Morgan Stanley Europe Holding SE Group

Pillar 3 Regulatory Disclosure Report

As at 31 December 2023

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Figures

1. Please note that the English version of the Pillar 3 Disclosure report as of 31 December 2023 is a translation; the German version prevails.

Tables

1. Overview and Key Metrics

The principal activity of Morgan Stanley Europe Holding SE, Frankfurt am Main, Germany ("MSEHSE"), together with its subsidiaries (the "MSEHSE Group") is the provision of financial services to clients based mainly in the European Economic Area ("EEA") consisting of corporations, governments, and financial institutions. There have not been any significant changes in the MSEHSE Group's principal activities during 2023.

As of 31 December 2023 Pillar 3 disclosures are prepared at the consolidated level of the MSEHSE Group. In addition, Morgan Stanley Europe SE, Frankfurt am Main, Germany (“MSESE”) is classified as a large non-listed subsidiary of the MSEHSE Group. Large subsidiary disclosures for MSESE are presented on an individual consolidation basis (MSESE as parent institution incorporating its subsidiary Morgan Stanley Bank AG, Frankfurt am Main, Germany (“MSBAG”), “MSESE Consol”).

Remuneration requirements according to Article 450 of the Capital Requirements Regulation (“CRR”) and §16 of the Remuneration Regulation for Institutions (*Institutsvergütungsverordnung* – *“*InstitutsVergV”) are disclosed within this Pillar 3 report. In previous years these were disclosed in a separate Remuneration Disclosure document.

Directors Responsibility Statement

The Management Boards of the MSEHSE Group certify that the Pillar 3 Disclosure Report of the MSEHSE Group and MSESE Consol as of 31 December 2023 is compliant with Part 8 of the CRR and has been prepared in accordance with formal governance and internal processes, systems and control procedures adopted at the management body level.

Key Metrics

Table 1: Key metrics (EU KM1) - MSEHSE Group and MSESE Consol		a	b	c	d	e
€MM[2] MSEHSE Group[1]		Q4'23	Q3'23	Q2'23	Q1'23	Q4'22
	Available own funds (amounts)					
1	Common Equity Tier 1 (CET1) capital	6,355		6,192		5,191
2	Tier 1 capital	7,355		7,192		6,191
3	Total capital	8,355		8,192		7,191
	Risk-weighted exposure amounts					
4	Total risk exposure amount	27,283		28,393		27,965
	Capital ratios (as a percentage of risk-weighted exposure amount)					
5	Common Equity Tier 1 ratio (%)	23.29%		21.81%		18.56%
6	Tier 1 ratio (%)	26.96%		25.33%		22.14%
7	Total capital ratio (%)	30.62%		28.85%		25.71%
	Additional own funds requirements to address risks other than the risk of excessive leverage (as a percentage of risk-weighted exposure amount)					
EU 7a	Additional own funds requirements to address risks other than the risk of excessive leverage (%)	2.75%		2.75%		2.75%
EU 7b	of which: to be made up of CET1 capital (percentage points)	1.55%		1.55%		1.55%
EU 7c	of which: to be made up of Tier 1 capital (percentage points)	2.06%		2.06%		2.06%
EU 7d	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)					
8	Capital conservation buffer (%)	2.50%		2.50%		2.50%
EU 8a	Conservation buffer due to macro-prudential or systemic risk identified at the level of a Member State (%)	-		-		-
9	Institution specific countercyclical capital buffer (%)	0.71%		0.64%		0.35%
EU 9a	Systemic risk buffer (%)	-		-		-
10	Global Systemically Important Institution buffer (%)	-		-		-
EU 10a	Other Systemically Important Institution buffer (%)	0.25%		0.25%		-
11	Combined buffer requirement (%)	3.46%		3.39%		2.85%
EU 11a	Overall capital requirements (%)	14.21%		14.14%		13.60%
12	CET1 available after meeting the total SREP own funds requirements (%)	17.24%		15.76%		12.52%
	Leverage ratio					
13	Total exposure measure	88,641		79,064		77,190
14	Leverage ratio (%)	8.30%		9.10%		8.02%
	Additional own funds requirements to address the risk of excessive leverage (as a percentage of total exposure measure)					
EU 14a	Additional own funds requirements to address the risk of excessive leverage (%)	-		-		-
EU 14b	of which: to be made up of CET1 capital (percentage points)	-		-		-
EU 14c	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)					
EU 14d	Leverage ratio buffer requirement (%)	-		-		-
EU 14e	Overall leverage ratio requirement (%)	3.00%		3.00%		3.00%
	Liquidity Coverage Ratio					
15	Total high-quality liquid assets (HQLA) (Weighted value -average)	14,337		13,758		10,663
EU 16a	Cash outflows - Total weighted value	23,223		22,613		19,522
EU 16b	Cash inflows - Total weighted value	12,963		12,652		12,648
16	Total net cash outflows (adjusted value)	10,260		9,961		7,158
17	Liquidity coverage ratio (%)	140.82%		139.26%		158.37%
	Net Stable Funding Ratio					
18	Total available stable funding	11,670		13,424		14,430
19	Total required stable funding	5,361		8,575		7,372
20	NSFR ratio (%)	217.70%		156.55%		195.74%

1. The MSEHSE Group is required to maintain a minimum ratio of Own Funds to Risk Weighted Exposure Amounts ("RWAs") as well as to maintain a minimum Leverage Ratio of 3% in accordance with Article 92 CRR. As of 31 December 2023, the MSEHSE Group complies with the minimum required ratios.
2. The quantitative information provided in this Pillar 3 disclosure report are rounded numbers (in millions - MM) and might not add up precisely to the totals provided in referencing documents.

The total capital ratio of the MSEHSE Group increased by 1.77% to 30.62% over the second half of 2023 mainly due to a reduction in Counterparty Credit Risk ("CCR") related RWA by €2,000MM. Additionally own funds increased during the second half of 2023 mainly due to profit recognition €186MM, partially offset by an Additional Tier 1 ("AT1") coupon payment in the amount of €48MM.

The leverage ratio of the MSEHSE Group decreased by 0.8% to 8.3% over the second half of 2023. The decrease is mainly due to an increase in leverage ratio exposure measure partially offset by an increase in Tier 1 ("T1") capital.

Over the second half of 2023, the Liquidity Coverage Ratio ("LCR") of the MSEHSE Group increased by 1.56% following increased High-quality Liquid Assets ("HQLA") by €579MM, partially offset by increased net cash outflows by €299MM.

