leverage ratio excluding claims on central banks (%)	5.67%	
Leverage ratio excluding central bank reserves as if the temporary treatment of unrealised gains and losses measured at fair value through other comprehensive income had not been applied (%)	5.67%	
Leverage ratio including claims on central banks (%)	5.31%	
Regulatory minimum leverage ratio requirement (%)	N/A	

1. Based on the guidance provided by the PRA under PS21/21, the MSI Group, a LREQ entity, shall be subject to additional leverage ratio disclosure requirements beginning 1 January 2023.

2. As per the Pillar 3 guidance, "Gross-up for derivatives collateral provided, where deducted from the balance sheet assets pursuant to the applicable accounting framework" and "Deductions of receivables assets for cash variation margin provided in derivatives transactions" is reported under "On-balance sheet exposures". Thus, the Total Derivative exposure reported above for Q4'21 will not reconcile with the split provided.

MSIP[1] $MM	Leverage ratio exposures Q2'22	 Q4'21
On-balance sheet exposures (excluding derivatives and SFTs)		
On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	208,256	208,396
Gross-up for derivatives collateral provided, where deducted from the balance sheet assets pursuant to the applicable accounting framework	3,446	
(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	(38,882)	
(Adjustment for securities received under securities financing transactions that are recognised as an asset)	-	
(General credit risk adjustments to on-balance sheet items)	-	
(Asset amounts deducted in determining tier 1 capital (leverage))	(1,630)	(1,438)
Total on-balance sheet exposures (excluding derivatives and SFTs)	**171,190**	**206,958**
Derivative exposures		
Replacement cost associated with SA-CCR derivatives transactions (i.e., net of eligible cash variation margin)	38,760	24,245
Derogation for derivatives: replacement costs contribution under the simplified standardised approach	-	
Add-on amounts for potential future exposure associated with SA-CCR derivatives transactions	95,402	158,796
Derogation for derivatives: potential future exposure contribution under the simplified standardised approach	-	
Exposure determined under the original exposure method	-	-
(Exempted CCP leg of client-cleared trade exposures) (SA-CCR)	(2,134)	(8,186)
(Exempted CCP leg of client-cleared trade exposures) (simplified standardised approach)	-	
(Exempted CCP leg of client-cleared trade exposures) (original exposure method)	-	
Adjusted effective notional amount of written credit derivatives	297,867	299,455
(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	(288,085)	(291,278)
Total derivative exposures[2]	**141,810**	**154,619**
Securities financing transaction (SFT) exposures		
Gross SFT assets (with no recognition of netting), after adjustments for sales accounting transactions	186,268	171,173
(Netted amounts of cash payables and cash receivables of gross SFT assets)	(62,162)	(47,099)
Counterparty credit risk exposure for SFT assets	10,365	8,969
Derogation for SFTs: counterparty credit risk exposure in accordance with Articles 429e(5) and 222 of the CRR	-	-
Agent transaction exposures	-	-
(Exempted CCP leg of client cleared SFT exposures)	-	-
Total securities financing transaction exposures	**134,471**	**133,043**
Other off-balance sheet exposures		
Off-balance sheet exposures at gross notional amount	11,591	6,821
(Adjustments for conversion to credit equivalent amounts)	(8,602)	(4,632)
(General provisions deducted in determining tier 1 capital (leverage) and specific provisions associated with off-balance sheet exposures)	-	
Off-balance sheet exposures	**2,989**	**2,189**
Excluded exposures		
(Exposures excluded from the total exposure measure in accordance with point (c) of Article 429a(1) of the CRR)	(488)	(578)
(Exposures exempted in accordance with point (j) of Article 429a(1) of the CRR (on- and off- balance sheet))	-	-
(Excluded excess collateral deposited at triparty agents)	-	
(Total exempted exposures)	**(488)**	**(578)**
Capital and total exposure measure		
Tier 1 capital (leverage)	21,566	20,522
Total exposure measure including claims on central banks	449,972	496,231
(-) Claims on central banks excluded	(22,597)	
Total exposure measure excluding claims on central banks	**427,375**	**496,231**
Leverage ratio		
Leverage ratio excluding claims on central banks (%)	5.05%	4.14%
Fully loaded ECL accounting model leverage ratio excluding claims on central banks (%)	5.05%	
Leverage ratio excluding central bank reserves as if the temporary treatment of unrealised gains and losses measured at fair value through other comprehensive income had not been applied (%)	5.05%	
Leverage ratio including claims on central banks (%)	4.79%	
Regulatory minimum leverage ratio requirement (%)	N/A	

1. Based on the guidance provided by the PRA under PS21/21, the MSIP, a LREQ entity, shall be subject to additional leverage ratio disclosure requirements beginning 1 January 2023.
2. As per the Pillar 3 guidance, "Gross-up for derivatives collateral provided, where deducted from the balance sheet assets pursuant to the applicable accounting framework" and "Deductions of receivables assets for cash variation margin provided in derivatives transactions" is reported under "On-balance sheet exposures". Thus, the Total Derivative exposure reported above for Q4'21 will not reconcile with the split provided.

Table 9 provides a breakdown of the on-balance sheet exposures into trading and non-trading (banking book) exposures for MSI Group and MSIP as at 30 June 2022.

Table 9: Split of on-balance sheet exposures (excluding derivatives, SFTs and exempted exposures) (UK LR3) – MSI Group and MSIP

	Leverage ratio exposures	
$MM	MSI Group	MSIP
Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:	**243,474**	**210,411**
Trading Book exposures	182,745	165,138
Banking book exposures, of which:	60,729	45,273
Covered bonds	-	-
Exposures treated as sovereigns	32,290	23,122
Exposures to regional governments, MDB, international organisations and PSE not treated as sovereigns	28	28
Institutions	21,873	18,080
Secured by mortgages of immovable properties	-	-
Retail exposures	-	-
Corporates	3,529	2,963
Exposures in default	169	62
Other exposures (e.g., equity, securitisations, and other non-credit obligation assets)	2,840	1,018

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 the approved internal modelling approach - the Internal Model Method ("IMM") for CCR exposure. Standardised methods are applied for exposures not covered by internal models. Foundation Internal Ratings Based approach ("IRB") for credit risk or Standardised Approach ("SA") Risk Weights are applied as applicable.

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

Settlement risk refers to the capital requirement that covers the risk due to the possibility that a counterparty will fail to deliver on the terms of a contract at the agreed-upon time.

Securitisation exposures are a transaction or scheme, whereby the credit risk associated with an exposure or pool of exposures is tranched. Payments in the transaction or scheme are dependent upon the performance of the exposure or pool of exposures. 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, cyber-attacks 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. For further discussion on credit risk, counterparty credit risk, market risk and operational risk, please refer to the specific sections within this document.

RWA Overview

Table 10 summarises RWAs and Total Own Funds Requirements ("TOFR") 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.

Table 10: Overview of risk weighted exposure amounts (UK OV1) – MSI Group and MSIP

	MSI Group			MSIP		
$MM	RWAs Q2'22	RWAs Q1'22	TOFR Q2'22	RWAs Q2'22	RWAs Q1'22	TOFR Q2'22
Credit risk (excluding CCR)	**15,676**	**15,161**	**1,254**	**10,952**	**10,742**	**876**
Of which standardised approach	4,261	3,785	341	2,405	1,942	192
Of which the Foundation IRB ("FIRB") approach	7,581	6,898	606	4,587	4,317	367
Of which slotting approach	-	-	-	-	-	-
Of which equities under the simple risk weighted approach[1]	3,834	4,478	307	3,960	4,483	317
Of which the Advanced IRB ("AIRB") approach	-	-	-	-	-	-
Counterparty credit risk – CCR	**64,905**	**74,689**	**5,192**	**56,216**	**65,521**	**4,497**
Of which standardised approach	10,855	12,669	868	10,377	11,709	830
Of which internal model method (IMM)	28,462	32,571	2,277	23,436	27,176	1,875
Of which exposures to a CCP	1,005	891	80	724	709	58
Of which credit valuation adjustment - CVA	18,611	21,751	1,489	16,060	19,024	1,285
Of which other CCR	5,972	6,807	478	5,619	6,903	449
Settlement risk	**456**	**244**	**36**	**399**	**284**	**32**
Securitisation exposures in the non-trading book (after the cap)	**3,353**	**3,084**	**268**	**3,332**	**3,084**	**267**
Of which SEC-IRBA approach	-	-	-	-	-	-
Of which SEC-ERBA (including IAA)	872	930	70	851	930	68
Of which SEC-SA approach	-	-	-	-	-	-
Of which 1250%/ deduction	2,481	2,154	198	2,481	2,154	199
Position, foreign exchange and commodities risks (Market risk)	**62,687**	**62,927**	**5,015**	**47,004**	**50,188**	**3,760**
Of which standardised approach	12,771	12,517	1,022	6,102	7,114	488
Of which IMA	49,916	50,410	3,993	40,902	43,074	3,272
Large exposures	**5,070**	**6,756**	**407**	**9,211**	**11,768**	**737**
Operational risk	**14,352**	**14,352**	**1,148**	**10,067**	**10,067**	**805**
Of which basic indicator approach	14,352	14,352	1,148	10,067	10,067	805
Of which standardised approach	-	-	-	-	-	-
Of which advanced measurement approach	-	-	-	-	-	-
Amounts below the thresholds for deduction (subject to 250% risk weight) (For information)[1]	**630**	**827**	**50**	**975**	**1,095**	**78**
Total	**166,499**	**177,213**	**13,320**	**137,181**	**151,654**	**10,974**

1. Equity exposures subject to risk weight 1250% has been included under *"Of which equities under the simple risk weighted approach"* for MSI Group and MSIP.

Overall RWAs decreased primarily due to Counterparty Credit Risk reflecting market and portfolio movements within IMM Over the Counter ("OTC") derivatives.

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 to the MSI Group. 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 ("CRMD") is an independent risk oversight group headed by the Head of Credit who reports directly to the EMEA Chief Risk Officer. The MSI Group CRMD is responsible for managing and overseeing the credit risk profile of the MSI 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, CRMD establishes practices to evaluate, monitor and control credit risk exposure at the transaction, obligor and portfolio levels. CRMD analyses material lending and derivative transactions and helps ensure that the creditworthiness of the MSI Group's counterparties and borrowers is periodically reviewed and that credit exposure is actively monitored and managed.

Credit Risk Policies and Procedures

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

Credit Risk Limits

The MSI Group Credit Limits Framework ("CLF") is one of the primary tools used to monitor, manage, and control credit risk exposures. The MSI Board approves limits that reflect the credit risk tolerance of the MSI Group and serve as a basis from which more detailed limits are established. The CLF includes single name limits (e.g., counterparty, lending, settlement and treasury) and portfolio concentration limits by country, industry and product type. The MSI Group credit limit restricts potential credit exposure to any one borrower or counterparty and to groups of connected borrowers or counterparties. The limits are assigned based on multiple factors including the size of counterparty, the counterparty's Probability of Default ("PD"), the perceived correlation between the credit exposure and the counterparty's credit quality, and the Loss-Given Default ("LGD") and tenor profile of the specific credit exposure taking into account the effect of enforceable netting and eligible collateral.

Credit Evaluation

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

8.2 Counterparty and Credit Risk Capital Requirements

The regulatory framework distinguishes between credit risk and CCR capital requirements. The credit risk capital component reflects the capital requirements attributable to the risk of loss arising from a borrower failing to meet its obligations and relates to investments made in the Non-Trading Book such as loans and other securities that the MSI Group holds until maturity with no intention to trade. CCR exposure arises from the risk that counterparties are unable to meet their payment obligations under contracts for traded products including OTC derivatives and securities financing transactions. The distinction between credit risk and CCR exposures is due to the bilateral nature of the risk for CCR exposures, see Section 9 Counterparty Credit Risk.

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 2022.

Table 11: Credit and counterparty credit risk RWA summary – MSI Group and MSIP

	MSI Group			MSIP		
$MM	RWAs Q2'22	RWAs Q4'21	MCR Q2'22	RWAs Q2'22	RWAs Q4'21	MCR Q2'22
Credit risk	15,676	14,224	1,254	10,952	8,856	876
Of which FIRB	7,581	6,788	606	4,587	3,468	367
Counterparty credit risk (excluding CVA)	46,294	45,885	3,703	40,156	40,595	3,212
Of which IMM	28,462	29,328	2,277	23,436	24,876	1,875
Securitisation[1]	3,353	2,162	268	3,332	2,162	267
Amounts below the thresholds for deduction	630	986	50	975	855	78
Total (excluding CVA)	**65,953**	**63,257**	**5,275**	**55,415**	**52,468**	**4,433**
CVA	18,611	20,480	1,489	16,060	18,110	1,285
Total	**84,564**	**83,737**	**6,764**	**71,475**	**70,578**	**5,718**

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

Over the second quarter, an increase in securitization and credit risk partially offset the decrease in CVA.

Table 12 shows the credit risk and counterparty credit risk for MSI Group and MSIP as at 30 June 2022, for each exposure class as per the classification set out in the CRR.

Table 12: Credit and counterparty credit risk EAD and RWA summary – MSI Group and MSIP

	MSI Group			MSIP		
$MM	EAD[2]	RWAs	MCR	EAD[2]	RWAs	MCR
IRB[1]						
Central governments or central banks	44,351	2,519	202	32,391	1,436	115
Corporates	61,089	33,931	2,714	46,808	27,043	2,162
Equity	1,026	3,834	307	983	3,960	317
Institutions	52,682	14,307	1,145	52,631	14,070	1,126
Total (IRB)	**159,148**	**54,591**	**4,368**	**132,813**	**46,509**	**3,720**
Standardised[1]						
Central governments or central banks	701	820	66	533	452	36
Corporates	2,947	3,152	250	1,722	2,271	182
Institutions	42,495	1,783	143	38,933	1,629	130
Multilateral development banks	22	-	-	21	-	-
International organisations	1	-	-	1	-	-
Exposures in default	3	4	-	-	-	-
Regional government or local authorities	6	-	-	5	-	-
Other items	1,233	1,233	99	44	44	4
Total (standardised)	**47,408**	**6,992**	**558**	**41,259**	**4,396**	**352**
Total (CCP default fund)[3]	**1,899**	**387**	**31**	**973**	**203**	**16**
Securitisation	**545**	**3,353**	**268**	**522**	**3,332**	**267**
Total[4]	**209,000**	**65,323**	**5,225**	**175,567**	**54,440**	**4,355**

1. Exposure classes which have no exposure are not shown in the table.
2. Exposure at Default ("EAD") figures are post Credit Risk Mitigation ("CRM") and post Credit Conversion Factor ("CCF")
3. Central Counterparty ("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 77% and the Standardised Approach account for 23%.

Increase in overall RWA is partially offset by Institutions under IRB approach.

Credit Risk RWA flow statements

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

Table 13: RWA flow statements of credit risk exposures under the IRB approach (UK CR8) – MSI Group and MSIP

	MSI Group	MSIP
$MM	RWAs	RWAs
RWA as at the end of the previous reporting period[1]	**6,898**	**4,317**
Asset size	960	296
Asset quality	(277)	(26)
Model updates	-	-
Methodology and policy	-	-
Acquisitions and disposals	-	-
Foreign exchange movements	-	-
Other	-	-
RWA as at the end of the reporting period	**7,581**	**4,587**

1. Previous reporting period was Q1'22.

Over the second quarter, RWA increased primarily due to an increase in loans and cash products.

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 and MSIP's equity exposures using the simple risk-weighted approach and, where appropriate, specialised lending.

Table 14: IRB (Specialised Lending and Equities) (UK CR10.5) – MSI Group and MSIP

	Equities exposures under the simple risk-weight approach					
	On-balance sheet exposures	Off-balance sheet exposures	Risk weight	Exposure value	RWA	Expected loss amount
MSI Group[1]	$MM	$MM	%	$MM	$MM	$MM
Private equity exposures	-	-	190%	-	-	-
Exchange-traded equity exposures	226	714	290%	940	2,727	8
Other equity exposures	-	-	370%	-	-	-
	-	-	1250%[2]	89	1,107	-
Total	**226**	**714**	**-**	**1,029**	**3,834**	**8**
MSIP[1]						
Private equity exposures	-	-	190%	-	-	-
Exchange-traded equity exposures	225	644	290%	869	2,519	7
Other equity exposures	-	-	370%	-	-	-
	-	-	1250%[2]	115	1,441	-
Total	**225**	**644**	**-**	**984**	**3,960**	**7**

1. MSI Group and MSIP have no specialised lending.
2. Risk weight of 1250% has been included under "Other equity exposures".