The Net Stable Funding Ratio ("NSFR") of the MSEHSE Group increased by 61.15%, mainly due to a reduction in Required Stable Funding ("RSF") of €3,214MM, partially offset by decreased Available Stable Funding ("ASF") by €1,754MM.

€MM MSESE Consol[1 2]		a Q4'23
	Available own funds (amounts)	
1	Common Equity Tier 1 (CET1) capital	5,998
2	Tier 1 capital	6,998
3	Total capital	7,998
	Risk-weighted exposure amounts	
4	Total risk exposure amount	27,066
	Capital ratios (as a percentage of risk-weighted exposure amount)	
5	Common Equity Tier 1 ratio (%)	22.16%
6	Tier 1 ratio (%)	25.86%
7	**Total capital ratio (%)**	29.55%
	Additional own funds requirements to address risks other than the risk of excessive leverage (as a percentage of risk-weighted exposure amount)	
EU 7a	Additional own funds requirements to address risks other than the risk of excessive leverage (%)	2.75%
EU 7b	of which: to be made up of CET1 capital (percentage points)	1.55%
EU 7c	of which: to be made up of Tier 1 capital (percentage points)	2.06%
EU 7d	Total SREP own funds requirements (%)	10.75%
	Combined buffer and overall capital requirement (as a percentage of risk-weighted exposure amount)	
8	Capital conservation buffer (%)	2.50%
EU 8a	Conservation buffer due to macro-prudential or systemic risk identified at the level of a Member State (%)	-
9	Institution specific countercyclical capital buffer (%)	0.71%
EU 9a	Systemic risk buffer (%)	-
10	Global Systemically Important Institution buffer (%)	-
EU 10a	Other Systemically Important Institution buffer (%)	-
11	Combined buffer requirement (%)	3.21%
EU 11a	Overall capital requirements (%)	13.96%
12	CET1 available after meeting the total SREP own funds requirements (%)	16.11%
	Leverage ratio	
13	Total exposure measure	88,459
14	Leverage ratio (%)	7.91%
	Additional own funds requirements to address the risk of excessive leverage (as a percentage of total exposure measure)	
EU 14a	Additional own funds requirements to address the risk of excessive leverage (%)	-
EU 14b	of which: to be made up of CET1 capital (percentage points)	-
EU 14c	Total SREP leverage ratio requirements (%)	3.00%
	Leverage ratio buffer and overall leverage ratio requirement (as a percentage of total exposure measure)	
EU 14d	Leverage ratio buffer requirement (%)	-
EU 14e	Overall leverage ratio requirement (%)	3.00%
	Liquidity Coverage Ratio	
15	Total high-quality liquid assets (HQLA) (Weighted value -average)	14,262
EU 16a	Cash outflows - Total weighted value	23,216
EU 16b	Cash inflows - Total weighted value	12,950
16	Total net cash outflows (adjusted value)	10,267
17	Liquidity coverage ratio (%)	140.00%
	Net Stable Funding Ratio	
18	Total available stable funding	11,459
19	Total required stable funding	5,280
20	NSFR ratio (%)	217.04%

1. MSESE Consol is required to maintain a minimum ratio of Own Funds to RWAs and Leverage. As at 31 December 2023, MSESE Consol is in compliance with the CRR capital requirements.
2. As of 31 December 2023, no table narratives are provided for MSESE Consol due to first-time disclosure.

Morgan Stanley Group

Morgan Stanley International Limited ("MSI") which, together with its consolidated subsidiaries, forms the "MSI Group". MSEHSE is a wholly owned subsidiary of MSI. The MSI Group is regulated by the Prudential Regulation Authority ("PRA") and the Financial Conduct Authority ("FCA") in the United Kingdom ("UK"). Details of the latest MSI Group Pillar 3 disclosure can be accessed at: https://www.morganstanley.com/about-us-ir/pillar-uk.

The MSEHSE Group's, and 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 ("FED") in the United States of America ("USA").

The information disclosed in this report is not 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 of the Morgan Stanley Group 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 LCR disclosure and NSFR disclosure can be accessed at https://www.morganstanley.com/about-us-ir/lcr-disclosures-us and https://www.morganstanley.com/about-us-ir/nsfr-disclosures-us.

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/about-us-ir/sec-filings.

MSEHSE Group

MSEHSE is the European Union ("EU") parent company of the MSEHSE Group and is authorised by the European Central Bank ("ECB") as a financial holding company. The MSEHSE Group is subject to joint supervision by the ECB, the Federal Financial Supervisory Authority ("BaFin") and the Deutsche Bundesbank.

MSEHSE directly holds 100% of the shares in MSESE which in turn directly holds 100% of the shares in MSBAG.

MSESE has permission to use the individual consolidation method under Article 9 of the CRR. Under this permission, capital requirements are managed at both the consolidated MSEHSE Group level and at the MSESE Consol level. MSESE Consol is disclosed as a large subsidiary. For reporting periods prior to 1 January 2023 MSESE was exempted from large subsidiary Pillar 3 disclosures because it had been granted a capital waiver in accordance with Article 7 of the CRR and section 2a (2) *Kreditwesengesetz* ("KWG").

MSBAG is classified as a non-large subsidiary in accordance with Article 4 (1) No. 146 CRR and is exempted from the requirement to publish Pillar 3 disclosures. MSBAG has been granted a capital waiver in accordance with Article 7 of the CRR and section 2a (3) KWG, that waives the requirement to comply with disclosure requirements on an individual basis.

Additionally, MSEHSE is the sole shareholder of Morgan Stanley France Holdings I S.A.S, Paris, France ("MSFH I") and its subsidiaries Morgan Stanley France Holdings II S.A.S, Paris, France ("MSFH II") and Morgan Stanley France S.A., Paris, France ("MSF"). MSF and MSFH I are subject to supervision by the Autorité de Contrôle Prudentiel et de Résolution ("ACPR"), Paris. As a Class 2 non-systemic investment firm, MSF falls under the scope of the Investment Firms Regulation ("IFR"). MSFH I on a consolidated basis, and MSF on a solo basis, prepare their own Pillar 3 disclosure report in accordance with the IFR rules. The latest report can be accessed at the following website: https://www.morganstanley.com/about-us/global-offices/europe-middle-east-africa/france.

Additional Regulatory Supervision

As a provider of services to global clients, MSESE is conditionally registered with the SEC as a Securities-Based Swap Dealer ("SBSD"). MSESE is also registered with the Commodity Futures Trading Commission ("CFTC") as a Swap Dealer.

MSESE complies with CRR and German specific capital requirements in lieu of SEC capital requirements pursuant to substituted compliance rules starting 1 January 2023.