Over the first half of 2022, equity exposures decreased due to the fall in the share price of Morgan Stanley.

8.3 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 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 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 leverages models under IMM and Standardised Methods for calculation of CCR Exposures. The majority of OTC derivatives and SFTs within the MSI Group are in scope of the IMM permission. The central process in calculating CCR exposure under IMM is a Monte Carlo simulation, which generates independent realizations of market risk factors at future time horizons across a number of simulation paths. Each trade is revalued under the simulated market conditions with future collateral requirements, along each simulation path determined by the simulated trade valuations. Finally, simulated trade values and collateral balances are aggregated based on netting agreements and legally confirmed enforceability to yield a distribution of CCR exposure across the simulation paths at each future time horizon. Selected measures of this distribution are then calculated to report CCR exposure and full distribution is used for capital calculation. 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. Standardised Methods are applied for exposures not covered by IMM, Standardised Approach for Counterparty Credit Risk ("SA-CCR") for OTC and Financial Collateral Comprehensive Method/ Master Netting Agreement for SFT.

Under SA-CCR, the EAD is given by the sum of two components, the replacement cost and the potential future exposure, multiplied by a supervisory multiplier, alpha (1.4).

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 2022.

Table 15: Analysis of CCR exposure by approach (UK CCR1) – MSI Group

$MM

MSI Group	Replacement cost (RC)	Potential future exposure (PFE)	EEPE	Alpha used for computing regulatory exposure value	Exposure value pre-CRM	Exposure value post-CRM	Exposure value	RWA
Original Exposure Method (for derivatives)	-	-		1.4	-	-	-	-
Simplified SA-CCR (for derivatives)	-	-		1.4	-	-	-	-
SA-CCR (for derivatives)	10,045	13,166		1.4	45,762	45,762	27,463	10,855
IMM (for derivatives and SFTs)			44,327	1.4	152,325	152,325	69,851	28,462
Of which securities financing transactions netting sets			9,170		12,776	12,776	12,776	2,545
Of which derivatives & long settlement transactions netting sets			35,157		139,549	139,549	57,075	25,917
Of which from contractual cross product netting sets					-	-	-	-
Financial collateral simple method (for SFTs)					-	-	-	-
Financial collateral comprehensive method (for SFTs)					16,099	16,099	16,099	4,841
VaR for SFTs					-	-	-	-
Total					**214,186**	**214,186**	**113,413**	**44,158**

Over the first half of 2022, IMM OTC RWAs reduced due to decrease in interest rate derivative transactions.

Table 16 summarises movements of RWAs for MSI Group and MSIP's CCR exposures under IMM.

Table 16: RWA flow statements of CCR exposures under IMM (UK CCR7) – MSI Group and MSIP

	MSI Group	MSIP
$MM	RWAs	RWAs
RWAs at the end of the previous reporting period[1]	**32,571**	**27,176**
Asset size	(2,697)	(2,497)
Credit quality of counterparties	(1,412)	(1,243)
Model updates (IMM only)	-	-
Methodology and policy (IMM only)	-	-
Acquisitions and disposals	-	-
Foreign exchange movements	-	-
Other	-	-
RWAs at the end of the current reporting period	**28,462**	**23,436**

1. Previous reporting period was Q1'22.

The decrease in RWA is mainly due to portfolio and market movements within OTC derivatives.

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 2022.

Table 17: Transactions subject to own funds requirements for CVA risk (UK CCR2) - MSI Group

$MM MSI Group	Exposure value	RWA
Total transactions subject to the Advanced method	35,216	11,976
(i) VaR component (including the 3× multiplier)		1,883
(ii) Stressed VaR component (including the 3× multiplier)		10,093
Transactions subject to the standardised method	23,185	6,635
Transactions subject to the Alternative approach (Based on the Original Exposure Method)	-	-
Total transactions subject to own funds requirements for CVA risk	**58,401**	**18,611**

Over the first half of 2022, decrease in Advanced charge is attributable to exposure reduction across multiple counterparties including MSI Group's affiliates.

9.3 Derivatives and SFTs credit exposure

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 18 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 CCP as at 30 June 2022 for the MSI Group.

Table 18: Composition of collateral for CCR exposures (UK CCR5) - MSI Group

$MM	Collateral used in derivative transactions				Collateral used in securities financing transactions (SFTs)	
	Fair value of collateral received		Fair value of collateral posted		Fair value of collateral received	Fair value of collateral posted
MSI Group	Segregated	Unsegregated	Segregated	Unsegregated		
Cash	6,949	108,809	38	96,510	468,396	499,075
Debt	14,413	24,380	9,629	6,633	254,389	196,263
Equity	3,295	4,566	597	111	214,331	86,501
Other	-	-	1,140	3,748	31,120	5,939
Total	**24,657**	**137,755**	**11,404**	**107,002**	**968,236**	**787,778**

Over the first half of 2022, there is an increase in unsegregated cash collateral held for Derivatives and SFTs.

9.4 Exposures to CCPs

Table 19 shows the breakdown of the exposures by Qualifying Central Counterparty ("QCCP") and non-QCCPs as at 30 June 2022 for the MSI Group.

Table 19: Exposures to CCPs (UK CCR8) - MSI Group

$MM

MSI Group	Exposure Value	RWA
Exposures to QCCPs (total)		**1,005**
Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	30,927	619
(i) OTC derivatives	14,789	296
(ii) Exchange-traded derivatives	12,629	253
(iii) SFTs	3,509	70
(iv) Netting sets where cross-product netting has been approved	-	-
Segregated initial margin	-	
Non-segregated initial margin	17,718	-
Prefunded default fund contributions	1,899	386
Unfunded default fund contributions	2,369	-
Exposures to non-QCCPs (total)		**-**
Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions); of which	-	-
(i) OTC derivatives	-	-
(ii) Exchange-traded derivatives	-	-
(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 2022 there has been an increase in OTC derivatives exposure with QCCPs.

Credit Derivative Transactions

Table 20 shows the extent of an institution's exposures to credit derivative transactions broken down between derivatives bought or sold for the MSI Group.

Table 20: Credit derivatives exposures (UK CCR6) - MSI Group

$MM

MSI Group[1]	Protection bought	Protection sold
Notionals		
Single-name credit default swaps	149,442	145,906
Index credit default swaps	151,290	152,457
Total return swaps	15,695	11,683
Credit options	72,635	70,954
Other credit derivatives	12,736	14,247
Total Notionals	**401,798**	**395,247**
Fair values		
Positive fair value (asset)	13,141	1,664
Negative fair value (liability)	(1,682)	(12,588)

1. Credit Derivatives are not used as a CRM technique for RWA benefits.

Over the first half of 2022, key contributors to gross notionals are Index Credit default swaps and Single-name Credit default swaps.

10. Securitisation

10.1 Securitisation Activities

The MSI Group acts, or has historically acted, as originator, sponsor, liquidity provider, servicer and derivative counterparty to its own originated and sponsored securitisations, as well as those of third party securitisations. The MSI Group also acts as market maker for, and refinancer of securitised products in EMEA. The majority of the securitisation exposures result from this activity and are Trading Book as at 30 June 2022.

The MSI Group's strategy has been to use securitisations for customer facilitation. The MSI Group has engaged in securitisation activities related to commercial and residential mortgage loans, corporate bonds and loans, and other types of financial instruments.

The MSI Group participated as a book runner or lead manager in a number of new securitisations during 2022. The MSI Group did not originate or sponsor any new securitisations in 2022.

10.2 Regulatory Capital Treatment

The MSI Group employs the Securitisation Standardised Approach ("SEC-SA"), Securitisation External Ratings Based Approach ("SEC-ERBA") and Default 1250% Approach to calculate the capital on its securitisation positions. MSI Group does not apply the Securitisation IRB Approach ("SEC-IRBA"). The MSI Group uses ratings from three External Credit Assessment Institutions ("ECAI"): Moody's Investors Service, Standard & Poor's and Fitch Ratings across all types of exposures.

10.3 Securitisation Exposures

Table 21 shows the securitisation exposures and MCR within the MSI Group as at 30 June 2022.

Table 21: Securitisation exposures summary - MSI Group

$MM MSI Group[1]	Trading book	Non-trading book
Exposures	779	545
MCR	266	268

1. Securitisation exposures increased by $128MM and capital requirements increased by $109 MM, compared to YE 2021. The increase in capital requirements was primarily driven by increased exposure in Trading Book activity.

Table 22 shows securitisation exposures in the non-trading book for MSI Group as at 30 June 2022.

Table 22: Securitisation exposures in the non-trading book (UK-SEC1) - MSI Group

$MM	Institution acts as originator							Institution acts as sponsor				Institution acts as investor			
	Traditional				Synthetic			Traditional		Synthetic		Traditional		Synthetic	
	STS		Non-STS					STS	Non-STS			STS	Non-STS		
MSI Group		Of which SRT		Of which SRT		Of which SRT	Sub-total				Sub-total				Sub-total
Total exposures		-		-	**23**	-	**23**	-	-	-	-	-	**522**	-	**522**
Retail (total)		-		-	10	-	10	-	-	-	-	-	494	-	494
Residential mortgage		-		-	10	-	10	-	-	-	-	-	161	-	161
Credit card		-		-	-	-	-	-	-	-	-	-	-	-	-
Other retail exposures		-		-	-	-	-	-	-	-	-	-	333	-	333
Re-securitisation		-		-	-	-	-	-	-	-	-	-	-	-	-
Wholesale (total)		-		-	13	-	13	-	-	-	-	-	28	-	28
Loans to corporates		-		-	13	-	13	-	-	-	-	-	24	-	24
Commercial mortgage		-		-	-	-	-	-	-	-	-	-	4	-	4
Lease and receivables		-		-	-	-	-	-	-	-	-	-	-	-	-
Other wholesale		-		-	-	-	-	-	-	-	-	-	-	-	-
Re-securitisation		-		-	-	-	-	-	-	-	-	-	-	-	-

Table 23 shows securitisation exposures in the trading book for MSI Group as at 30 June 2022.

Table 23: Securitisation exposures in the trading book (UK-SEC2) - MSI Group

$MM	Institution acts as originator				Institution acts as sponsor				Institution acts as investor			
	Traditional		Synthetic		Traditional		Synthetic		Traditional		Synthetic	
MSI Group	STS	Non-STS		Sub-total	STS	Non-STS		Sub-total	STS	Non-STS		Sub-total
Total exposures	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**4**	**718**	**57**	**779**
Retail (total)	-	-	-	-	-	-	-	-	4	443	57	504
Residential mortgage	-	-	-	-	-	-	-	-	3	350	57	410
Credit card	-	-	-	-	-	-	-	-	-	-	-	-
Other retail exposures	-	-	-	-	-	-	-	-	1	85	-	86
Re-securitisation	-	-	-	-	-	-	-	-	-	8	-	8
Wholesale (total)	-	-	-	-	-	-	-	-	-	275	-	275
Loans to corporates	-	-	-	-	-	-	-	-	-	194	-	194
Commercial mortgage	-	-	-	-	-	-	-	-	-	81	-	81
Lease and receivables	-	-	-	-	-	-	-	-	-	-	-	-
Other wholesale	-	-	-	-	-	-	-	-	-	-	-	-
Re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-

Table 24 shows the securitisation positions broken down by SEC-SA capital approach and risk weight band within the MSI Group as at 30 June 2022.

Table 24: Securitisation exposures and capital requirements by standardised approach (SEC-SA) - MSI Group

$MM MSI Group[1]	Trading book exposure	Non-trading book exposure	Trading book MCR	Non-trading book MCR
Investor securitisations by risk weight				
>10% <=20%	124	-	1	-
>20%<=50%	59	-	1	-
Total	**183**	**-**	**2**	**-**

1. Includes $2MM trading book STS ("simple, transparent and standardised") exposures ($22k capital)

Table 25 shows the securitisation positions broken down by SEC-ERBA capital approach and risk weight band within the MSI Group as at 30 June 2022.

Table 25: Securitisation exposures and capital requirements by external ratings approach (SEC-ERBA) - MSI Group

$MM MSI Group[1]	Trading book exposure	Non-trading book exposure	Trading book MCR	Non-trading book MCR
Investor securitisations by risk weight				
<=10%	-	-	-	-
>10% <=20%	21	-	0	-
>20% <=50%	27	105	1	3
>50% <= 100%	5	24	0	2
>100% <=650%	134	93	28	47
>650% <1250%	90	-	60	-
1250%	12	15	12	15
Originator securitisations by risk weight				
<=10%	-	-	-	-
>10% <=20%	-	-	-	-
>20% <=50%	-	-	-	-
>50% <= 100%	-	13	-	1
>100% <=650%	-	10	-	2
>650% <1250%	-	-	-	-
1250%	-	-	-	-
Total	**289**	**260**	**101**	**70**

1. Includes $2MM trading book STS exposures ($464k capital)

Table 26 shows the securitisation positions broken down by Default 1250% (Risk Weight) capital approach within the MSI Group as at 30 June 2022.

Table 26: Securitisation exposures and capital requirements by default approach (1250% Risk Weight) - MSI Group

$MM MSI Group	Trading book exposure	Non-trading book exposure	Trading book MCR	Non-trading book MCR
Investor securitisations	299	285	155	198
Originator securitisations	-	-	-	-
Investor re-securitisations	8	-	8	-
Originator re-securitisations	-	-	-	-
Total	**307**	**285**	**163**	**198**

Table 27 shows Securitisation exposures in the non-trading book and associated regulatory capital requirements - institution acting as originator or as sponsor for MSI Group as at 30 June 2022.

Table 27: Securitisation exposures in the non-trading book and associated regulatory capital requirements - institution acting as originator or as sponsor (UK-SEC3) - MSI Group

$MM	Exposure values (by RW bands/deductions)					Exposure values (by regulatory approach)				RWA (by regulatory approach)				Capital charge after cap			
MSI Group	≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/ deductions
Total exposures	**-**	**-**	**15**	**7**	**-**	**-**	**23**	**-**	**-**	**-**	**44**	**-**	**-**	**-**	**4**	**-**	**-**
Traditional transactions	-	-	15	7	-	-	23	-	-	-	44	-	-	-	4	-	-
Securitisation	-	-	15	7	-	-	23	-	-	-	44	-	-	-	4	-	-
Retail underlying	-	-	2	7	-	-	10	-	-	-	33	-	-	-	3	-	-
Of which STS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wholesale	-	-	13	-	-	-	13	-	-	-	11	-	-	-	1	-	-
Of which STS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Synthetic transactions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 28 shows Securitisation exposures in the non-trading book and associated regulatory capital requirements - institution acting as investor for MSI Group as at 30 June 2022.

Table 28: Securitisation exposures in the non-trading book and associated regulatory capital requirements - institution acting as investor (UK-SEC4) - MSI Group

$MM	Exposure values (by RW bands/deductions)					Exposure values (by regulatory approach)				RWA (by regulatory approach)				Capital charge after cap			
MSI Group	≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/ deductions
Total exposures	**-**	**104**	**24**	**93**	**301**	**-**	**237**	**-**	**285**	**-**	**829**	**-**	**2,480**	**-**	**67**	**-**	**198**
Traditional securitisation	-	104	24	93	301	-	237	-	285	-	829	-	2,480	-	67	-	198
Securitisation	-	104	24	93	301	-	237	-	285	-	829	-	2,480	-	67	-	198
Retail underlying	-	104	-	93	297	-	213	-	281	-	808	-	2,430	-	65	-	194
Of which STS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wholesale	-	-	24	-	4	-	24	-	4	-	21	-	50	-	2	-	4
Of which STS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Synthetic securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 29 shows Exposures securitised by the institution - Exposures in default and specific credit risk adjustments for MSI Group as at 30 June 2022.

Table 29: Exposures securitised by the institution - Exposures in default and specific credit risk adjustments (UK-SEC5) - MSI Group

$MM	Exposures securitised by the institution - Institution acts as originator or as sponsor		
	Total outstanding nominal amount		Total amount of specific credit risk adjustments made during the period
MSI Group		Of which exposures in default	
Total exposures	**23**	**-**	**-**
Retail (total)	10	-	-
Residential mortgage	10	-	-
Credit card	-	-	-
Other retail exposures	-	-	-
Re-securitisation	-	-	-
Wholesale (total)	13	-	-
Loans to corporates	13	-	-
Commercial mortgage	-	-	-
Lease and receivables	-	-	-
Other wholesale	-	-	-
Re-securitisation	-	-	-

10.4 Accounting

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

10.5 Valuation

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

10.6 Risk Monitoring

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

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

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

11. 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 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 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 by the PRA to the MSIP, MSESE and Morgan Stanley Bank AG ("MSBAG") entities for use in the MSI consolidation. 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. 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. The effectiveness of hedges and mitigants is monitored using processes such as risk and limit reporting.

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 for market risk metrics are reported to the senior management risk committees.

11.1 Value at Risk

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

VaR Methodology, Assumptions and Limitations

The MSI Group calculates VaR using a model based on historical simulation for general market risk factors and for name-specific equity risk and on Monte Carlo simulation for name-specific risk in bonds, loans, and related derivatives. Market risk factors' daily moves are modelled either as absolute changes or relative changes, dependent on the most suitable stochastic process (normal or lognormal diffusion process) to describe the daily risk factor changes. The model constructs a distribution of hypothetical daily changes in the value of trading portfolios based on historical observation of daily changes in key market indices or other market risk factors, and information on the sensitivity of the portfolio values to these market risk factor changes.

The methodology for VaR at Morgan Stanley is 1-year historical simulation. The risk exposures used for the daily VaR calculation are based on greeks and full-revaluation grids, and simulations cover both systematic and specific risk components. The total simulated profit and loss of a given position for each simulation date in the historical window is calculated taking into account both systematic and specific risk components of the market factor moves. The final profit and loss distribution is a result of profit and losses of all risk factors and all positions being aggregated. The time series data is updated on a weekly basis, with the exception of idiosyncratic risk factors which are updated quarterly. The same valuation and aggregation approach is used for Stressed Value at Risk (“SVaR”).

A set of internal processes and controls ensure that all relevant trading positions booked by the MSI Group are included in VaR. The MSI Group’s 99%/one-day VaR corresponds to the unrealised loss in portfolio value that, based on historically observed market risk factor movements, would have been exceeded with a frequency of 1%, or once every 100 trading days, if the portfolio were held constant for one day. The 99th percentile is computed and is scaled by the square root of 10 to arrive at a 10-day VaR for regulatory purposes. The 95th percentile 1-day VaR is used by MRD internally to manage risk and to base the legal entity VaR limits on.

The MSI Group uses VaR as one of a range of risk management tools. Among their benefits, VaR models permit estimation of a portfolio’s aggregate market risk exposure, incorporating a range of market risks and portfolio assets. One key element of the VaR model is that it reflects portfolio diversification or hedging activities. However VaR has various limitations which include but are not limited to: use of historical changes in market risk factors, which may not be accurate predictors of future market conditions, and may not fully incorporate the risk of extreme market events that are outsized relative to observed historical market behaviour or reflect the historical distribution of results beyond the 99% confidence interval; and reporting of losses in a single day, which does not reflect the risk of positions that cannot be liquidated or hedged in one day. The modelling of the risk characteristics of some positions relies on approximations that, under certain circumstances, could produce significantly different results from those produced using more precise measures. VaR is most appropriate as a risk measure for trading positions in liquid financial markets and will understate the risk associated with severe events such as periods of extreme illiquidity. The MSI Group is aware of these and other limitations and therefore uses VaR as only one component in its risk management oversight process. This process also incorporates stress testing and scenario analyses and extensive risk monitoring, analysis, quantification of risk not captured in VaR, and control at the trading desk, division and the MSI Group levels.

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

Since the reported VaR statistics are estimates based on historical data, VaR should not be viewed as predictive of the MSI Group's future revenues or financial performance or of its ability to manage risk. There can be no assurance that the MSI Group's actual losses on a particular day will not exceed the VaR amounts indicated below or that such losses will not occur more than once in 100 trading days. VaR does not predict the magnitude of losses which, should they occur, may be significantly greater than the VaR amount.

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

11.2 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 SA.

Table 30 summarises the capital requirements under the respective approaches for the MSI Group and MSIP. Ongoing assessment to ensure that the capital calculations meet the required soundness standard is carried out on a quarterly basis with the results reported to the PRA.

Table 30: Market risk RWA summary – MSI Group and MSIP

	MSI Group			MSIP		
$MM	RWAs Q2'22	RWAs Q4'21	TOFR Q2'22	RWAs Q2'22	RWAs Q4'21	TOFR Q2'22
Standardised approach	12,771	12,409	1,022	6,102	6,580	488
Internal models approach	49,916	49,918	3,993	40,902	42,832	3,272
Total	**62,687**	**62,327**	**5,015**	**47,004**	**49,412**	**3,760**

Standardised Approach

Table 31 shows the market risk RWA for the MSI Group as at 30 June 2022, calculated in accordance with the SA and categorised by component type.

Table 31: Market risk under the standardised approach (UK MR1) - MSI Group

$MM MSI Group	RWAs
Outright products	
Interest rate risk (general and specific)	2,319
Equity risk (general and specific)	50
Foreign exchange risk	5,729
Commodity risk	912
Options	
Simplified approach	-
Delta-plus method	439
Scenario approach	-
Securitisation (specific risk)	3,322
Total	**12,771**

Over the first half of 2022, capital requirements under the SA increased driven by foreign exchange risk primarily due to higher EUR exposure.

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 ("CRMe") charges are determined by the higher of the average of the latest 12 weeks IRC/CRMe and the IRC/CRMe charge for the relevant day.

Table 32 shows the VaR and SVaR, as well as the IRC and CRMe measures for the MSI Group, as at 30 June 2022. The VaR and SVaR capital measures presented in Table 33 were based on the 60-day averages, as they were higher than the daily measures as at 30 June 2022.

Table 32: Market risk under Internal Model Approach (UK MR2-A) - MSI Group
$MM

MSI Group		RWAs	Own funds requirements
VaR (higher of values a and b)		**5,949**	**476**
(a)	Previous day's VaR (VaRt-1)	2,226	178
(b)	Multiplication factor (mc) x average of previous 60 working days (VaRavg)	5,949	476
SVaR (higher of values a and b)		**14,827**	**1,186**
(a)	Latest available SVaR (SVaRt-1))	4,158	333
(b)	Multiplication factor (ms) x average of previous 60 working days (sVaRavg)	14,827	1,186
IRC (higher of values a and b)		**5,625**	**450**
(a)	Most recent IRC measure	4,427	354
(b)	12 weeks average IRC measure	5,625	450
CRMe (higher of values a, b and c)		**0**	**0**
(a)	Most recent risk measure of comprehensive risk measure	0	0
(b)	12 weeks average of comprehensive risk measure	0	0
(c)	Comprehensive risk measure Floor	0	0
Other		**23,515**	**1,881**
Total		**49,916**	**3,993**

Table 33 summarises the key drivers of RWAs/TOFR for MSI Group and MSIP's market risk exposures under the IMA.

Table 33: RWA flow statements of market risk exposures under the IMA (UK MR2-B) – MSI Group and MSIP

$MM MSI Group	VaR	SVaR	IRC	Comprehensive risk measure	Other[4]	Total RWAs	TOFR
RWAs at previous period end[1]	**5,340**	**16,219**	**5,731**	**0**	**23,120**	**50,410**	**4,033**
Regulatory adjustment[2]	(2,532)	(10,930)	(421)	-	(10,970)	(24,853)	(1,988)
RWAs at the previous quarter-end (end of the day)	2,808	5,289	5,310	-	12,150	25,557	2,045
Movement in risk levels	(1,250)	(1,561)	(854)	-	(283)	(3,948)	(317)
Model updates/changes	-	-	7	-	-	7	1
Methodology and policy	-	-	-	-	-	-	-
Acquisitions and disposals	-	-	-	-	-	-	-
Foreign exchange movements	(15)	(54)	(34)	-	(100)	(203)	(16)
Other[3]	683	484	(2)	-	-	1,165	93
RWAs at the end of the disclosure period (end of the day)	2,226	4,158	4,427	-	11,767	22,578	1,806
Regulatory adjustment[2]	3,723	10,669	1,198	-	11,748	27,338	2,187
RWAs at the end of the disclosure period	**5,949**	**14,827**	**5,625**	**0**	**23,515**	**49,916**	**3,993**
MSIP							
RWAs at previous period end[1]	**4,746**	**13,615**	**5,207**	**0**	**19,506**	**43,074**	**3,446**
Regulatory adjustment[2]	(2,173)	(9,168)	(374)	-	(9,236)	(20,951)	(1,676)
RWAs at the previous quarter-end (end of the day)	2,573	4,447	4,833	-	10,270	22,123	1,770
Movement in risk levels	(1,255)	(1,773)	(972)	-	(399)	(4,399)	(352)
Model updates/changes	-	-	7	-	-	7	1
Methodology and policy	-	-	-	-	-	-	-
Acquisitions and disposals	-	-	-	-	-	-	-
Foreign exchange movements	-	-	-	-	-	-	-
Other[3]	619	483	(21)	-	-	1,081	86
RWAs at the end of the disclosure period (end of the day)	1,937	3,157	3,847	-	9,871	18,812	1,505
Regulatory adjustment[2]	3,183	8,696	1,037	-	9,174	22,090	1,767
RWAs at the end of the disclosure period	**5,120**	**11,853**	**4,884**	**0**	**19,045**	**40,902**	**3,272**

1. Previous reporting period was Q1'22.
2. 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 CRMe. 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.
3. Other (flow driver) represents low impact data and implementation changes including time series updates and periodic parameter updates to the respective models.
4. Other (risk measure) represents Risks Not in VaR ("RNIV").

Over the second quarter of 2022, Modelled Market Risk RWA for MSI Group remained stable, while MSIP decreased primarily driven by risk profile changes.

Table 34 provides a summary of the maximum, minimum, average, and period-end values over the six months to 30 June 2022, for the MSI Group, resulting from the different types of models approved to be used for computing the regulatory capital charge.

Table 34: IMA values for trading portfolios (UK MR3) - MSI Group

MSI Group	$MM
VaR (10 day 99%)	
Maximum value	273
Average value	147
Minimum value	95
Period end	178
SVaR (10 day 99%)	
Maximum value	549
Average value	400
Minimum value	304
Period end	333
IRC (99.9%)	
Maximum value	810
Average value	444
Minimum value	286
Period end	354
Comprehensive Risk Measure (99.9%)	
Maximum value	0
Average value	0
Minimum value	0
Period end	0

Over the first half of 2022, VaR, SVaR and IRC movements were mainly attributable to the elevated market volatility and changes in the Fixed Income risk profile.

11.3 Positions Included in the Trading Book

The MSI Group has a comprehensive framework of policies, controls and reporting to meet the requirements of the CRR for inclusion of positions in the Trading Book. The underlying policies, controls and reporting mechanisms cover a range of different aspects including Trading Intent, Valuation, Liquidity, Restrictions, Hedgeability, Active Management and transfers between the Trading and Non-Trading Books. Governance is provided by the firm’s Banking/Trading Committee whose role with respect to the banking/trading boundary is to oversee the determination of the banking/trading/covered position designation in accordance with regulatory requirements. The committee acts as the adjudication forum for any positions where the appropriate banking/trading/covered position designation is unclear. The Banking/Trading Committee reports to the firm’s Basel Capital Steering Committee.

The Trading Book comprises financial instruments that are: held for trading intent or intent to hedge a trading position; free from restrictive covenants on tradability or for which the material risk elements can be hedged in a two-way market; frequently/accurately valued and actively managed on a trading desk. If a position fails to meet the Trading Book criteria, it will be classified as Non-Trading Book.

Trading Book positions are subject to market risk based rules, with market risk capital requirements calculated using regulatory approved internal models or a non-modelled SA.

The Firm methodology for determining Non-Trading Book versus Trading Book classification is documented within the Firm’s Trading Book, Banking Book and Covered Positions Boundary Policy. The policy outlines criteria for identifying and classifying trading book positions for the purpose of regulatory capital and market risk measurement and sets out associated roles and responsibilities across the business unit, finance, and other stakeholder groups. This policy is subject to annual review and sign-off.

A firm-wide framework establishes controls around initial Banking/Trading classification as well as ongoing monitoring to ensure the initial classification remains appropriate over time.

11.4 Backtesting

Morgan Stanley performs regulatory backtesting for MSIP and MSEHSE 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 at 30 June 2022, 80% of total MSI Group market risk capital requirements are covered by the internal models. VaR represents a subset of total model-based market risk capital requirements.

Backtesting compares the profit and loss for trade date T against the 99%/one-day Regulatory Trading VaR for T-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 whilst 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 exceptions observed (instances where MSIP or MSEHSE Group level, actual or hypothetical, losses exceed 99% VaR). These exceptions are reported to the regulator. Firms observing five or more exceptions within the measurement period are required to set aside additional market risk capital based on a sliding scale.

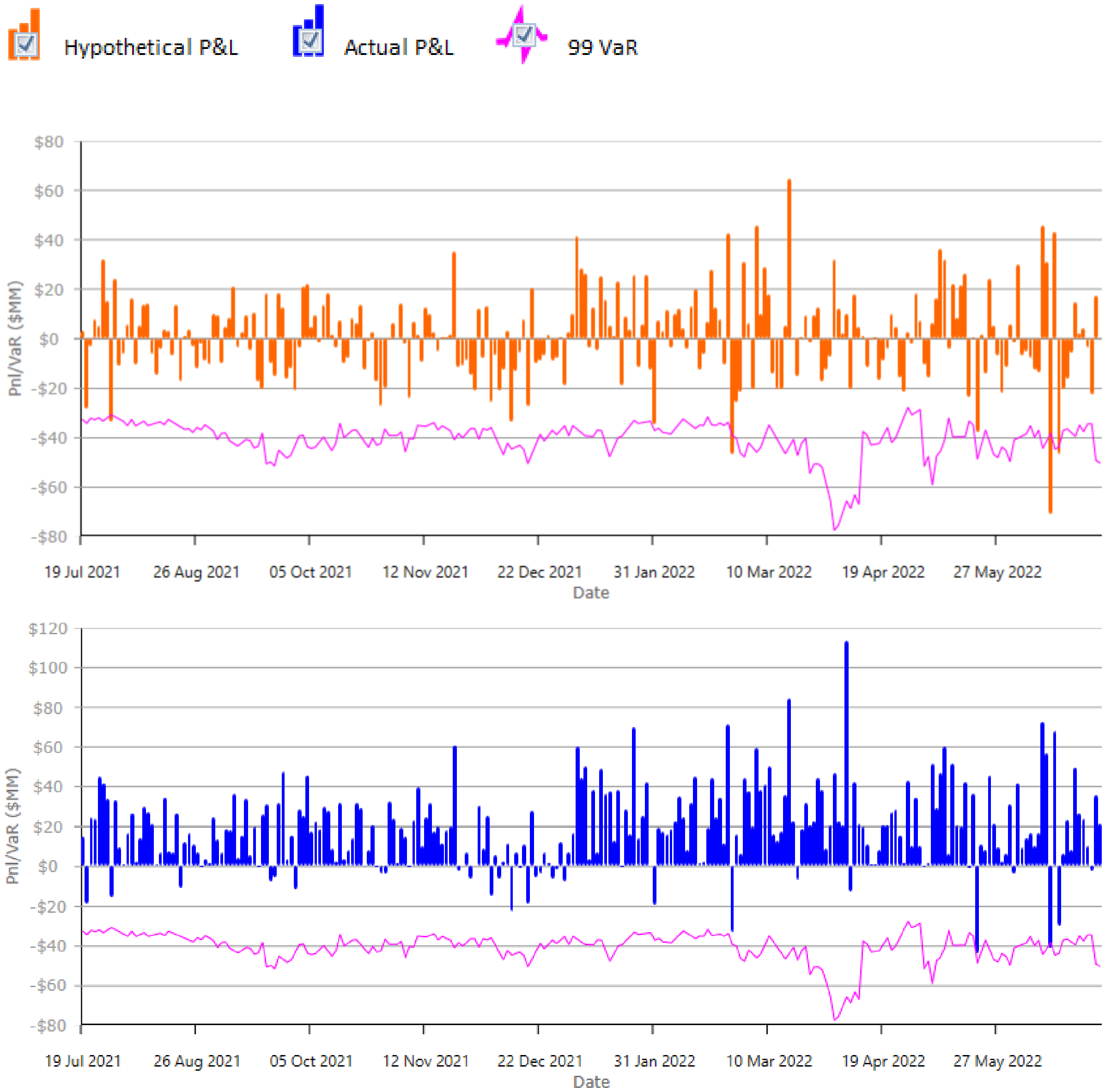
Backtesting results are reported, analysed, and discussed by the firm's MSI Group Market Risk Backtesting Review Forum. Findings or recommendations from this forum are escalated to Model Oversight and Risk Committees who are responsible for authorising any further model analysis or model remediation efforts. The results of backtesting and model performance monitoring are also reported to the regulator on a periodic basis.