The CFTC are developing specific requirements to allow registered non-bank Swap Dealers to meet CFTC capital requirements by reference to local prudential standards with a draft proposal published for Germany. Until those rules are finalised, pursuant to interim no-action relief, MSESE complies with home-country capital requirements in lieu of CFTC capital requirements.

Business Developments

In alignment with its business strategy and regulatory expectations, the MSEHSE Group is expanding its business activities by implementing booking model changes which will result in risk management of additional EU products within the MSEHSE Group.

War and increased tensions in the Middle East

The MSEHSE Group continues to monitor the war and increased tensions in the Middle East and its impact on the regional economy, as well as on other world economies and the financial markets.

2. Regulatory Frameworks

2.1 Regulatory Overview

The Basel Committee on Banking Supervision ("BCBS") sets the Standards 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 central 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 several times, most recently through a series of reforms known collectively as Basel III. The Basel Accords are implemented in the EU via the Capital Requirements Directive ("CRD") and CRR, both as amended. Further detailed requirements are provided through technical standards and regulations issued by other EU bodies, for example the European Banking Authority ("EBA"), as well as the ECB and other national supervisors which includes the BaFin and the Deutsche Bundesbank.

The framework consists of three "Pillars":

- Pillar 1 – Minimum capital and liquidity requirements: defines rules for the calculation of own funds requirements for credit, market, operational and liquidity risk;
- Pillar 2 – Supervisory Review and Evaluation Process ("SREP"): including a requirement for institutions 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 institutions.

Pillar 3 Disclosure

This report represents the annual public Pillar 3 qualitative and quantitative disclosures in relation to the MSEHSE Group and MSESE Consol, as of 31 December 2023. Qualitative and quantitative information are disclosed for MSESE Consol in this report according to Article 13 (1) of the CRR.

The MSEHSE Group's Pillar 3 disclosures are prepared in accordance with the requirements of Part 8 of the CRR. Additional disclosure requirements are implemented by the EBA via Regulatory Technical Standards ("RTS") and Implementing Technical Standards ("ITS"). These additional disclosure requirements include published templates which have been integrated within this disclosure where applicable.

Although not issuing securities admitted to trading on a regulated market of any Member State as of 31 December 2023, the MSEHSE Group voluntarily discloses information on Environmental, Social and Governance risks ("ESG").

2.2 Regulatory Development of Prudential Requirements

Finalising Basel III reforms

There are a number of remaining standards of the Basel III reform package (referred to as "Finalisation of Basel III") that are yet to be implemented. These revisions cover RWA requirements for credit, market, CVA and operational risk.

They also introduce an aggregate floor for RWA generated by internal models, which will be set at 72.5% of total standardised RWA. The output floor will be phased-in over five years. Institutions will also need to disclose their RWA based upon the standardised approaches.

The European Commission published draft rules in October 2021, referred to as CRR III and CRD VI, to implement these final elements of the Basel III reform package. The draft rules are largely consistent with the Basel III reform package with some adjustments to address EU specificities. The proposed rules are currently going through the European legislative process and are subject to amendments proposed by the European Parliament and the Council of the EU. The proposal also includes an increased focus on ESG risks. As of now, these rules are expected to become effective from 1 January 2025.

3. Risk Management

3.1 Overview

The quantitative disclosures in this document are calculated with reference to regulatory methodologies set out in the CRR and the CRD and are not necessarily the primary exposure measures used for risk management.

The business strategy defines the MSEHSE Group's business model, which in turn drives the risk strategy and the consequent risk profile of the MSEHSE Group. The business strategy and risk strategy are considered and aligned as part of the annual strategic review, or more frequently if necessary.

3.2 Risk Management Framework

Risk taking is an inherent part of the MSEHSE Group's business activities and effective risk management is vital to the success of the MSEHSE Group.

Consistent with the waivers granted to the entities of the MSEHSE Group as described in the chapter "Overview and Key Metrics", the Risk Management Framework was established at the MSESE Consol level and at the MSEHSE Group level, encompassing the risk management culture, risk governance, approach and practices that support risk identification, measurement, monitoring, escalation and decision-making processes. This chapter covers the core components of the Framework.

Three Lines of Defence Framework

The MSEHSE Group Management Boards[2] have established a "Three Lines of Defence" framework to create a clear delineation of responsibilities between risk owners and independent risk control functions with a view to addressing potential conflicts of interest.

The structure applies to all legal entities and branches within the MSEHSE Group. The functions responsible for carrying out the activities across the Three Lines of Defence are summarised below.

- **First Line of Defence:** Business Units are responsible for managing their strategy and business activities in accordance with the MSEHSE Group's Risk Strategy and Risk Appetite. This includes the consideration of risks arising from climate change and environmental degradation. Support functions are independent of the Business Units and support strategy execution of MSEHSE Group's revenue-generating activities.
- **Second Line of Defence**: Responsible for independent identification, analysis, reporting, management, and escalation of risks arising from MSEHSE Group's activities, including the risk arising from climate change and environmental degradation. It further sets policies and monitors adherence with these policies. This includes (but is not limited to) the following:
    - The Risk Division is responsible for the independent identification, measurement, monitoring and reporting of Credit, Market, Liquidity and Model Risk arising from MSEHSE Group's business activities. It reports to the MSEHSE Group Chief Risk Officer ("Head of Risk Management"/"CRO") who is also a member of the MSEHSE Group Management Boards.
    - The Operational Risk Department ("ORD") provides independent oversight of Operational Risk and assesses, measures and monitors Operational Risk against tolerances. ORD works with the divisions and control groups to help ensure a transparent, consistent and comprehensive framework for managing Operational Risk within each area and across the MSEHSE Group.
    - The Compliance Department maintains an enterprise-wide, independent Compliance Risk Management Program and is responsible for the design and development of an overall Conduct Risk Framework of the MSEHSE Group. The Compliance Department is independent of the business units and reports directly to the MSEHSE Group Management Boards.

2. The MSEHSE, MSESE and MSBAG Management Boards are collectively referred to as 'MSEHSE Group Management Boards'.

- ◦ The Global Financial Crimes Department is responsible for the Financial Crimes Risk Management Framework covering money laundering as well as fraud and other relevant criminal offences. The team acts independently from the business units, reporting directly to the MSEHSE Group Management Boards.
- ◦ The MSEHSE Group Central Outsourcing Control Office ("COCO") is independent of individual business divisions and reports directly to the MSEHSE Group Management Boards. It is responsible for ensuring the proper execution of outsourcing frameworks and guidelines, working closely with divisional management accountable for supervising any outsourcings by their division to ensure outsourcing regulatory requirements are maintained on a continuous basis.