For the measurement period ended 30 June 2022, four hypothetical and one actual profit and loss exceptions were observed for MSIP which equates to the Green zone for capital multiplier purposes (less than five exceptions). The Firm's analysis of this these exceptions concluded that they were primarily driven by significant directional market moves in risk factors that were captured in the VaR model with sufficient granularity.

The plots of actual and hypothetical profit and loss, covering 250 business days of MSIP backtesting monitoring to 30 June 2022 are displayed below:

Figure 1: Comparison of VaR Estimates with Gains/Losses – MSIP (UK 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:

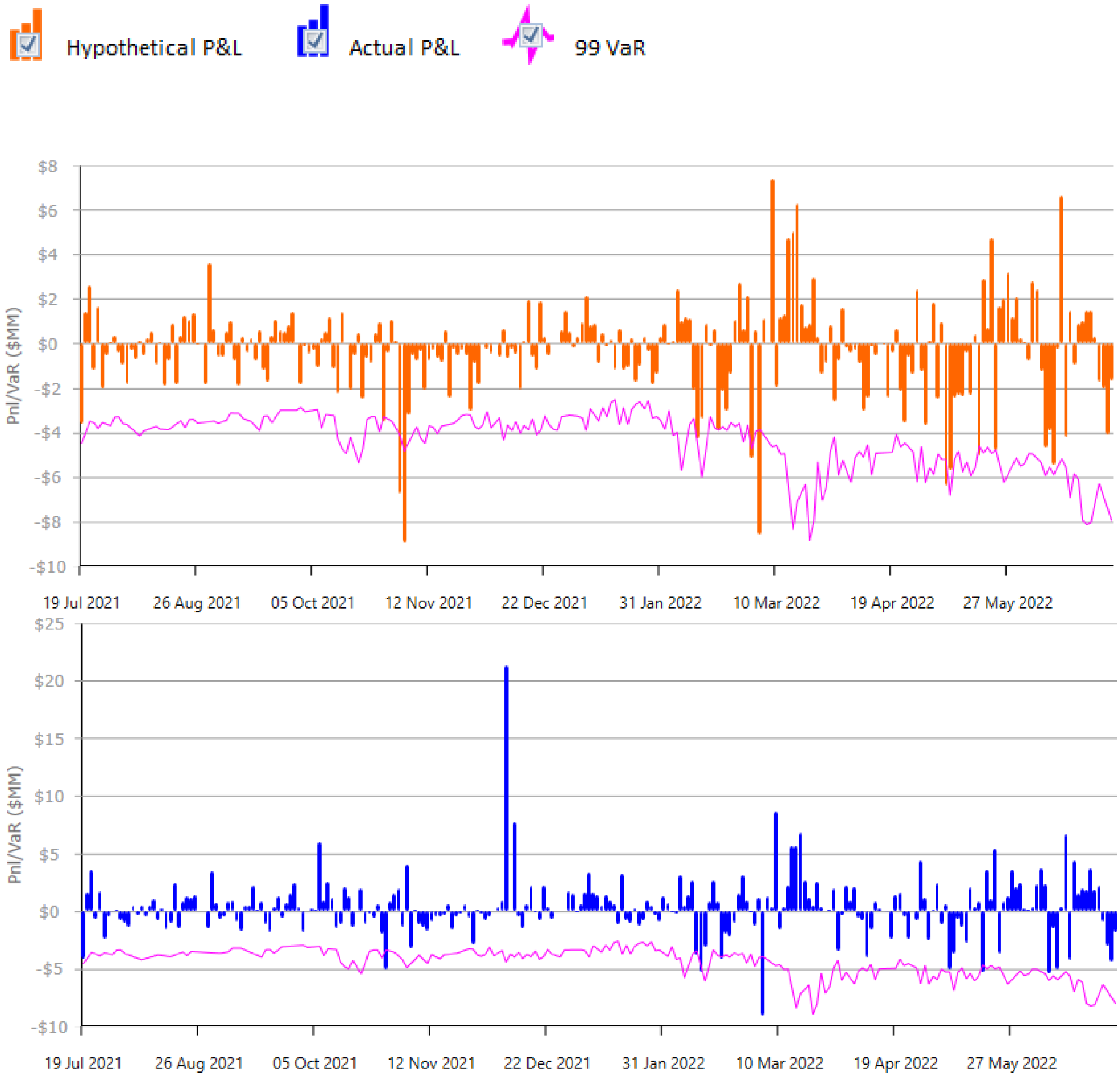


For the measurement period ended 30 June 2022, eight hypothetical and six actual profit and loss exceptions were observed for MSEHSE Group which equates to the Amber zone (five – nine exceptions) and results in a 0.75 addend to the capital multiplier. The Firm's analysis of these exceptions concluded that they were largely driven by directional market moves in risk factors that were captured in the VaR model with sufficient granularity.

The plots of actual and hypothetical profit and loss, covering 250 business days of MSEHSE Group backtesting monitoring to 30 June 2022, are displayed below:

Figure 2: Comparison of VaR Estimates with Gains/Losses – MSEHSE Group (EU MR4)

The graphs below show the 1 day Regulatory Trading VaR against actual and hypothetical profit and loss for MSEHSE Group, values in millions of dollars:



11.5 Interest Rate Risk in the Banking Book (IRRBB)

Interest Rate Risk in the Banking Book ("IRRBB") is defined as the risk of losses arising from adverse changes in the interest rate curves within the defined Banking Book population. The MSI Group is exposed to interest rate risk primarily through the Trading Book which is captured within VaR. The MSI Group has IRRBB, primarily arising from MSI Group's funding and liquidity management. The interest rate risk is measured on a daily basis through firmwide risk systems, except for the risks on internal funding positions which are measured on a quarterly basis.

Changes in the economic values of equity ("EVE") are evaluated using a number of scenarios that impact the level and shape of the yield curve. Impacts to Net Interest Income ("NII") are measured using parallel interest rate rally and selloff scenarios across currencies. There is a limit on the impact to NII and on the total IRRBB PV01 exposure, and a Key Risk Indicator for NII under the 200 basis point shock, which includes incremental funding cost. EVE and NII risk is mitigated by Treasury management of liquidity, funding and capital, including using cash, repo and reverse repo and interest rate derivatives.

Table 35 provides quantitative information on interest rate risk in banking book as at 30 June 2022.

Table 35: Quantitative information on IRRBB (UK IRRBB1) - MSI Group

$MM	ΔEVE		ΔNII		Tier 1 capital	
Period						
MSI Group	T[2]	T-1[2]	T	T-1	T	T-1
Parallel shock up	(9)	23	636	598		
Parallel shock down	(18)	(41)	(619)	(155)		
Steepener shock	0	2				
Flattener shock	(22)	(4)				
Short rates shock up	(18)	2				
Short rates shock down	2	(16)				
Maximum[1]	**(22)**	**(41)**	**(619)**	**(155)**		
Tier 1 capital					**26,355**	**25,738**

1. The maximum value for EVE is determined as the largest loss observed across the scenarios.
2. "T" date refers to 30/06/2022. "T-1" refers to 31/12/2021.

12. Liquidity Coverage Ratio

The MSI Group LCR increased from 198% to 207%, driven by a decrease in net average cash outflows. The MSIP LCR increased from 195% to 198%, driven by an increase in HQLA.

The most significant drivers of MSI Group and MSIP 's cash outflow amounts this quarter were secured wholesale funding, unsecured wholesale funding and outflows related to derivative exposures and other collateral requirements. MSI Group and MSIP's cash inflow amounts this quarter were primarily driven by secured lending which includes reverse repurchase transactions, securities borrowed and margin loan transactions. HQLA primarily comprises of Level 1 assets that includes government bonds and cash balances with central banks.

The MSI Group and MSIP fund themselves through transactions with affiliates in the Morgan Stanley Group for capital, unsecured and secured funding, and through a diverse range of counterparties in unsecured and secured funding markets.

MSI Group and MSIP are participants in global derivatives markets. In some cases, the derivative counterparties have contractual rights that require the entities to post collateral to them in the event that credit rating agencies downgrade the Group's credit rating. In measuring collateral call risks, all amounts of collateral that could be required to be posted in accordance with the terms and conditions of the downgrade trigger clauses found in applicable legal agreements are considered.

A portion of MSI Group's business is conducted in currencies other than the USD, and changes in foreign exchange rates relative to the USD, therefore, can affect the value of non-USD net assets, revenues and expenses. Potential exposures as a result of these fluctuations in currencies are closely monitored, and strategies are adopted to reduce the impact of these fluctuations on financial performance. These strategies may include the financing of non-USD assets with direct or swap-based borrowings in the same currency and the use of currency forward contracts or the spot market in various hedging transactions related to net assets, revenues, expenses or cash flows.

The LCR quantitative disclosures, shown in Table 36 reflects the monthly average value for each quarter-end period. The figures reported in the "Total Weighted Value" column reflect the prescribed, industry-wide rules and haircuts applicable to the LCR to determine the Firm's eligible HQLA and cash in/outflow amounts. The figures reported in the "Total Unweighted Value" columns reflect gross values that are not included in the calculation used to determine the Firm's compliance with LCR requirements.

Table 36: Quantitative Information of LCR (UK LIQ1) – MSI Group and MSIP

$MM	Total unweighted value				Total weighted value			
MSI Group[1]	30-Jun-2022	31-Mar-2022	31-Dec-2021	30-Sep-2021	30-Jun-2022	31-Mar-2022	31-Dec-2021	30-Sep-2021
Number of data points used in the calculation of averages	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**
High-Quality Liquid Assets								
Total high-quality liquid assets (HQLA)					49,145	49,196	50,367	49,416
Cash-Outflows								
Retail deposits and deposits from small business customers, of which:	-	-	-	-	-	-	-	-
Stable deposits	-	-	-	-	-	-	-	-
Less stable deposits	-	-	-	-	-	-	-	-
Unsecured wholesale funding	17,078	16,939	16,973	15,979	17,078	16,939	16,973	15,979
Operational deposits (all counterparties) and deposits in networks of cooperative banks	-	-	-	-	-	-	-	-
Non-operational deposits (all counterparties)	16,656	16,457	16,527	15,586	16,656	16,457	16,527	15,586
Unsecured debt	422	482	446	393	422	482	446	393
Secured wholesale funding					44,279	45,281	44,949	43,285
Additional requirements	30,307	30,177	29,802	28,707	20,193	20,408	20,225	19,826
Outflows related to derivative exposures and other collateral requirements	23,087	22,745	22,407	22,203	18,727	18,939	18,805	18,551
Outflows related to loss of funding on debt products	-	-	-	-	-	-	-	-
Credit and liquidity facilities	7,220	7,432	7,395	6,504	1,466	1,469	1,420	1,275
Other contractual funding obligations	47,291	47,101	46,549	47,402	1,006	987	1,189	1,222
Other contingent funding obligations	4,840	5,259	6,073	6,533	2,330	2,545	2,678	2,689
Total Cash Outflows					**84,886**	**86,160**	**86,014**	**83,001**
Cash Inflows								
Secured lending (e.g., reverse repos)	220,173	216,519	213,764	212,076	43,892	44,352	43,668	41,259
Inflows from fully performing exposures	12,063	12,509	12,980	12,949	10,968	11,135	11,322	11,185
Other cash inflows	7,708	7,160	6,588	6,000	7,708	7,160	6,588	6,000
(Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies)					1,329	1,272	1,250	1,162
(Excess inflows from a related specialised credit institution)					-	-	-	-
Total Cash Inflows	**239,944**	**236,188**	**233,332**	**231,025**	**61,239**	**61,375**	**60,328**	**57,282**
Fully exempt inflows	-	-	-	-	-	-	-	-
Inflows Subject to 90% Cap	-	-	-	-	-	-	-	-
Inflows Subject to 75% Cap	190,917	188,636	187,554	185,458	61,239	61,375	60,328	57,283
					Total Adjusted Value			
Liquidity Buffer					**49,145**	**49,196**	**50,367**	**49,416**
Total Net Cash Outflows					**23,765**	**24,785**	**25,686**	**25,717**
Liquidity Coverage Ratio (%)					**206.79%**	**198.49%**	**196.09%**	**192.16%**

1. All cash inflows and outflows shown are at the full unweighted/weighted value and do not reflect the phase in of LCR requirements.

$MM	Total unweighted value				Total weighted value			
MSIP[1]	30-Jun-2022	31-Mar-2022	31-Dec-2021	30-Sep-2021	30-Jun-2022	31-Mar-2022	31-Dec-2021	30-Sep-2021
Number of data points used in the calculation of averages	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**
High-Quality Liquid Assets								
Total high-quality liquid assets (HQLA)					41,980	41,519	40,982	40,017
Cash-Outflows								
Retail deposits and deposits from small business customers, of which:	-	-	-	-	-	-	-	-
Stable deposits	-	-	-	-	-	-	-	-
Less stable deposits	-	-	-	-	-	-	-	-
Unsecured wholesale funding	16,502	15,814	15,205	14,312	16,502	15,814	15,205	14,312
Operational deposits (all counterparties) and deposits in networks of cooperative banks	0	0	0	0	0	0	0	0
Non-operational deposits (all counterparties)	16,080	15,332	14,759	13,919	16,080	15,332	14,759	13,919
Unsecured debt	422	482	446	393	422	482	446	393
Secured wholesale funding					44,881	45,901	45,514	43,759
Additional requirements	20,260	19,505	18,930	18,465	15,920	15,693	15,314	14,810
Outflows related to derivative exposures and other collateral requirements	20,259	19,504	18,929	18,462	15,919	15,692	15,313	14,808
Outflows related to loss of funding on debt products	0	0	0	0	0	0	0	0
Credit and liquidity facilities	1	1	1	3	1	1	1	2
Other contractual funding obligations	49,213	48,942	47,872	49,034	975	952	984	1,142
Other contingent funding obligations	4,920	5,313	6,114	6,561	2,370	2,572	2,700	2,706
Total Cash Outflows					**80,648**	**80,932**	**79,717**	**76,729**
Cash Inflows	-	-	-	-	-	-	-	-
Secured lending (e.g., reverse repos)	224,490	220,041	216,302	214,347	43,967	44,372	43,676	41,280
Inflows from fully performing exposures	10,864	11,375	12,178	12,518	9,779	10,011	10,529	10,762
Other cash inflows	7,206	6,730	6,247	5,725	7,206	6,730	6,247	5,725
(Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies)					1,213	1,180	1,204	1,129
(Excess inflows from a related specialised credit institution)					-	-	-	-
Total Cash Inflows	**242,560**	**238,146**	**234,727**	**232,590**	**59,739**	**59,933**	**59,248**	**56,638**
Fully exempt inflows	0	0	0	0	0	0	0	0
Inflows Subject to 90% Cap	0	0	0	0	0	0	0	0
Inflows Subject to 75% Cap	193,631	190,521	188,895	187,025	59,739	59,933	59,248	56,638
					Total Adjusted Value			
Liquidity Buffer					**41,980**	**41,519**	**40,982**	**40,017**
Total Net Cash Outflows					**21,159**	**21,346**	**20,896**	**20,630**
Liquidity Coverage Ratio (%)					**198.41%**	**194.51%**	**196.13%**	**193.98%**

1. All cash inflows and outflows shown are at the full unweighted/weighted value and do not reflect the phase in of LCR requirements.

13. Appendix I: Capital Instruments & Eligible Liabilities

Table 37: Capital instruments and eligible liabilities (EU CCA) – MSEHSE Group

Description MSEHSE Group[1]	COMMON EQUITY TIER 1	ADDITIONAL TIER 1	ADDITIONAL TIER 1	SUBORDINATED DEBT	SENIOR SUBORDINATED DEBT
Issuer	Morgan Stanley Europe Holding SE	Morgan Stanley Europe Holding SE	Morgan Stanley Europe Holding SE	Morgan Stanley Europe Holding SE	Morgan Stanley Europe Holding SE
Unique Identifier	N/A	N/A	N/A	N/A	N/A
Public or private placement	Private	Private	Private	Private	Private
Governing law(s) of the instrument	German Stock Corporation Act	German Law	German Law	German Law	German Law
Contractual recognition of write down and conversion powers of resolution authorities	No	Yes	Yes	Yes	Yes
Regulatory treatment					
Current treatment taking into account, where applicable, transitional CRR rules	Common Equity Tier 1	Additional Tier 1	Additional Tier 1	Tier 2	Eligible Liability
Post-transitional CRR rules	Common Equity Tier 1	Additional Tier 1	Additional Tier 1	Tier 2	Eligible Liability
Eligible at solo/(sub-)consolidated/ solo&(sub-)consolidated	Solo & (sub-) consolidated	Solo & (sub-) consolidated	Solo & (sub-) consolidated	Solo & (sub-) consolidated	Solo & (sub-) consolidated
Instrument type (types to be specified by each jurisdiction)	Ordinary Shares	Undated Subordinated AT1 Notes	Undated Subordinated AT1 Notes	Schuldschein Loan	Subordinated non-T2 Loan
Amount recognised in regulatory capital or eligible liabilities (Currency in million, as of most recent reporting date)	EUR 800MM	EUR 400MM	EUR 600MM	EUR 1,000MM	EUR 1,500MM
Nominal amount of instrument	€1 per ordinary share	EUR 400MM	EUR 600MM	EUR 1,000MM	EUR 1,500MM
Issue Price	N/A	EUR 400MM	EUR 600MM	EUR 1,000MM	EUR 1,500MM
Redemption Price	N/A	EUR 400MM	EUR 600MM	EUR 1,000MM	EUR 1,500MM
Accounting Classification	Shareholders' Equity	Liability under German GAAP; shareholders' equity under IFRS	Liability under German GAAP; shareholders' equity under IFRS	Liability - amortised cost	Liability - amortised cost
Original date of issuance	26/09/2017	12/04/2022	29/10/2020	27/10/2020	17/12/2021
Perpetual or dated	Perpetual	Perpetual	Perpetual	Dated	Dated
Original maturity date	No maturity	No maturity	No maturity	27/10/2031	395 days from issuance
Issuer call subject to prior supervisory approval	N/A	Yes	Yes	Yes	N/A
Option call date, contingent call dates and redemption amount	N/A	30/11/2027	30/11/2025	27/10/2025	N/A
Subsequent call dates, if applicable	N/A	Daily thereafter	Daily thereafter	Each Interest Payment Date	N/A
Coupons / dividends					
Fixed or floating dividend / coupon	Floating	Fixed	Fixed	Floating	Floating
Coupon rate and any related index	N/A	5.0%	4.7%	3M EURIBOR + 1.6%	Proxy[2]
Existence of a dividend stopper	No	No	No	No	No
Fully discretionary, partially discretionary or mandatory (in terms of timing)	Fully Discretionary	Fully Discretionary	Fully Discretionary	Mandatory	Mandatory
Fully discretionary, partially discretionary or mandatory (in terms of amount)	Fully Discretionary	Fully Discretionary	Fully Discretionary	Mandatory	Mandatory
Existence of step up or other incentive to redeem	No	No	No	No	No
Noncumulative or cumulative	Noncumulative	Noncumulative	Noncumulative	Cumulative	Cumulative
Convertible or non-convertible	Nonconvertible	Nonconvertible	Nonconvertible	Nonconvertible	Nonconvertible
If convertible, conversion trigger(s)	N/A	N/A	N/A	N/A	N/A
If convertible, fully or partially	N/A	N/A	N/A	N/A	N/A
If convertible, conversion rate	N/A	N/A	N/A	N/A	N/A
If convertible, mandatory or optional conversion	N/A	N/A	N/A	N/A	N/A
If convertible, specify instrument type convertible into	N/A	N/A	N/A	N/A	N/A
If convertible, specify issuer of instrument it converts into	N/A	N/A	N/A	N/A	N/A
Write-down features	No	Yes	Yes	No	No
If write-down, write-down trigger(s)	N/A	Contractual write down if CET1 capital ratio of MSEHSE Group falls below 5.125%. Competent Authority will trigger the write down of the instrument upon the exercise of statutory powers.	Contractual write down if CET1 capital ratio of MSEHSE Group falls below 5.125%. Competent Authority will trigger the write down of the instrument upon the exercise of statutory powers.	BaFin as the German Resolution Authority has the authority to write down or convert into shares the instrument prior to any insolvency or liquidation of the Company, under the applicable Resolution Legislation	BaFin as the German Resolution Authority has the authority to write down or convert into shares the instrument prior to any insolvency or liquidation of the Company, under the applicable Resolution Legislation

If write-down, full or partial	N/A	Full or Partial	Full or Partial	N/A	N/A
If write-down, permanent or temporary	N/A	Temporary	Temporary	N/A	N/A
If temporary write-down, description of write-up mechanism	N/A	The Current Principal Amount, unless previously redeemed or repurchased and cancelled, may be written up in each of the financial years until the full Initial Principal Amount has been reached, to the extent that a corresponding Annual Profit is recorded, and the write-up will not give rise to or increase an annual net loss.	The Current Principal Amount, unless previously redeemed or repurchased and cancelled, may be written up in each of the financial years until the full Initial Principal Amount has been reached, to the extent that a corresponding Annual Profit is recorded, and the write-up will not give rise to or increase an annual net loss.	N/A	N/A
Type of subordination (only for eligible liabilities)	N/A	N/A	N/A	N/A	Contractual
Ranking of the instrument in normal insolvency proceedings	Rank 1	Rank 2	Rank 2	Rank 3	Rank 4
Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Perpetual Unsecured Fixed Rate Securities	Long-term subordinated loan facility	Long-term subordinated loan facility	Senior Subordinated Facility	Other Liabilities
Non-compliant transitioned features	No	No	No	No	No
If yes, specify non-compliant features	N/A	N/A	N/A	N/A	N/A
Link to the full term and conditions of the instrument (signposting)	N/A	N/A	N/A	N/A	N/A
TLAC Eligibility	Yes	Yes	No	No	Yes

1. All capital instruments issued by the MSEHSE Group are issued within Morgan Stanley and are not marketable instruments.
2. Interest rate at which Morgan Stanley is offering loans, in the relevant currency, to members of the Morgan Stanley Group on such day, which counterparties have acknowledged and agreed to apply to any loan, acting on an arm's length basis.

14. Appendix II: Own Funds Disclosure Template

Table 38 shows the composition of regulatory own funds for the MSI Group and MSIP as at 30 June 2022.

Table 38: Composition of regulatory own funds (UK CC1) – MSI Group and MSIP

$MM	MSI Group	Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
Common Equity Tier 1 (CET1) capital: instruments and reserves		
Capital instruments and the related share premium accounts	2,417	A
of which: Instrument type 1		
of which: Instrument type 2		
of which: Instrument type 3		
Retained earnings	16,068	B
Accumulated other comprehensive income (and other reserves)	6,284	C
Funds for general banking risk	-	
Amount of qualifying items referred to in Article 484 (3) CRR and the related share premium accounts subject to phase out from CET1	-	
Minority interests (amount allowed in consolidated CET1)	-	
Independently reviewed interim profits net of any foreseeable charge or dividend	-	
Common Equity Tier 1 (CET1) capital before regulatory adjustments	**24,769**	
Common Equity Tier 1 (CET1) capital: regulatory adjustments		
Additional value adjustments (negative amount)	(1,464)	
Intangible assets (net of related tax liability) (negative amount)	(724)	D
Empty set in the UK		
Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability where the conditions in Article 38 (3) CRR are met) (negative amount)	(22)	E
Fair value reserves related to gains or losses on cash flow hedges of financial instruments that are not valued at fair value	-	
Negative amounts resulting from the calculation of expected loss amounts	(334)	
Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	82	F
Defined-benefit pension fund assets (negative amount)	(15)	G
Direct, indirect and synthetic holdings by an institution of own CET1 instruments (negative amount)	-	
Direct, indirect and synthetic holdings of the CET1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	-	
Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	
Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	
Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative	-	
of which: qualifying holdings outside the financial sector (negative amount)	-	
of which: securitisation positions (negative amount)	-	
of which: free deliveries (negative amount)	-	
Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions in Article 38 (3) CRR are met) (negative amount)	-	
Amount exceeding the 17,65% threshold (negative amount)	-	
of which: direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities	-	
of which: deferred tax assets arising from temporary differences	-	
Losses for the current financial year (negative amount)	(1)	
Foreseeable tax charges relating to CET1 items except where the institution suitably adjusts the amount of CET1 items insofar as such tax charges reduce the amount up to which those items may be used to cover risks or losses (negative amount)	-	
Qualifying AT1 deductions that exceed the AT1 items of the institution (negative amount)	-	
Other regulatory adjustments to CET1 capital (including IFRS 9 transitional adjustments when relevant)	(236)	
Total regulatory adjustments to Common Equity Tier 1 (CET1)	**(2,714)**	
Common Equity Tier 1 (CET1) capital	**22,055**	
Additional Tier 1 (AT1) capital: instruments		
Capital instruments and the related share premium accounts	4,300	
of which: classified as equity under applicable accounting standards	4,300	
of which: classified as liabilities under applicable accounting standards	-	
Amount of qualifying items referred to in Article 484 (4) CRR and the related share premium accounts subject to phase out from AT1 as described in Article 486(3) CRR	-	

Amount of qualifying items referred to in Article 494a(1) CRR subject to phase out from AT1	-	
Amount of qualifying items referred to in Article 494b(1) CRR subject to phase out from AT1	-	
Qualifying Tier 1 capital included in consolidated AT1 capital (including minority interests not included in row 5) issued by subsidiaries and held by third parties	-	
of which: instruments issued by subsidiaries subject to phase out	-	
Additional Tier 1 (AT1) capital before regulatory adjustments	**4,300**	H
Additional Tier 1 (AT1) capital: regulatory adjustments		
Direct, indirect and synthetic holdings by an institution of own AT1 instruments (negative amount)	-	
Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	-	
Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	
Direct, indirect and synthetic holdings by the institution of the AT1 instruments of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)	-	
Qualifying T2 deductions that exceed the T2 items of the institution (negative amount)	-	
Other regulatory adjustments to AT1 capital	-	
Total regulatory adjustments to Additional Tier 1 (AT1) capital	-	
Additional Tier 1 (AT1) capital	**4,300**	
Tier 1 capital (T1 = CET1 + AT1)	**26,355**	
Tier 2 (T2) capital: instruments		
Capital instruments and the related share premium accounts	8,325	
Amount of qualifying items referred to in Article 484 (5) CRR and the related share premium accounts subject to phase out from T2 as described in Article 486(4) CRR	-	
Amount of qualifying items referred to in Article 494a (2) CRR subject to phase out from T2	-	
Amount of qualifying items referred to in Article 494b (2) CRR subject to phase out from T2	-	
Qualifying own funds instruments included in consolidated T2 capital (including minority interests and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties	-	
of which: instruments issued by subsidiaries subject to phase out	-	
Credit risk adjustments	-	
Tier 2 (T2) capital before regulatory adjustments	**8,325**	I
Tier 2 (T2) capital: regulatory adjustments		
Direct, indirect and synthetic holdings by an institution of own T2 instruments and subordinated loans (negative amount)	-	
Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	-	
Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	
Direct, indirect and synthetic holdings by the institution of the T2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)	-	
Qualifying eligible liabilities deductions that exceed the eligible liabilities items of the institution (negative amount)	-	
Other regulatory adjustments to T2 capital	-	
Total regulatory adjustments to Tier 2 (T2) capital	-	
Tier 2 (T2) capital	**8,325**	
Total capital (TC = T1 + T2)	**34,680**	
Total Risk exposure amount	**166,499**	
Capital ratios and buffers		
Common Equity Tier 1 (as a percentage of total risk exposure amount)	13.25%	
Tier 1 (as a percentage of total risk exposure amount)	15.83%	
Total capital (as a percentage of total risk exposure amount)	20.83%	
Institution CET1 overall capital requirement (CET1 requirement in accordance with Article 92 (1) CRR, plus additional CET1 requirement which the institution is required to hold in accordance with point (a) of Article 104(1) CRD, plus combined buffer requirement in accordance with Article 128(6) CRD) expressed as a percentage of risk exposure amount)	8.73%	
of which: capital conservation buffer requirement	2.50%	
of which: countercyclical buffer requirement	0.05%	
of which: systemic risk buffer requirement	-	
of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer	-	
Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)	**7.07%**	
Amounts below the thresholds for deduction (before risk weighting)		
Direct and indirect holdings of own funds and eligible liabilities 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)	682	

Direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 17.65% thresholds and net of eligible short positions)	0	
Deferred tax assets arising from temporary differences (amount below 17,65% threshold, net of related tax liability where the conditions in Article 38 (3) CRR are met)	252	J
Applicable caps on the inclusion of provisions in Tier 2		
Credit risk adjustments included in T2 in respect of exposures subject to standardised approach (prior to the application of the cap)	-	
Cap on inclusion of credit risk adjustments in T2 under standardised approach	-	
Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach (prior to the application of the cap)	-	
Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	-	
Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2014 and 1 Jan 2022)		
Current cap on CET1 instruments subject to phase out arrangements	-	
Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	-	
Current cap on AT1 instruments subject to phase out arrangements	-	
Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	-	
Current cap on T2 instruments subject to phase out arrangements	-	
Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	-	

$MM	MSIP	Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
Common Equity Tier 1 (CET1) capital: instruments and reserves		
Capital instruments and the related share premium accounts	12,977	A
of which: Instrument type 1		
of which: Instrument type 2		
of which: Instrument type 3		
Retained earnings	4,774	B
Accumulated other comprehensive income (and other reserves)	1,217	C
Funds for general banking risk	-	
Amount of qualifying items referred to in Article 484 (3) CRR and the related share premium accounts subject to phase out from CET1	-	
Minority interests (amount allowed in consolidated CET1)	-	
Independently reviewed interim profits net of any foreseeable charge or dividend	-	
Common Equity Tier 1 (CET1) capital before regulatory adjustments	**18,968**	
Common Equity Tier 1 (CET1) capital: regulatory adjustments		
Additional value adjustments (negative amount)	(1,377)	
Intangible assets (net of related tax liability) (negative amount)	(2)	D
Empty set in the UK		
Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability where the conditions in Article 38 (3) CRR are met) (negative amount)	-	
Fair value reserves related to gains or losses on cash flow hedges of financial instruments that are not valued at fair value	-	
Negative amounts resulting from the calculation of expected loss amounts	(249)	
Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	82	E
Defined-benefit pension fund assets (negative amount)	-	
Direct, indirect and synthetic holdings by an institution of own CET1 instruments (negative amount)	-	
Direct, indirect and synthetic holdings of the CET1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	-	
Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	
Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	
Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative	-	
of which: qualifying holdings outside the financial sector (negative amount)	-	
of which: securitisation positions (negative amount)	-	
of which: free deliveries (negative amount)	-	
Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions in Article 38 (3) CRR are met) (negative amount)	-	
Amount exceeding the 17,65% threshold (negative amount)	-	
of which: direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities	-	
of which: deferred tax assets arising from temporary differences	-	