- **Third Line of Defence**: The Internal Audit Department ("IAD") is independent of the First and Second Lines of Defence. The IAD provides an independent assessment of MSEHSE Group's control environment and risk management processes and further reviews and tests MSEHSE Group's compliance with internal guidelines set for risk management and risk monitoring, as well as external rules and regulations governing the MSEHSE Group.

During 2023, the departments of Global Financial Crimes, Compliance and Operational Risk were organised within a single second line Non-Financial Risk Framework. There were no changes to the MSEHSE Group Heads of Risk Management, Operational Risk, Compliance, Global Financial Crimes, COCO and IAD.

Risk Policies and Processes

Morgan Stanley has several well-established policies and procedures which set out the standards that govern the identification, measurement, monitoring, management and escalation of the various types of risk involved in its business activities.

The MSEHSE Group has implemented specific risk management policies to address local business and regulatory requirements, where appropriate. These policies are approved by the MSEHSE Group Management Boards and reviewed at least annually.

Risk Culture

MSEHSE Group's Risk Management culture is rooted in the following key principles: integrity, comprehensiveness, independence, accountability, and transparency.

The MSEHSE Group has a risk culture that encourages open dialogue, effective challenge, escalation and appropriate reporting of risk to senior management, the MSEHSE Group Supervisory Board Risk Committees, the MSEHSE Group Management Boards and regulators, as well as external disclosures of risk matters. Developing the MSEHSE Group's risk culture is a continuous process and builds upon Morgan Stanley's commitment to its values, including "Do the Right Thing", which make managing risk each employee's responsibility. Senior management promotes the MSEHSE Group's risk culture, which enables individuals across the organisation to make appropriate risk decisions. The Risk Appetite Statements ("RAS") of the MSEHSE Group and MSESE Consol are embedded in the risk culture and linked to MSEHSE Group's short-term and long-term strategic, capital, and financial plans, as well as compensation programmes.

The MSEHSE Group Management Boards are responsible for overseeing the adoption of the Morgan Stanley Group's risk culture by the MSEHSE Group.

The Compliance Department maintains an enterprise-wide, independent Compliance Risk Management Programme as detailed in the Global Compliance Policy. The Compliance Department is responsible for:

- promoting a strong culture of compliance;
- defining an operating model and setting standards for Compliance Risk Management;
- identifying, assessing, addressing and reporting on Compliance Risks;
- maintaining a risk-based programme for monitoring, testing and challenge of Compliance Risk management by the first line of defence across the MSEHSE Group;
- providing advice, guidance (including Compliance policies and, where appropriate, procedures) and training concerning the laws, regulations and policies;
- managing Morgan Stanley's Compliance Risk reporting framework;

- reviewing new products and business initiatives to assess Compliance Risks as part of the New Product Approval process; and
- supporting and facilitating the framework for managing significant communications with regulators and regulatory relationships maintained by the Regulatory Relations Group.

This is reinforced by the Code of Conduct which sets out the high standards of conduct and ethical behaviour expected from all employees.

The Compliance Department is also responsible for the design and development of an EMEA ("Europe, the Middle East and Africa") Conduct Risk Framework and for the execution of compliance related responsibilities as set out in the EMEA and MSI Group Conduct Risk Management Supplement, which is a supplement to the Global Conduct Risk Management Policy.

Risk Identification, Risk Appetite and Risk Limits/Tolerances

Risk Identification

The MSEHSE Group has established a framework to identify and assess material risks and risk factors stemming from MSEHSE Group's business activities. The materiality of risks is assessed quarterly on a quantitative and qualitative basis, using risk specific stress tests where possible. In addition, other risk management processes such as regular risk reviews, horizon scanning, and ad-hoc stress tests are conducted to assess impacts of potential market events and regulations and thereby support the continuous process of risk identification.

Material risks identified through these processes inform the design of key risk and capital management processes, including the MSEHSE Group Risk Strategy and RAS, individual risk management frameworks, macroeconomic stress testing scenarios, as well as the MSEHSE Group's ICAAP and ILAAP.

The following risk types involved in MSEHSE Group's business activities are currently considered material as determined through the Risk Identification Framework:

- Credit Risk;
- Market Risk;
- Liquidity Risk;
- Operational Risk;
- Leverage Risk;
- Valuation Risk;
- Earnings at Risk / Strategic Risk;
- Model Risk;
- Compliance Risk;
- Conduct Risk;
- Reputational Risk.

Climate change is a driver of existing risks and is managed within the MSEHSE Group's existing Risk Appetite. For further detail, refer to Chapter 15 Climate and Environmental Risk.

The MSEHSE Group Management Boards have established frameworks to identify, analyse, monitor, mitigate and report these risks. The frameworks for Credit Risk, Market Risk, Liquidity Risk, Operational Risk, Leverage Risk and Valuation Risk are described in further detail in the respective chapters of this document.

A summary of other material risks is outlined below:

- **Earnings at Risk/Strategic Risk** are defined as risks to baseline earnings stability that are generally manifested over a longer time horizon rather than an instantaneous market shock. Risk can arise from a decline in key revenue generators, significant loss of customer base, reduced standing amongst competitors, macroeconomic stress conditions, idiosyncratic or industry-wide factors, significant changes to expected expenses, transfer pricing impacts and shifting of business/product mix. This includes risks to Net Revenue, Net Interest Income

("NII"), Non-Interest Income, Non-Interest Expense and Balance Sheet that are impacted by more than just Market Risks and Credit Risks.

- **Model Risk** is the potential for adverse consequences from decisions based on incorrect or misused model outputs. Model Risk can lead to financial loss, poor business and strategic decision-making, or damage to Morgan Stanley's reputation.
- **Compliance Risk** is defined as the risk of legal or regulatory sanctions, material financial loss or damage to reputation resulting from the failure to comply with laws, rules, regulations, related self-regulatory organisation standards and codes of conduct applicable to MSEHSE Group's activities.
- **Conduct Risk** is defined as the risk arising from misconduct by individual employees or contingent workers (collectively, "Covered Persons") or groups of Covered Persons, or the risk arising from conduct by the Morgan Stanley Group where the outcome has an adverse impact on clients or markets.
- **Reputational Risk** (also referred to as Franchise Risk), describes potential risks associated with the way in which the MSEHSE Group conducts its business and the perception of the MSEHSE Group by external parties including shareholders, clients, regulators and the public. Reputational risks may be triggered by either the nature of the transaction (e.g., unusual complexity or novel issues) or business practice (e.g., a transaction without appropriate economic substance or business purpose) or by the identity or reputation of the client or counterparty (e.g., a client linked to alleged corruption or other improper activities).