Losses for the current financial year (negative amount)	0	
Foreseeable tax charges relating to CET1 items except where the institution suitably adjusts the amount of CET1 items insofar as such tax charges reduce the amount up to which those items may be used to cover risks or losses (negative amount)	-	
Qualifying AT1 deductions that exceed the AT1 items of the institution (negative amount)	-	
Other regulatory adjustments to CET1 capital (including IFRS 9 transitional adjustments when relevant)	(156)	
Total regulatory adjustments to Common Equity Tier 1 (CET1)	**(1,702)**	
Common Equity Tier 1 (CET1) capital	**17,266**	
Additional Tier 1 (AT1) capital: instruments		
Capital instruments and the related share premium accounts	4,300	
of which: classified as equity under applicable accounting standards	4,300	
of which: classified as liabilities under applicable accounting standards	-	
Amount of qualifying items referred to in Article 484 (4) CRR and the related share premium accounts subject to phase out from AT1 as described in Article 486(3) CRR	-	
Amount of qualifying items referred to in Article 494a(1) CRR subject to phase out from AT1	-	
Amount of qualifying items referred to in Article 494b(1) CRR subject to phase out from AT1	-	
Qualifying Tier 1 capital included in consolidated AT1 capital (including minority interests not included in row 5) issued by subsidiaries and held by third parties	-	
of which: instruments issued by subsidiaries subject to phase out	-	
Additional Tier 1 (AT1) capital before regulatory adjustments	**4,300**	
Additional Tier 1 (AT1) capital: regulatory adjustments		
Direct, indirect and synthetic holdings by an institution of own AT1 instruments (negative amount)	-	
Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	-	
Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	
Direct, indirect and synthetic holdings by the institution of the AT1 instruments of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)	-	
Qualifying T2 deductions that exceed the T2 items of the institution (negative amount)	-	
Other regulatory adjustments to AT1 capital	-	
Total regulatory adjustments to Additional Tier 1 (AT1) capital	-	
Additional Tier 1 (AT1) capital	**4,300**	F
Tier 1 capital (T1 = CET1 + AT1)	**21,566**	
Tier 2 (T2) capital: instruments		
Capital instruments and the related share premium accounts	7,378	
Amount of qualifying items referred to in Article 484 (5) CRR and the related share premium accounts subject to phase out from T2 as described in Article 486(4) CRR	-	
Amount of qualifying items referred to in Article 494a (2) CRR subject to phase out from T2	-	
Amount of qualifying items referred to in Article 494b (2) CRR subject to phase out from T2	-	
Qualifying own funds instruments included in consolidated T2 capital (including minority interests and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties	-	
of which: instruments issued by subsidiaries subject to phase out	-	
Credit risk adjustments	-	
Tier 2 (T2) capital before regulatory adjustments	**7,378**	
Tier 2 (T2) capital: regulatory adjustments		
Direct, indirect and synthetic holdings by an institution of own T2 instruments and subordinated loans (negative amount)	-	
Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	-	
Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	
Direct, indirect and synthetic holdings by the institution of the T2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)	-	
Qualifying eligible liabilities deductions that exceed the eligible liabilities items of the institution (negative amount)	-	
Other regulatory adjustments to T2 capital	-	
Total regulatory adjustments to Tier 2 (T2) capital	-	
Tier 2 (T2) capital	**7,378**	G
Total capital (TC = T1 + T2)	**28,944**	
Total Risk exposure amount	**137,181**	
Capital ratios and buffers		
Common Equity Tier 1 (as a percentage of total risk exposure amount)	12.59%	
Tier 1 (as a percentage of total risk exposure amount)	15.72%	

Total capital (as a percentage of total risk exposure amount)	21.10%	
Institution CET1 overall capital requirement (CET1 requirement in accordance with Article 92 (1) CRR, plus additional CET1 requirement which the institution is required to hold in accordance with point (a) of Article 104(1) CRD, plus combined buffer requirement in accordance with Article 128(6) CRD) expressed as a percentage of risk exposure amount)	8.70%	
of which: capital conservation buffer requirement	2.50%	
of which: countercyclical buffer requirement	0.05%	
of which: systemic risk buffer requirement	-	
of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer	-	
Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)	**6.44%**	
Amounts below the thresholds for deduction (before risk weighting)		
Direct and indirect holdings of own funds and eligible liabilities 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)	686	
Direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 17.65% thresholds and net of eligible short positions)	137	
Deferred tax assets arising from temporary differences (amount below 17,65% threshold, net of related tax liability where the conditions in Article 38 (3) CRR are met)	116	H
Applicable caps on the inclusion of provisions in Tier 2		
Credit risk adjustments included in T2 in respect of exposures subject to standardised approach (prior to the application of the cap)	-	
Cap on inclusion of credit risk adjustments in T2 under standardised approach	-	
Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach (prior to the application of the cap)	-	
Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	-	
Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2014 and 1 Jan 2022)		
Current cap on CET1 instruments subject to phase out arrangements	-	
Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	-	
Current cap on AT1 instruments subject to phase out arrangements	-	
Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	-	
Current cap on T2 instruments subject to phase out arrangements	-	
Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	-	

Table 39 shows the reconciliation of regulatory own funds in Table 38 to balance sheet in the audited financial statements.

Table 39: Reconciliation of regulatory own funds to balance sheet in the audited financial statements (UK CC2) – MSI Group and MSIP

$MM MSI Group	Balance sheet as in published financial statements As at 30 Jun 2022	Under regulatory scope of consolidation As at 30 Jun 2022	Reference
Assets - Breakdown by asset classes according to the balance sheet in the published financial statements			
Cash and short-term deposits	51,606	51,606	
Trading financial assets	395,922	395,922	
Secured financing	118,366	118,366	
Loans and advances	109	109	
Investment Securities	153	153	
Trade and other receivables	105,419	105,419	
of which: Defined Pension Fund Assets (net of related tax liability)	15	15	G
Physical Commodities	0	0	
Current tax assets	143	143	
Deferred tax assets	274	274	
of which: Deferred tax assets that rely on future profitability and do not arise from temporary differences	22	22	E
of which: Deferred tax assets that rely on future profitability and arise from temporary differences	252	252	J
Other assets	203	203	
Investment in Subsidiaries Associates and Joint Ventures	(0)	(0)	
Property plant and equipment	1,015	1,015	
Intangible Assets	762	762	
of which: Intangibles net of related tax liabilities	724	724	D
Total Assets	**673,972**	**673,972**	
Liabilities - Breakdown by liability classes according to the balance sheet in the published financial statements			
Bank loans and overdrafts	2,750	2,750	
Trading financial liabilities	367,442	367,442	
Secured borrowing	97,846	97,846	
Trade and other payables	120,725	120,725	
Debt and other borrowings	53,497	53,497	
of which: Subordinated debt	8,325	8,325	I
of which: Senior subordinated debt	6,300	6,300	
Provisions	181	181	
Current tax liabilities	167	167	
Deferred tax liabilities	1	1	
Other liabilities	781	781	
Post-employment benefit obligations	79	79	
Total Liabilities	**643,469**	**643,469**	
Shareholders' equity			
Share Capital	**6,678**	**6,678**	
of which: amount eligible for CET1	2,378	2,378	A
of which: amount eligible for AT1	4,300	4,300	H
Share Premium Account	38	38	A
Currency Translation Reserve	(983)	(983)	C
Pension Reserve	(112)	(112)	C
Debt Valuation Adjustment Reserve	(82)	(82)	F&C
Capital Contribution Reserve	6,061	6,061	C
Capital Redemption Reserve	1,400	1,400	C
Available-For-Sale Reserve	0	0	
Retained Earnings	17,081	17,081	
of which: Previous years retained earnings	16,069	16,069	B
of which: Profit or loss attributable to owners of the parent	1,012	1,012	
Equity Attributable to The Owners Of The Company	**30,081**	**30,081**	
Non-Controlling Interests	422	422	
Total shareholders' equity	**30,503**	**30,503**	
TOTAL LIABILITIES AND EQUITY	**673,972**	**673,972**	

$MM MSIP	Balance sheet as in published financial statements As at 30 Jun 2022	Under regulatory scope of consolidation As at 30 Jun 2022	Reference
Assets - Breakdown by asset classes according to the balance sheet in the published financial statements			
Cash and short-term deposits	41,234	41,234	
Trading financial assets	350,653	350,653	
Secured financing	125,043	125,043	
Loans and advances	4	4	
Investment Securities	151	151	
Trade and other receivables	84,772	84,772	
Physical Commodities	0	0	
Current tax assets	196	196	
Deferred tax assets	116	116	
of which: Deferred tax assets that rely on future profitability and do not arise from temporary differences	0	0	
of which: Deferred tax assets that rely on future profitability and arise from temporary differences	116	116	H
Other assets	34	34	
Investment in Subsidiaries Associates and Joint Ventures	137	137	
Property plant and equipment	9	9	
Intangible Assets	2	2	
of which: Intangibles net of related tax liabilities	2	2	D
Total Assets	**602,351**	**602,351**	
Liabilities - Breakdown by liability classes according to the balance sheet in the published financial statements			
Bank loans and overdrafts	21	21	
Trading financial liabilities	325,773	325,773	
Secured borrowing	103,887	103,887	
Trade and other payables	105,280	105,280	
Debt and other borrowings	42,887	42,887	
of which: Subordinated debt	7,378	7,378	G
of which: Senior subordinated debt	3,900	3,900	
Provisions	101	101	
Current tax liabilities	44	44	
Deferred tax liabilities	0	0	
Other liabilities	312	312	
Post-employment benefit obligations	4	4	
Total Liabilities	**578,309**	**578,309**	
Shareholders' equity			
Share Capital	16,765	16,765	
of which: amount eligible for CET1	12,465	12,465	A
of which: amount eligible for AT1	4,300	4,300	F
Share Premium Account	513	513	A
Currency Translation Reserve	(101)	(101)	C
Pension Reserve	(3)	(3)	C
Debt Valuation Adjustment Reserve	(82)	(82)	C&E
Capital Contribution Reserve	3	3	C
Capital Redemption Reserve	1,400	1,400	C
Available-For-Sale Reserve	0	0	
Retained Earnings	5,547	5,547	
of which: Previous years retained earnings	4,774	4,774	B
of which: Profit or loss attributable to owners of the parent	773	773	
Equity Attributable to The Owners Of The Company	24,042	24,042	
Non-Controlling Interests	0	0	
Total shareholders' equity	**24,042**	**24,042**	
TOTAL LIABILITIES AND EQUITY	**602,351**	**602,351**	

15. Appendix III: Countercyclical Capital Buffer

Table 40 shows the geographical distribution of credit exposures relevant for the calculation of CCyB as at 30 June 2022 for the MSI Group and MSIP.

Table 40: Geographical distribution of credit exposures relevant for the calculation of the countercyclical buffer (UK CCyB1) – MSI Group and MSIP

	General credit exposures		Trading book exposures				Own funds requirements						
	Exposure value under the standardised approach	Exposure value under the IRB approach	Sum of long and short positions of trading book exposures for SA	Value of trading book exposures for internal models	Securitisation exposures Exposure value for non-trading book	Total exposure value	Relevant credit risk exposures - Credit risk	Relevant credit exposures – Market risk	Relevant credit exposures – Securitisation positions in the non-trading book	Total	Risk-weighted exposure amounts	Own funds requirement weights	CCyB rate
MSI Group	$MM	$MM	$MM	$MM	$MM		$MM	$MM	$MM	$MM		%	%
Bulgaria	-	-	-	2	-	2	-	-	-	-	2	0.00%	0.50%
Czech Republic	-	-	-	20	-	20	-	7	-	7	82	0.15%	0.50%
Hong Kong	78	191	9	134	-	412	27	28	-	55	686	1.21%	1.00%
Luxembourg	393	3,658	23	39	-	4,113	242	21	-	263	3,279	5.79%	0.50%
Norway	30	345	14	61	-	450	10	4	-	14	182	0.32%	1.50%
Slovakia	-	11	-	2	-	13	1	-	-	1	18	0.03%	1.00%
Other	9,606	63,468	1,253	5,300	435	80,062	2,767	1,218	204	4,189	52,369	92.49%	0.00%
TOTAL	**10,107**	**67,673**	**1,299**	**5,558**	**435**	**85,072**	**3,047**	**1,278**	**204**	**4,529**	**56,618**	**100.00%**	
MSIP													
Bulgaria	-	-	-	2	-	2	-	-	-	-	2	0.00%	0.50%
Czech Republic	-	-	-	20	-	20	-	7	-	7	82	0.18%	0.50%
Hong Kong	73	247	-	134	-	454	29	27	-	56	701	1.52%	1.00%
Luxembourg	307	2,816	-	39	-	3,162	201	18	-	219	2,742	5.96%	0.50%
Norway	-	103	-	61	-	164	4	3	-	7	91	0.20%	1.50%
Slovakia	-	-	-	2	-	2	-	-	-	-	3	0.01%	1.00%
Other	6,743	50,511	779	3,199	411	61,643	2,076	1,114	203	3,393	42,403	92.13%	0.00%
TOTAL	**7,123**	**53,677**	**779**	**3,457**	**411**	**65,447**	**2,310**	**1,169**	**203**	**3,682**	**46,024**	**100.00%**	

Over the first half of 2022, CCyB rate for Norway has been increased from 1% to 1.5% and has minimal impact.

Table 41 shows the amount of institution specific CCyB as at 30 June 2022 for the MSI Group and MSIP.

Table 41: Amount of institution-specific countercyclical capital buffer (UK CCyB2) – MSI Group and MSIP

$MM	MSI Group	MSIP
Total risk exposure amount	**166,499**	**137,181**
Institution specific countercyclical capital buffer rate	0.05%	0.05%
Institution specific countercyclical capital buffer requirement	78	67

Over the first half of 2022, the institution specific CCyB rate has minimal impact.

16. Appendix IV: Additional Credit and Counterparty Credit Risk Tables

Table 42 shows a breakdown of net exposures by residual maturity and exposure classes as at 30 June 2022 for the MSI Group and MSIP.

Table 42: Maturity of exposures (UK CR1-A) - MSI Group and MSIP

$MM	Net exposure value					
MSI Group	**On demand**	**<= 1 year**	**> 1 year <= 5 years**	**> 5 years**	**No stated maturity**	**Total**
Loans and advances	-	6,792	2,681	-	1,122	10,595
Debt securities	-	125	238	-	-	363
Total	**-**	**6,917**	**2,919**	**-**	**1,122**	**10,958**
MSIP						
Loans and advances	-	6,639	1,213	-	854	8,706
Debt securities	-	125	238	-	-	363
Total	**-**	**6,764**	**1,451**	**-**	**854**	**9,069**

No significant change in the maturity profile for both entities compared to December 2021.

Table 43 shows changes in the stock of non-performing loans and advances as at 30 June 2022 for the MSI Group and MSIP.

Table 43: Changes in the stock of non-performing loans and advances (UK CR2) – MSI Group and MSIP

$MM	
MSI Group	**Gross carrying amount**
Initial stock of non-performing loans and advances	**87**
Inflows to non-performing portfolios	100
Outflows from non-performing portfolios	(81)
Outflows due to write-offs	-
Outflow due to other situations	(81)
Final stock of non-performing loans and advances	**106**
MSIP	
Initial stock of non-performing loans and advances	**78**
Inflows to non-performing portfolios	96
Outflows from non-performing portfolios	(74)
Outflows due to write-offs	-
Outflow due to other situations	(74)
Final stock of non-performing loans and advances	**100**

Increase in non-performing loans and advances is mainly driven by margin cash exposures with a Russian counterparty.

Table 44 shows an overview of performing and non-performing exposures and the related provisions as at 30 June 2022 for the MSI Group and MSIP.