Risk Appetite

The MSEHSE Group Management Boards determine the Risk Strategy of the MSEHSE Group consistent with the business strategy and the risks stemming from it. The Risk Strategy sets the framework for how risks will be identified, measured, monitored, and reported.

The centrepiece of the Risk Strategy are the RAS for MSEHSE Group and MSESE Consol, which articulate the aggregate level and type of risk that the MSEHSE Group entities are willing to accept in executing the business strategy while protecting capital and liquidity resources. The RAS consist of both qualitative and quantitative statements.

To remain adequate in a changing environment, the RAS and the underlying limits and tolerance frameworks are reviewed by the MSEHSE Group Management Boards when required (e.g., when the business strategy is amended by the Management Boards), but at least annually. This review takes into account changes in the MSEHSE Group business strategy, financial resources and plans as well as any anticipated changes in risk appetite.

Key ratios and figures are provided in EU KM1, EU OV1, as well as within the risk type specific chapters.

Risk Limits/Tolerances

The Risk Appetite of the MSEHSE Group and MSESE Consol are translated into a comprehensive set of risk limits and risk tolerances across Credit Risk, Market Risk, Operational Risk, and Liquidity Risk, each at different granularity levels to manage risk taking in line with MSEHSE Group's and MSESE Consol's Risk Appetite.

MSEHSE Group's aggregate Risk Appetite for Market and Credit Risk is expressed as a percentage of Total Capital Resources. It is operationalised through the Macroeconomic Stress Loss Limit ("MSLL") and monitored through a suite of severe and plausible Macroeconomic Scenarios, designed to capture key portfolio vulnerabilities of the MSEHSE Group. The credit and market risk limits are calibrated to reflect MSEHSE Group's and MSESE Consol's Market and Credit Risk Appetite. The potential impact of climate-related risks on Credit and Market Risk is assessed through a specific transition risk/carbon repricing scenario and managed via the Climate Stress Loss Limit ("CSLL").

Once established, risk limits are reviewed and updated on an annual basis at a minimum, with more frequent updates as necessary.

Figure 1 outlines the MSEHSE Group Limit Framework for specific risk areas.

Figure 1: MSEHSE Group and MSESE Consol Limit Framework

<table>
<tr><th></th><th>MARKET RISK</th><th>CREDIT RISK</th><th>OPERATIONAL RISK</th><th>LIQUIDITY RISK</th></tr>
<tr><td rowspan="2">RISK METRICS AND LIMITS</td><td colspan="2">• Macroeconomic stress loss limits
• Climate stress loss limits</td><td rowspan="2">• Aggregate Operational Risk Tolerance level
• Tolerances for each Top Operational Risk (TOR)</td><td rowspan="2">• Liquidity and Funding Limits
• Granular business area specific limits on liquidity and funding</td></tr>
<tr><td>• Legal entity and Division Value at Risk (“VaR”) and exposure limits
• Granular risk exposure limits are allocated by desk/products</td><td>• Single name, country, and industry credit limits
• Climate Risk Industry Limits
• Granular product limits for certain business areas</td></tr>
</table>

Stress Testing

Stress testing provides a flexible approach to understanding the aggregate risk for the MSEHSE Group and assessing the MSEHSE Group’s resilience to different scenarios over a range of severities. At a more granular level, stress tests provide detailed insights of potential areas of weakness in portfolios at the business area and counterparty level, respectively. Stress testing is a key risk management tool for the MSEHSE Group, addressing a number of processes and associated decisions and is performed in line with internal and external regulatory requirements.

The MSEHSE Group conducts both cross-risk stress tests and risk specific stress tests with the following objectives:

- Risk Identification: Identification of material risk concentrations and vulnerabilities in adverse scenarios;
- Risk Aggregation: Estimation of aggregate size of exposure and losses in adverse shocks;
- Risk Management: Management of tail risks or vulnerabilities against risk appetite;
- Capital and Liquidity Management: Informing the capital and liquidity risk assessment processes and plans (ICAAP & ILAAP) and the recovery plan;
- Regulatory Requirements: Meeting regulatory requirements.

Results are communicated to interested parties and committees, such as the MSEHSE Group Executive Risk Committee (“ERC”) and the MSESE ERC, the MSEHSE Group Management Boards, the MSEHSE Group Supervisory Boards[3] and their Risk Committees on a regular basis.

Cross-risk stress tests

Cross-risk stress tests help ensure that concentration risks are captured and measured across the material risks. Cross-risk stress tests can be classified into macroeconomic stress tests, Reverse Stress Tests ("RST"), and topical stress tests.

- Macroeconomic scenarios are MSEHSE Group’s primary stress testing tool to monitor, assess, and manage MSEHSE Group’s vulnerability to downside risk. The MSEHSE Group runs a suite of macroeconomic stress test scenarios on a regular basis to measure its market and credit risk loss potential and to monitor those against the MSLL. Each scenario is supported by a macroeconomic narrative, a detailed set of macroeconomic projections and a set of instantaneous market shocks, and selected credit risk default rules as appropriate.
- Reverse Stress Tests : Existential threats to MSEHSE Group’s business model are captured through RST. The scenarios used in RST are extreme and borderline plausible and are designed to test a pre-defined outcome (e.g. viability of MSEHSE Group's business model). RST are used to inform recovery planning and are considered in capital and liquidity planning.
- Topical Stress Tests: Specific market events or portfolio vulnerabilities are assessed through Topical Stress Tests, such as scenarios related to the war and increased tension in the Middle East, to evaluate the possible impact of “downside” scenarios on MSEHSE Group’s risk and resource profile.

3. The MSEHSE, MSESE and MSBAG Supervisory Boards are collectively referred to as the ‘MSEHSE Group Supervisory Boards’.

Risk-specific stress tests

Risk-specific stress tests identify and measure vulnerabilities and concentrations that may arise in a particular risk area, country, or industry. The MSEHSE Group conducts risk specific stress tests for Operational Risk, Market Risk, Credit Risk and Liquidity Risk.

Risk Reporting

The MSEHSE Group has put in place a Risk Reporting Framework to monitor and report MSEHSE Group's risk profile against set risk limits and tolerances, and to provide timely risk information and/or escalation to responsible limit owners and relevant MSEHSE Group risk governance forums (for further detail, refer to section "Risk Governance" Figure 3), as appropriate.