Table 44: Performing and Non-performing exposures and related provisions (UK CR1) – MSI Group and MSIP

$MM	Gross carrying amount/nominal amount						Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions							Collateral and financial guarantees received	
	Performing exposures			Non-performing exposures			Performing exposures – accumulated impairment and provisions			Non-performing exposures – accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions					
MSI Group		Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3		Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3	Accumulated partial write-off	On performing exposures	On non-performing exposures
Cash balances at central banks and other demand deposits	**51,480**	**51,480**	**-**	**109**	**-**	**109**	**-**	**-**	**-**	**(109)**	**-**	**(109)**	**-**	**-**	**-**
Loans and advances	**223,904**	**44,186**	**60,931**	**106**	**31**	**75**	**(1)**	**-**	**(1)**	**(47)**	**-**	**(47)**	**-**	**115,877**	**-**
Central banks	6,087	-	759	-	-	-	-	-	-	-	-	-	-	5,236	-
General governments	2,078	74	1,332	-	-	-	-	-	-	-	-	-	-	657	-
Credit institutions	44,435	6	18,008	13	2	11	-	-	-	(3)	-	(3)	-	25,655	-
Other financial corporations	169,560	44,034	39,200	74	12	62	(1)	-	(1)	(42)	-	(42)	-	84,290	-
Non-financial corporations	1,744	72	1,632	19	17	2	-	-	-	(2)	-	(2)	-	39	-
Of which SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Households	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt securities	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General governments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Credit institutions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other financial corporations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-financial corporations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Off-balance-sheet exposures	**2,961**	**2,899**	**50**	**-**	**-**	**-**	**(1)**	**(1)**	**-**	**-**	**-**	**-**		**-**	**-**
Central banks	-	-	-	-	-	-	-	-	-	-	-	-		-	-
General governments	-	-	-	-	-	-	-	-	-	-	-	-		-	-
Credit institutions	38	38	-	-	-	-	-	-	-	-	-	-		-	-
Other financial corporations	570	558	-	-	-	-	-	-	-	-	-	-		-	-
Non-financial corporations	2,353	2,303	50	-	-	-	(1)	(1)	-	-	-	-		-	-
Households	-	-	-	-	-	-	-	-	-	-	-	-		-	-
Total	**278,345**	**98,565**	**60,981**	**215**	**31**	**184**	**(2)**	**(1)**	**(1)**	**(156)**	**-**	**(156)**	**-**	**115,877**	**-**
MSIP															
Cash balances at central banks and other demand deposits	**41,422**	**41,422**	**-**	**101**	**-**	**101**	**-**	**-**	**-**	**(101)**	**-**	**(101)**	**-**	**-**	**-**
Loans and advances	**210,039**	**40,752**	**43,625**	**100**	**31**	**69**	**-**	**-**	**-**	**(44)**	**-**	**(44)**	**-**	**122,316**	**-**
Central banks	872	-	706	-	-	-	-	-	-	-	-	-	-	116	-
General governments	1,195	29	493	-	-	-	-	-	-	-	-	-	-	657	-
Credit institutions	36,634	176	12,224	11	2	9	-	-	-	(2)	-	(2)	-	23,479	-
Other financial corporations	170,091	40,546	28,997	71	12	59	-	-	-	(41)	-	(41)	-	98,025	-
Non-financial corporations	1,247	1	1,205	18	17	1	-	-	-	(1)	-	(1)	-	39	-
Of which SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Households	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Debt securities	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General governments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Credit institutions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other financial corporations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-financial corporations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Off-balance-sheet exposures	**12**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**		**-**	**-**
Central banks	-	-	-	-	-	-	-	-	-	-	-	-		-	-
General governments	-	-	-	-	-	-	-	-	-	-	-	-		-	-
Credit institutions	-	-	-	-	-	-	-	-	-	-	-	-		-	-
Other financial corporations	12	-	-	-	-	-	-	-	-	-	-	-		-	-
Non-financial corporations	-	-	-	-	-	-	-	-	-	-	-	-		-	-
Households	-	-	-	-	-	-	-	-	-	-	-	-		-	-
Total	**251,473**	**82,174**	**43,625**	**201**	**31**	**170**	**-**	**-**	**-**	**(145)**	**-**	**(145)**	**-**	**122,316**	**-**

Increase in Stage 3 non-performing cash balances is mainly driven by cash balances with Russian banks.

Increase in Stage 3 non-performing loans and advances is mainly driven by margin cash exposures with a Russian counterparty.

Decrease in Stage 2 non-performing loans and advances is mainly driven by reduction in receivables.

Table 45 shows the quality of non-performing exposures by geography as at 30 June 2022 for the MSI Group and MSIP.

Table 45: Quality of non-performing exposures by geography (UK CQ4) – MSI Group and MSIP

$MM	Gross carrying/nominal amount						
		Of which non-performing				Provisions on off-balance-sheet commitments and financial guarantees given	Accumulated negative changes in fair value due to credit risk on non-performing exposures
MSI Group			Of which defaulted	Of which subject to impairment	Accumulated impairment		
On-balance-sheet exposures[1]	**224,010**	**106**	**106**	**105,223**	**(48)**		
United States of America	83,459	24	24	46,264	-		-
United Kingdom	40,479	24	24	21,114	(4)		-
France	23,360	3	3	3,378	(2)		-
Japan	22,810	-	-	523	-		-
Other countries	53,902	55	55	33,944	(42)		-
Off-balance-sheet exposures[1]	**2,961**	**-**	**-**	**-**	**-**	**(1)**	**-**
France	1,780	-	-			(1)	
Italy	265	-	-			-	
Netherlands	230	-	-			-	
Norway	161	-	-			-	
Other countries	525	-	-			-	
Total	**226,971**	**106**	**106**	**105,223**	**(48)**	**(1)**	**-**
MSIP							
On-balance-sheet exposures[1]	**210,139**	**100**	**100**	**84,477**	**(44)**	**-**	**-**
United States of America	78,250	23	23	41,375	-		-
United Kingdom	36,110	23	23	16,719	(3)		-
Japan	22,686	-	-	434	-		-
Germany	22,100	-	-	2,636	-		-
France	14,404	2	2	1,866	-		-
Other countries	36,589	52	52	21,447	(41)		-
Off-balance-sheet exposures[1]	**12**	**-**	**-**	**-**	**-**	**-**	**-**
United States of America	12	-	-	-	-		-
Total	**210,151**	**100**	**100**	**84,477**	**(44)**	**-**	**-**

1. Countries exceeding 5% of total gross carrying amount for MSI and MSIP Group are reported individually.

Table 46 shows the credit quality of loans and advances to non-financial corporations by industry as at 30 June 2022 for the MSI Group and MSIP.

Table 46: Credit quality of loans and advances to non-financial corporations by industry (UK CQ5) - MSI Group and MSIP

$MM	Gross carrying amount					Accumulated negative changes in fair value due to credit risk on non-performing exposures
		Of which non-performing				
MSI Group			Of which defaulted	Of which loans and advances subject to impairment	Accumulated impairment	
Agriculture, forestry and fishing	5	-	-	5	-	-
Mining and quarrying	124	1	1	84	-	-
Manufacturing	350	5	5	350	(1)	-
Electricity, gas, steam and air conditioning supply	349	-	-	349	-	-
Water supply	31	-	-	31	-	-
Construction	16	-	-	16	-	-
Wholesale and retail trade	23	-	-	23	-	-
Transport and storage	111	1	1	111	-	-
Accommodation and food service activities	6	-	-	6	-	-
Information and communication	483	9	9	483	-	-
Financial and insurance activities	-	-	-	-	-	-
Real estate activities	182	2	2	182	-	-
Professional, scientific and technical activities	2	-	-	2	-	-
Administrative and support service activities	7	-	-	7	-	-
Public administration and defence, compulsory social security	-	-	-	-	-	-
Education	12	-	-	12	-	-
Human health services and social work activities	9	-	-	9	-	-
Arts, entertainment and recreation	5	-	-	5	-	-
Other services	48	1	1	48	(1)	-
Total	**1,763**	**19**	**19**	**1,723**	**(2)**	**-**
MSIP						
Agriculture, forestry and fishing	5	-	-	5	-	-
Mining and quarrying	80	1	1	40	-	-
Manufacturing	333	5	5	333	(1)	-
Electricity, gas, steam and air conditioning supply	100	-	-	100	-	-
Water supply	4	-	-	4	-	-
Construction	16	-	-	16	-	-
Wholesale and retail trade	22	-	-	22	-	-
Transport and storage	53	1	1	53	-	-
Accommodation and food service activities	4	-	-	4	-	-
Information and communication	411	9	9	411	-	-
Financial and insurance activities	-	-	-	-	-	-
Real estate activities	156	2	2	156	-	-
Professional, scientific and technical activities	2	-	-	2	-	-
Administrative and support service activities	6	-	-	6	-	-
Public administration and defence, compulsory social security	-	-	-	-	-	-
Education	12	-	-	12	-	-
Human health services and social work activities	8	-	-	8	-	-
Arts, entertainment and recreation	5	-	-	5	-	-
Other services	48	-	-	48	-	-
Total	**1,265**	**18**	**18**	**1,225**	**(1)**	**-**

Table 47 shows the extent of the use of CRM techniques as at 30 June 2022 for the MSI Group and MSIP.

Table 47: CRM techniques overview: Disclosure of the use of credit risk mitigation techniques (UK CR3) – MSI Group and MSIP

$MM	Unsecured carrying amount	Secured carrying amount	Of which secured by collateral	Of which secured by financial guarantees	Of which secured by credit derivatives
MSI Group					
Loans and advances	159,565	115,877	115,877	-	-
Debt securities	-	-	-	-	
Total	**159,565**	**115,877**	**115,877**	**-**	**-**
Of which non-performing exposures	59	-	-	-	-
Of which defaulted	59	-			
MSIP					
Loans and advances	129,201	122,316	122,316	-	-
Debt securities	-	-	-	-	
Total	**129,201**	**122,316**	**122,316**	**-**	**-**
Of which non-performing exposures	56	-	-	-	
Of which defaulted	56	-			

Increase in the loans and advances is mainly driven by overall increase in cash balance with central bank and trade receivables.

Table 48 shows the effect of all CRM techniques as at 30 June 2022 for the MSI Group and MSIP.

Table 48: Standardised approach: Credit risk exposure and CRM effects (UK CR4) – MSI Group and MSIP

$MM	Exposures before CCF[1] and CRM		Exposures post CCF and post CRM		RWAs and RWA density	
	On-balance sheet exposures $MM	Off-balance sheet exposures $MM	On-balance sheet exposures $MM	Off-balance sheet amount $MM	RWAs $MM	RWA density %
MSI Group						
Central governments or central banks	634	-	634	-	813	128%
Regional government or local authorities	4	-	4	-	-	5%
Public sector entities	-	-	-	-	-	32%
Multilateral development banks	22	-	22	-	-	1%
International organisations	1	-	1	-	-	0%
Institutions	199	262	199	52	454	181%
Corporates	936	-	936	-	1,756	188%
Retail	-	-	-	-	-	0%
Secured by mortgages on immovable property	-	-	-	-	-	0%
Exposures in default	3	-	3	-	4	150%
Exposures associated with particularly high risk	-	-	-	-	-	0%
Covered bonds	-	-	-	-	-	0%
Institutions and corporates with a short-term credit assessment	-	-	-	-	-	0%
Collective investment undertakings	-	-	-	-	-	0%
Equity	-	-	-	-	-	0%
Other items	1,233	-	1,233	-	1,233	100%
Total	**3,032**	**262**	**3,032**	**52**	**4,260**	**138%**
MSIP						
Central governments or central banks	499	-	499	-	448	90%
Regional government or local authorities	4	-	4	-	-	5%
Public sector entities	-	-	-	-	-	32%
Multilateral development banks	21	-	21	-	-	1%
International organisations	1	-	1	-	-	0%
Institutions	212	259	212	52	435	165%
Corporates	706	-	706	-	1,477	210%
Retail	-	-	-	-	-	0%
Secured by mortgages on immovable property	-	-	-	-	-	0%
Exposures in default	-	-	-	-	-	150%
Exposures associated with particularly high risk	-	-	-	-	-	0%
Covered bonds	-	-	-	-	-	0%
Institutions and corporates with a short-term credit assessment	-	-	-	-	-	0%
Collective investment undertakings	-	-	-	-	-	0%
Equity	-	-	-	-	-	0%
Other items	44	-	44	-	44	100%
Total	**1,487**	**259**	**1,487**	**52**	**2,404**	**156%**

Variance in RWA is due to a decrease in deferred tax assets and receivables with Central governments and central bank, and other assets primarily consisting of intangibles.

Table 49 shows the breakdown of exposures under SA by asset class and risk weight as at 30 June 2022 for the MSI Group.

Table 49: Standardised approach (UK CR5) - MSI Group

$MM

MSI Group	Risk Weight 0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	250%	370%	1250%	Others	Total	Of which: unrated
Central governments or central banks	130	-	-	-	6	-	202	-	-	13	9	274	-	-	-	**634**	-
Regional government or local authorities	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**4**	4
Public sector entities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
Multilateral development banks	21	-	-	-	1	-	-	-	-	-	-	-	-	-	-	**22**	-
International organisations	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1**	-
Institutions	-	52	-	-	53	-	73	-	-	43	-	-	-	29	-	**250**	60
Corporates	-	-	-	-	9	-	80	-	-	695	80	-	-	72	-	**936**	638
Retail Exposures	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
Exposures secured by mortgages on immovable property	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
Exposures in default	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	**3**	3
Exposures associated with particularly high risk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
Covered bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
Exposures to institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
Units or shares in collective investment undertakings	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
Equity exposures	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
Other items	-	-	-	-	-	-	-	-	-	1,234	-	-	-	-	-	**1,234**	-
Total	**156**	**52**	**-**	**-**	**69**	**-**	**355**	**-**	**-**	**1,985**	**92**	**274**	**-**	**101**	**-**	**3,084**	**705**

Over the first half of 2022, decrease in EAD is due to other items, primarily consisting of intangibles.

Table 50 shows the exposures for the MSI Group, calculated using SA for each exposure class and broken down by Credit Quality Step ("CQS").

Table 50: Standardised approach EAD by credit quality step - MSI Group

$MM

MSI Group[1]		CQS1	CQS2	CQS3	CQS4	CQS5	CQS6	Other[2]	Unrated	Total
Central Governments or Central Banks	GROSS EAD	185	5	77	7	6	9	356	56	**701**
	EAD	185	5	77	7	6	9	356	56	**701**
Corporates	GROSS EAD	18	88	107	17	15	13	1,231	1,458	**2,947**
	EAD	18	88	107	17	15	13	1,231	1,458	**2,947**
High risk	GROSS EAD	-	-	-	-	-	-	-	-	**-**
	EAD	-	-	-	-	-	-	-	-	**-**
Institutions	GROSS EAD	22,963	5,971	188	118	2	-	12,561	692	**42,495**
	EAD	18,910	5,971	188	118	2	-	12,499	692	**38,380**
Multilateral developments banks	GROSS EAD	22	-	-	-	-	-	-	-	**22**
	EAD	22	-	-	-	-	-	-	-	**22**
Public sector entities	GROSS EAD	-	-	-	-	-	-	-	-	**-**
	EAD	-	-	-	-	-	-	-	-	**-**
Regional governments or Local Authorities	GROSS EAD	1	-	-	-	-	-	-	5	**6**
	EAD	1	-	-	-	-	-	-	5	**6**
International Organisations	GROSS EAD	1	-	-	-	-	-	-	-	**1**
	EAD	1	-	-	-	-	-	-	-	**1**
Securitisation	GROSS EAD	-	-	104	-	16	-	425	-	**545**
	EAD	-	-	104	-	16	-	425	-	**545**
Other Items	GROSS EAD	38	-	-	-	-	-	669	526	**1,233**
	EAD	38	-	-	-	-	-	669	526	**1,233**
Total	**GROSS EAD**	**23,228**	**6,064**	**476**	**142**	**39**	**22**	**15,242**	**2,737**	**47,950**
	EAD	**19,175**	**6,064**	**476**	**142**	**39**	**22**	**15,180**	**2,737**	**43,835**

1. 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.

EAD with CQS1 counterparties has increased due to higher activity with QCCPs.

Table 51 shows the breakdown of exposures under the standardised approach by asset class and risk weight as at 30 June 2022 for the MSI Group and MSIP. Credit Derivatives are not used as a CRM technique for RWA benefits.