The Risk Reporting Framework covers all material risks, identification of matters for escalation and decision-making and highlights emerging risks, mitigating actions and other risk matters that are deemed significant to the relevant MSEHSE Group risk governance forums and/or the MSEHSE Group Management Boards.

The key purpose of risk reporting is to provide decision makers and risk managers with an accurate and timely representation of risk exposures, including risk concentrations, at the MSEHSE Group level, across business lines and between legal entities. To provide this information, MSEHSE Group generates various risk reports across individual risk functions including Market, Credit, Operational, Liquidity and Model Risk, at different frequencies (e.g., daily, weekly).

In addition, MSEHSE Group has established a set of principles for risk reports which are applied to risk reporting, such as the appropriate level of aggregation, balance between qualitative and quantitative information or implementation of controls to ensure reported information is complete and accurate.

MSEHSE Group's Data Quality ("DQ") monitoring and reporting processes are integrated into the Morgan Stanley Group's global DQ management processes. The DQ for risk-related data is reviewed through defined Key Performance Indicators ("KPIs") which are summarised in respective DQ Dashboards for certain risk areas such as Credit Risk, Market Risk and Liquidity Risk. At the MSEHSE Group level, any material data limitations/issues on risk data goes through governance and is escalated to the MSEHSE Group Management Boards if necessary.

Risk Governance

The MSEHSE Group has a comprehensive risk management governance framework which includes Management Boards approved policies and a defined risk oversight and escalation process at various levels of the governance structure, including for key MSEHSE Group legal entities as appropriate.

Each of MSEHSE, MSESE and MSBAG is governed by a two-tier board, consisting of a Management Board and a Supervisory Board. The MSEHSE Group Management Boards are responsible for the establishment and implementation of appropriate organisational and governance arrangements and risk management frameworks across the MSEHSE Group. The MSEHSE Group Supervisory Boards are responsible for the overall supervision and oversight of the MSEHSE Group Management Boards.

As of 31 December 2023, the MSEHSE Management Board was comprised of five members, the MSESE Management Board was comprised of seven members and the MSBAG Management Board was comprised of five members. The MSEHSE Group Supervisory Boards were comprised of seven members each.

Figure 2: MSEHSE Group Boards Composition as of 31 December 2023

Management Board of MSEHSE	Management Board of MSESE	Management Board of MSBAG	Supervisory Boards of MSEHSE, MSESE and MSBAG[(1)(3)]
Oliver Behrens (Chief Executive Officer and Chair)	Oliver Behrens (Chief Executive Officer and Chair)	Oliver Behrens (Chief Executive Officer and Chair)	Frank Mattern (Chair)
David Best (Chief Operating Officer)	David Best (Chief Operating Officer)	David Best (Chief Operating Officer)	Clare Woodman (Deputy Chair)
Emmanuel Goldstein	Martin Borghetto (MSESE Head of Institutional Equities Division)	Oliver Kehren (MSBAG Head of Lending and Loan Trading)	Raja Akram
André Munkelt (Chief Risk Officer)	Emmanuel Goldstein	André Munkelt (Chief Risk Officer)	Maria Luís Albuquerque
Dr. Jana Währisch (Chief Financial Officer)	Philipp Lingnau (MSESE Head of Fixed Income Division and Bank Risk Management)	Dr. Jana Währisch (Chief Financial Officer)	David Cannon
	André Munkelt (Chief Risk Officer)		Lee Guy[(2)]
	Dr. Jana Währisch (Chief Financial Officer)		Kim Lazaroo

1 Lucrezia Reichlin resigned as member of the Supervisory Boards of MSEHSE, MSESE and MSBAG with effect as of 31 May 2023.
2 Lee Guy resigned as a member of the Supervisory Boards of MSEHSE, MSESE and MSBAG with effect from 13 February 2024.
3 Paula Smith was appointed as a member of the Supervisory Boards of MSEHSE, MSESE and MSBAG with effect from 1 January 2024.

For further details on the members of the MSEHSE Group Management Boards and MSEHSE Group Supervisory Boards, including biographies and other directorships, refer to Appendix I.

MSEHSE Group Management Board Committees (associated with Risk Governance)

The MSEHSE Group Management Boards have established a robust committee structure for the governance of material risks.

In particular, the ERCs assist the Management Boards with their oversight of the Risk Management framework and other specific areas of day-to-day activities of the MSEHSE Group. The ERCs have further established a series of sub-committees and also leverage certain existing EMEA committees where appropriate.

MSEHSE Group Supervisory Board Committees

The MSEHSE Group Supervisory Board Risk Committees have been established to assist and provide guidance to the MSEHSE Group Supervisory Boards on the overall risk tolerance and strategy of the MSEHSE Group and its oversight of the implementation of this strategy by the MSEHSE Group Management Boards, as well as the management of financial and non-financial risks, including:

- risk strategy and appetite;
- risk identification and management;
- risk framework and policies;
- risk culture;
- financial resource management and capital; and
- recovery and resolution, in each case in relation to the MSEHSE Group.

The MSEHSE Group Supervisory Board Risk Committees met four-times in 2023 and had two additional joint meetings with the MSEHSE Group Supervisory Board Audit Committees.

The MSEHSE Group Supervisory Board Audit Committees have been established to assist and provide guidance to the MSEHSE Group Supervisory Boards in monitoring:

- financial reporting;
- internal controls;
- legal and regulatory compliance;
- internal audit; and
- the external auditors, in each case in relation to the MSEHSE Group.

The MSEHSE Group Remuneration Committees ("MSEHSE RemCo") have been established to assist the MSEHSE Group Supervisory Boards in:

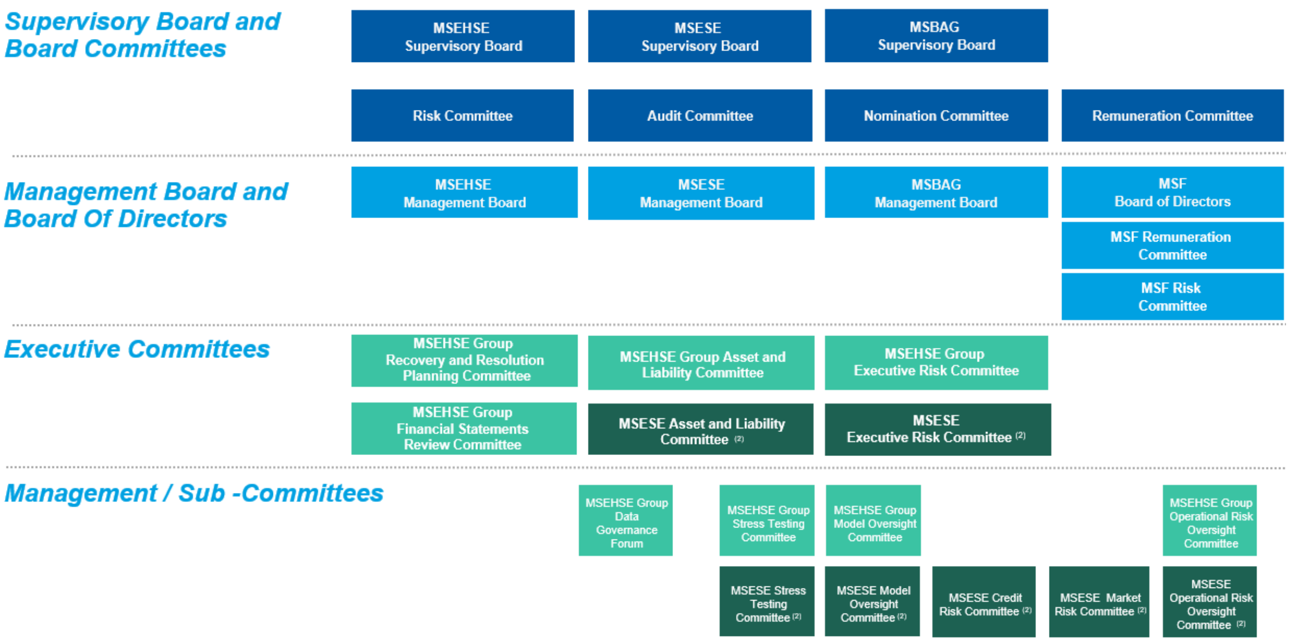
- overseeing the design and implementation of the remuneration systems, policies, and practices applicable to MSEHSE Group; and
- monitoring compliance by the MSEHSE Group with applicable EU and German remuneration rules, statements, and guidance.

The MSEHSE Group Nomination Committees have been established to assist and provide guidance to the MSEHSE Group Supervisory Boards in relation to:

- the selection of members of the MSEHSE Group Management Boards and the preparation of proposals for the election of members of the MSEHSE Group Supervisory Boards;
- the assessment of the performance of the MSEHSE Group Management Boards and Supervisory Boards; and
- the corporate governance framework in relation to the MSEHSE Group.

The following diagram provides an overview of the MSEHSE Group Board Committees as of 31 December 2023.

Figure 3: MSEHSE Group and MSESE Consol Board Committees[1] as of 31 December 2023



1 Overview of the MSEHSE Group Governance Structure, including the key EMEA/MSI Group Governance Committees that are relevant for the MSEHSE Group.
2 Committee is responsible for MSESE and MSBAG on consolidated level and meets jointly with the respective MSEHSE Group Committee.

Following the permission received for MSESE to apply the individual consolidation method under Article 9 of the CRR the MSESE ERC, its sub-committees and the MSESE Asset and Liability Committee ("ALCO") were established at the level of MSESE Consol with effect as of 1 January 2023.

The MSEHSE Group Regulatory Oversight Committee was dissolved in December 2023.

Adequacy of Risk Management Arrangements

The MSEHSE Group Management Boards have approved, for the purpose of Article 435(1) CRR, the below concise risk statement and declaration on the adequacy of the risk management arrangements:

The MSEHSE Group Risk Management Framework, as described above, is embedded in the day-to-day operations of the MSEHSE Group. The effectiveness of the framework is reviewed at least annually and, where appropriate, elements are updated to reflect best practice, evolving market conditions, lessons learned following market-wide or idiosyncratic risk events, and in response to changing regulatory expectations and requirements. The MSEHSE Group Management Boards have reviewed the adequacy of these risk management arrangements and systems, including Management's planned enhancements to strengthen these elements, and considers these appropriate given the strategy and risk profile of the MSEHSE Group.

MSEHSE Group Risk Situation

The MSEHSE Group's Risk Strategy and Risk Appetite are aligned with the MSEHSE Group's business strategy as well as capital and liquidity resources and are embedded into risk management processes. The MSEHSE Group remained within the set Risk Appetite throughout 2023 and maintained economic capital requirements below its internal capital (risk bearing capacity).

Key figures and an overview of the MSEHSE Group's risk profile are described in the table below.

Table: Economic Perspective

€MM	2023	2022
Risk Bearing Capacity	**6,184**	**5,053**
Capital Requirements	**3,211**	**2,870**
Credit risk	2,038	1,929
Market risk	352	279
Operational risk	609	535
Other	212	127

4. Basis of Preparation and Linkage to Financial Accounts

Basis of Consolidation

The MSEHSE Group completes its prudential consolidation in compliance with CRR Part 1, Title II Chapter 2, with all entities fully consolidated. The prudential consolidation scope is the same as the consolidation scope for accounting purposes.

Financial Statements

This disclosure report does not constitute a set of financial statements and does not represent any form of forward-looking statement. The consolidated financial statements of MSEHSE have been prepared in accordance with the International Financial Reporting Standards ("IFRS"), as adopted in the EU, with additional disclosure requirements from the German Commercial Code ("HGB"). These can be found at https://www.unternehmensregister.de/ureg/ as well as on the following webpage https://www.morganstanley.com/about-us-ir/subsidiaries.

The breakdown of entities of the MSEHSE Group by country (country-by-country reporting) required under section 26a (1) sentence 2 KWG is included in the MSEHSE Group's consolidated financial statements. The disclosure of return on capital required under section 26a (1) sentence 4 KWG is reported in the MSESE and MSBAG solo financial statements. Information on the appropriateness and effectiveness of risk management and the associated business and risk strategy, in accordance with section 25a KWG, is provided in Section 3. Risk Management.

Trading Book/Non-Trading Book

In determining its overall capital requirement, the MSEHSE Group classifies its exposures as either "Trading Book" or "Non-Trading Book" (otherwise referred to as Banking Book).

Positions are attributed to the Non-Trading Book unless they meet the criteria for Trading Book classification. Generally they are accounted for at amortised cost, fair value or under the equity method, and are subject to credit risk capital requirements as discussed in the Credit Risk section.

Trading Book positions represent positions that the MSEHSE Group holds as part of its market-making and underwriting businesses, and should be resold in the short term, or the positions are intended to benefit from actual or expected short-term differences between bid and ask prices or other price or interest rate fluctuations. These Trading Book positions, which reflect assets or liabilities that are accounted for at fair value, along with certain Non-Trading Book positions which are subject to both credit risk and market risk, are subject to market risk capital requirements, as discussed in the Market Risk section. Some Trading Book positions, such as derivatives, are also subject to CCR capital requirements.