Table 51: IRB approach: Effect on the RWAs of credit derivatives used as CRM techniques (UK CR7) – MSI Group and MSIP

	MSI Group		MSIP	
$MM	Pre-credit derivatives RWAs	Actual RWAs	Pre-credit derivatives RWAs	Actual RWAs
Exposures under FIRB	**7,581**	**7,581**	**4,587**	**4,587**
Central governments and central banks	915	915	681	681
Institutions	2,633	2,633	2,368	2,368
Corporates	4,033	4,033	1,538	1,538
of which SMEs	-	-	-	-
of which Specialised lending	-	-	-	-
Exposures under AIRB	**-**	**-**	**-**	**-**
Central governments and central banks	-	-	-	-
Institutions	-	-	-	-
Corporates	-	-	-	-
of Corporates - which SMEs	-	-	-	-
of which Corporates - Specialised lending	-	-	-	-
Retail	-	-	-	-
of which Retail – SMEs - Secured by immovable property collateral	-	-	-	-
of which Retail – non-SMEs - Secured by immovable property collateral	-	-	-	-
of which Retail – Qualifying revolving	-	-	-	-
of which Retail – SMEs - Other	-	-	-	-
of which Retail – Non-SMEs- Other	-	-	-	-
Total (including FIRB exposures and AIRB exposures)	**7,581**	**7,581**	**4,587**	**4,587**

Morgan Stanley does not use credit derivatives to mitigate risk weighted assets.

Table 52 shows the parameters used for the calculation of capital requirements for IRB models as at 30 June 2022 for the MSI Group.

Table 52: IRB approach: Credit risk exposures by exposure class and PD range (UK CR6) - MSI Group

MSI Group	On-balance sheet exposure $MM	Off-balance sheet exposures pre-CCF $MM	Exposure weighted average CCF %	Exposure post CCF and post CRM $MM	Exposure weighted average PD %	Number of obligors #	Exposure weighted average LGD %	Exposure weighted average maturity Years	RWA after supporting factors $MM	Density of RWA %	Expected loss amount $MM	Value adjustments and provisions $MM
0.00 to <0.15	31,619	6	0.75	31,623	-	11	45%	-	915	3%	1	
0.00 to <0.10	31,619	6	0.75	31,623	-	11	45%	-	915	3%	1	
0.10 to <0.15	-	-	-	-	-	-	-	-	-	-	-	
0.15 to <0.25	-	-	-	-	-	-	-	-	-	-	-	
0.25 to <0.50	-	-	-	-	-	-	-	-	-	-	-	
0.50 to <0.75	-	-	-	-	-	-	-	-	-	-	-	
0.75 to <2.50	-	-	-	-	-	-	-	-	-	-	-	
0.75 to <1.75	-	-	-	-	-	-	-	-	-	-	-	
1.75 to <2.5	-	-	-	-	-	-	-	-	-	-	-	
2.50 to <10.00	-	-	-	-	-	-	-	-	-	-	-	
2.5 to <5	-	-	-	-	-	-	-	-	-	-	-	
5 to <10	-	-	-	-	-	-	-	-	-	-	-	
10.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	
10 to <20	-	-	-	-	-	-	-	-	-	-	-	
20 to <30	-	-	-	-	-	-	-	-	-	-	-	
30.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	
100.00 (Default)	-	-	-	-	-	-	-	-	-	-	-	
Central governments or central banks	**31,619**	**6**	**0.75**	**31,623**	**-**	**11**	**45%**	**-**	**915**	**3%**	**1**	**-**
0.00 to <0.15	11,864	1,220	0.79	12,825	-	83	45%	-	2,084	16%	3	
0.00 to <0.10	11,112	1,214	0.79	12,069	-	67	45%	-	1,832	15%	3	
0.10 to <0.15	751	6	0.75	756	-	16	45%	-	252	33%	-	
0.15 to <0.25	163	14	0.75	174	-	10	45%	-	77	44%	-	
0.25 to <0.50	222	1	0.75	222	-	5	45%	-	132	59%	-	
0.50 to <0.75	-	-	-	-	-	-	-	-	-	-	-	
0.75 to <2.50	78	2	0.75	80	-	8	45%	-	79	99%	-	
0.75 to <1.75	78	-	-	78	-	7	45%	-	77	99%	-	
1.75 to <2.5	-	2	0.75	2	-	1	45%	-	2	114%	-	
2.50 to <10.00	-	-	-	-	-	-	-	-	-	-	-	
2.5 to <5	-	-	-	-	-	-	-	-	-	-	-	
5 to <10	-	-	-	-	-	-	-	-	-	-	-	
10.00 to <100.00	114	1	0.75	115	0.02	46	45%	-	260	227%	6	
10 to <20	114	1	0.75	115	0.04	46	45%	-	260	227%	6	
20 to <30	-	-	-	-	-	-	-	-	-	-	-	
30.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	
100.00 (Default)	1	-	-	1	0.01	2	45%	-	-	-	-	
Institutions	**12,442**	**1,238**	**0.75**	**13,417**	**0.03**	**154**	**45%**	**-**	**2,632**	**446%**	**9**	**-**
0.00 to <0.15	1,453	4,476	0.75	4,849	-	91	45%	2	1,451	30%	2	
0.00 to <0.10	1,159	3,750	0.75	4,010	-	58	45%	2	1,130	28%	1	
0.10 to <0.15	294	727	0.75	839	-	33	45%	2	320	38%	1	
0.15 to <0.25	4	417	0.75	317	-	15	45%	2	172	54%	-	
0.25 to <0.50	61	305	0.75	290	-	22	45%	3	214	74%	-	
0.50 to <0.75	35	112	0.75	119	0.01	14	40%	1	82	69%	-	
0.75 to <2.50	164	231	0.75	336	0.02	30	45%	2	427	127%	3	
0.75 to <1.75	33	173	0.75	163	0.01	20	45%	3	195	120%	1	
1.75 to <2.5	131	57	0.75	174	0.02	10	45%	1	232	133%	2	
2.50 to <10.00	58	190	0.75	201	0.05	43	45%	4	372	185%	4	
2.5 to <5	58	190	0.75	201	0.05	43	45%	4	372	185%	4	
5 to <10	-	-	-	-	-	-	-	-	-	-	-	
10.00 to <100.00	490	18	0.75	503	0.20	119	44%	2	1,314	261%	45	
10 to <20	172	15	0.75	183	0.11	94	44%	-	429	234%	9	
20 to <30	318	2	0.75	320	0.25	25	45%	2	885	277%	36	
30.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	
100.00 (Default)	165	28	0.75	186	1.00	34	45%	4	-	-	84	
Corporates	**2,430**	**5,777**	**0.75**	**6,801**	**1.28**	**368**	**45%**	**20**	**4,032**	**801%**	**138**	**-**
Total (all exposure classes)	**46,491**	**7,021**	**0.75**	**51,841**		**533**			**7,579**	**1250%**	**148**	**-**

Increase in RWA is primarily driven by cash exposure with central governments and central banks using lower PD band and Corporates using higher PD band.

Table 53 provides disclosure of the extent of the use of CRM techniques for the MSI Group and MSIP as at 30 June 2022.

Table 53: IRB approach: Disclosure of the extent of the use of CRM techniques (UK CR7-A) - MSI Group and MSIP

		Credit risk Mitigation techniques											Credit risk Mitigation methods in the calculation of RWAs	
		Funded credit Protection (FCP) Part of exposures covered by -									Unfunded credit Protection (UFCP) Part of exposures covered by -			
FIRB	Total exposures	Financial Collaterals	Other eligible collaterals	Immovable property Collaterals	Receivables	Other physical collateral	Other funded credit protection	Cash on deposit	Life insurance policies	Instruments held by a third party	Guarantees	Credit Derivatives	RWA post all CRM assigned to the obligor exposure class	RWA with substitution effects
MSI Group	**$MM**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**(%)**	**$MM**	**$MM**
Central governments and central banks	31,623	-	-	-	-	-	-	-	-	-	-	-	915	915
Institutions	13,417	6.31%	-	-	-	-	0.01%	-	-	-	-	-	2,588	2,633
Corporates	6,801	-	-	-	-	-	3.24%	-	-	-	22.82%	-	4,788	4,033
Of which: -														
SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Specialised lending	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	6,801	-	-	-	-	-	3.24%	-	-	-	22.82%	-	4,788	4,033
Total	**51,841**	**1.63%**	**-**	**-**	**-**	**-**	**0.43%**	**-**	**-**	**-**	**2.99%**	**-**	**8,291**	**7,581**
MSIP														
Central governments and central banks	22,597	-	-	-	-	-	-	-	-	-	-	-	681	681
Institutions	12,559	6.74%	-	-	-	-	0.01%	-	-	-	-	-	2,368	2,368
Corporates	1,770	-	-	-	-	-	12.32%	-	-	-	-	-	1,538	1,538
Of which: -														
SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Specialised lending	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	1,770	-	-	-	-	-	12.32%	-	-	-	-	-	1,538	1,538
Total	**36,926**	**2.29%**	**-**	**-**	**-**	**-**	**1.00%**	**-**	**-**	**-**	**-**	**-**	**4,587**	**4,587**

CRM techniques are not used largely to mitigate risks, with the exception of exposures to Corporates, some of which are mitigated by guarantees.

Table 54 shows all the relevant parameters used for the calculation of CCR capital requirements for IRB models as at 30 June 2022 for the MSI Group.

Table 54: Standardised approach: CCR exposures by regulatory exposure class and risk weight (UK CCR3)- MSI Group

$MM	Risk Weight											
MSI Group	**0%**	**2%**	**4%**	**10%**	**20%**	**50%**	**70%**	**75%**	**100%**	**150%**	**Others**	**Total exposure value**
Central governments or central banks	59	-	-	-	-	2	-	-	6	-	-	**67**
Regional governments or local authorities	1	-	-	-	-	-	-	-	-	-	-	**1**
Public sector entities	-	-	-	-	-	-	-	-	-	-	-	**-**
Multilateral development banks	-	-	-	-	-	-	-	-	-	-	-	**-**
International organisations	-	-	-	-	-	-	-	-	-	-	-	**-**
Institutions	-	30,927	5,745	-	1,206	24	-	-	224	3	-	**38,129**
Corporates	-	-	-	-	728	74	-	-	1,209	1	-	**2,012**
Retail	-	-	-	-	-	-	-	-	-	-	-	**-**
Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-	**-**
Other Items	-	-	-	-	-	-	-	-	-	-	-	**-**
Total exposure value	**60**	**30,927**	**5,745**	**-**	**1,934**	**100**	**-**	**-**	**1,439**	**4**	**-**	**40,209**

Over the first half of 2022, institutional exposures primarily using a 2% risk weight has increased.

Table 55 shows all the relevant parameters used for the calculation of CCR capital requirements for IRB models as at 30 June 2022 for the MSI Group.

Table 55: IRB approach: CCR exposures by portfolio and PD scale (UK CCR4) - MSI Group

	Exposure Value	**Exposure weighted average PD**	**Number of obligors**	**Exposure weighted average LGD**	**Exposure weighted average maturity**	**RWAs**	**RWA density**
MSI Group	**$MM**	**%**	**#**	**%**	**Years**	**$MM**	**%**
Central governments and central banks							
0.00 to <0.15	11,819	0.02%	194	45.00%	1	927	8%
0.15 to <0.25	242	0.22%	17	45.00%	3	144	59%
0.25 to <0.50	415	0.35%	5	45.00%	-	144	35%
0.50 to <0.75	-	-	-	-	-	-	-
0.75 to <2.50	3	1.25%	7	45.00%	-	2	80%
2.50 to <10.00	242	4.95%	3	45.00%	2	370	153%
10.00 to <100.00	8	17.31%	6	45.00%	1	17	219%
100.00 (Default)	-	-	-	-	-	-	-
	12,729	**0.14%**	**232**	**45.00%**	**1**	**1,604**	**13%**
Corporates							
0.00 to <0.15	29,260	0.07%	5,674	45.38%	2	8,705	30%
0.15 to <0.25	7,727	0.22%	652	46.14%	1	3,753	49%
0.25 to <0.50	5,534	0.35%	2,225	45.00%	1	3,760	68%
0.50 to <0.75	3,368	0.55%	350	45.00%	1	2,735	81%
0.75 to <2.50	5,701	1.25%	1,303	45.00%	1	5,833	102%
2.50 to <10.00	934	4.95%	442	45.00%	1	1,418	152%
10.00 to <100.00	1,764	14.26%	1,244	44.51%	1	3,692	209%
100.00 (Default)	-	100.00%	3	45.00%	2	-	-
	54,288	**0.82%**	**11,893**	**45.35%**	**1**	**29,896**	**55%**
Institutions							
0.00 to <0.15	35,654	0.07%	277	45.39%	1	7,814	22%
0.15 to <0.25	1,427	0.22%	63	45.00%	1	827	58%
0.25 to <0.50	710	0.35%	71	45.54%	1	440	62%
0.50 to <0.75	313	0.55%	34	45.00%	1	265	85%
0.75 to <2.50	650	1.12%	99	45.18%	1	757	117%
2.50 to <10.00	30	4.95%	12	45.00%	1	50	169%
10.00 to <100.00	482	12.27%	77	57.00%	1	1,521	316%
100.00 (Default	-	-	-	-	-	-	-
	39,266	**0.25%**	**633**	**45.51%**	**1**	**11,674**	**30%**
Total (all CCR relevant exposure classes)	**106,283**	**0.53%**	**12,758**	**45.37%**	**1**	**43,174**	**41%**

Over the first half of 2022, decrease in exposures to Institutions in the lower PD bands due to the movement in OTC derivatives, partially offsets the increase in Corporates with higher PD bands.

17. Appendix V: Abbreviations

Term	Definition
AIRB	Advanced Internal Ratings Based
AT1	Additional Tier 1 Capital
BCBS	Basel Committee on Banking Supervision
BIA	Basic Indicator Approach
CCF	Credit Conversion Factor
CCP	Central Counterparty
CCR	Counterparty Credit Risk
CCyB	Countercyclical Capital Buffer
CET1	Common Equity Tier 1 Capital
CFTC	Commodity Future Trading Commission
CLF	Credit Limits Framework
CQS	Credit Quality Step
CRD	Capital Requirements Directive
CRM	Credit Risk Mitigation
CRMD	Credit Risk Management Department
CRMe	Comprehensive Risk Measure
CRR	Capital Requirements Regulation
CVA	Credit Valuation Adjustment
EAD	Exposure at Default
EBA	European Banking Authority
ECAI	External Credit Assessment Institutions
ECB	European Central Bank
EMEA	Europe, the Middle East and Africa
EMEA ALCO	EMEA Asset and Liability Committee
EU	European Union
EVE	Economic Values of Equity
FCA	Financial Conduct Authority
FIRB	Foundation Internal Ratings Based
G-SIIs	Global Systematically Important Institutions
HQLA	High Quality Liquid Assets
IAA	Internal Assessment Approach
ICAAP	Internal Capital Adequacy Assessment Process
ILAAP	Internal Liquidity Adequacy Assessment Process
IMA	Internal Modelling Approach
IMM	Internal Models Method
IRB	Internal Ratings Based
IRRBB	Interest Rate Risk in the Banking Book
IRC	Incremental Risk Charge
ITS	Implementing Technical Standards
LCR	Liquidity Coverage Ratio
LGD	Loss-Given Default
LREQ	Leverage Ratio Requirements
MCR	Minimum Capital Requirements
MDB	Multilateral Development Bank
MM	Millions
MSBAG	Morgan Stanley Bank AG
MSEHSE Group	Morgan Stanley Europe Holding SE Group
MSESE	Morgan Stanley Europe SE
MSI	Morgan Stanley International Limited
MSI Group	Morgan Stanley International Limited (and its subsidiaries)
MSIP	Morgan Stanley & Co. International plc
MRD	Market Risk Department
MREL	Minimum Required Eligible Liabilities
NII	Net Interest Income
NSFR	Net Stable Funding Ratio
OTC	Over the Counter
PD	Probability of Default
PRA	Prudential Regulation Authority

Term	Definition
PSE	Public Sector Entity
QCCP	Qualifying Central Counterparty
RNIV	Risks Not in VaR
RTS	Regulatory Technical Standards
RWAs	Risk Weighted Exposure Amounts
SA	Standardised Approach
SA-CCR	Standardised Approach for Counterparty Credit Risk
SEC	US Securities and Exchange Commission
SEC-SA	Securitisation Standardised Approach
SEC-ERBA	Securitisation External Ratings Based Approach
SEC-IRBA	Securitisation IRB Approach
SFT	Securities Financing Transactions
SPOE	Single Point of Entry
SREP	Supervisory Review and Evaluation Process
SVaR	Stressed Value at Risk
T1	Tier 1
T2	Tier 2
TCR	Total Capital Requirement
TLAC	Total Loss-Absorbing Capacity
TOFR	Total Own Funds Requirements
UK	United Kingdom
VaR	Value at Risk