Credit and market risks related to securitisation exposures are discussed in the Securitisation section. Trading Book and Non-Trading Book definitions used in this document refers to the regulatory view and may differ from the accounting definitions.

Policies and Procedures

The MSEHSE Group has policies and procedures in place to assess the appropriateness of its Pillar 3 disclosure. All members of the management body are required to confirm that the disclosure has been prepared in accordance with internal control processes agreed upon at the level of the MSEHSE Group Management Boards.

Balance Sheet under the Regulatory Scope of Consolidation

Table 2 shows the MSEHSE Group's balance sheet as of 31 December 2023 on both an accounting consolidation and regulatory consolidation basis.

The carrying values are broken down into the stated risk frameworks and where they are not subject to capital requirements or subject to deduction from capital.

Table 2: Differences between the accounting scope and the scope of prudential consolidation and mapping of financial statement categories with regulatory risk categories (EU LI1) - MSEHSE Group

		a	b	c	d	e	f	g
€MM				Carrying values of items				
MSEHSE Group[1]		Carrying values as reported in published financial statements	Carrying values under scope of prudential consolidation	Subject to the credit risk framework	Subject to the CCR framework	Subject to the securitisation framework	Subject to the market risk framework	Not subject to own funds requirements or subject to deduction from own funds
Breakdown by asset class according to the balance sheet in the published financial statements								
1	Cash and short-term deposits	9,982	9,982	9,961	-	-	-	21
2	Trading financial assets	49,843	49,843	84	40,524	-	49,765	-
3	Secured financing	29,575	29,575	-	29,575	-	27,526	-
4	Loans and advances	120	120	120	-	-	118	-
5	Investment securities	-	-	-	-	-	-	-
6	Trade and other receivables	16,927	16,927	3,143	13,233	-	3	551
7	Current tax assets	104	104	104	-	-	-	-
8	Deferred tax assets	30	30	30	-	-	-	-
9	Other assets	5	5	4	-	-	-	1
10	Property plant and equipment	125	125	125	-	-	-	-
11	Intangible assets	-	-	-	-	-	-	-
	Total assets	**106,711**	**106,711**	**13,571**	**83,332**	**-**	**77,412**	**573**
Breakdown by liability class according to the balance sheet in the published financial statements								
1	Bank loans and overdrafts	(3,892)	(3,892)	-	-	-	-	(3,892)
2	Trading financial liabilities	(52,457)	(52,457)	-	(39,595)	-	(52,457)	-
3	Secured borrowing	(22,797)	(22,797)	-	(22,797)	-	(18,738)	-
4	Trade and other payables	(16,222)	(16,222)	-	(14,805)	-	(1)	(1,416)
5	Debt and other borrowings	(3,776)	(3,776)	-	-	-	(3,776)	-
6	Provisions	(13)	(13)	(5)	-	-	-	(8)
7	Current tax liabilities	(38)	(38)	-	-	-	-	(38)
8	Deferred tax liabilities	(1)	(1)	-	-	-	-	(1)
9	Post-employment benefit obligations	(23)	(23)	-	-	-	-	(23)
	Total liabilities	**(99,219)**	**(99,219)**	**(5)**	**(77,197)**	**-**	**(74,972)**	**(5,378)**

1. The total carrying values under the regulatory scope of consolidation do not equal the sum of the amounts shown in the remaining columns of this table as some of the assets included in these items are subject to regulatory capital charges in more than just one risk framework.

Table 3 shows the MSEHSE Group consolidated regulatory balance sheet (per EU LI1) reconciled to the Exposures at Default ("EAD") for items subject to the Credit Risk, CCR and Securitisation frameworks.

Table 3: Main sources of differences between regulatory exposure amounts and carrying values in financial statements (EU LI2) - MSEHSE Group

		a	b	c	d	e
€MM			Items subject to			
MSEHSE Group[1]		Total	Credit risk framework	Securitisation framework	CCR framework	Market risk framework
1	**Assets carrying value amount under the scope of prudential consolidation (as per template LI1)**	**106,138**	**13,571**	**-**	**83,332**	**77,412**
2	**Liabilities carrying value amount under the scope of prudential consolidation (as per template LI1)**	**(93,841)**	**(5)**	**-**	**(77,197)**	**(74,972)**
3	**Total net amount under the scope of prudential consolidation**	**12,297**	**13,566**	**-**	**6,135**	**2,440**
4	**Off-balance-sheet amounts[2]**	**70,371**	**70,371**	**-**	**-**	
5	*Differences in valuations*	-	-	-	-	
6	*Differences due to different netting rules, other than those already included in row 2[3]*	12,159	-	-	12,159	
7	*Differences due to consideration of provisions[4]*	8	8	-	-	
8	*Differences due to the use of credit risk mitigation techniques (CRMs)[5]*	(88,273)	(64,207)	-	(24,066)	
9	*Differences due to credit conversion factors[6]*	(3,162)	(3,162)	-	-	
10	*Differences due to Securitisation with risk transfer*	-	-	-	-	
11	*Other differences[7]*	26,282	(2,412)	-	28,647	
12	**Exposure amounts considered for regulatory purposes[8]**	**29,682**	**14,164**	**-**	**22,875**	

1. The total carrying values under the regulatory scope of consolidation do not equal the sum of the amounts shown in the remaining columns of this table as some of the assets included in these items are subject to regulatory capital charges in more than just one risk framework.
2. Under the credit risk framework, off-balance sheet amounts principally consist of undrawn credit facilities and the aggregate value of forward starting (reverse) repos ("FSRs") and reverse repos, before the use of a credit conversion factor ("CCF").
3. Differences due to different netting rules: This reflects the netting that is not permitted per regulatory rules related to balances that are presented net in row 3 of the above table.
4. Differences due to consideration of provisions: This reflects the removal of accounting provisions recorded for on and off-balance sheet credit risk exposures.
5. Differences due to use of CRM techniques: Impact of CRM such as guarantees and collateral to the regulatory exposure values. Haircuts on Securities Financing Transactions ("SFTs") are considered.
6. Differences due to CCF: Impact of CCF on off-balance sheet exposures.
7. Other differences: This reflects the difference between assets carrying values as defined per IFRS and the values defined for regulatory reporting purposes. This includes add-ons and differences in modelled and non-modelled approaches.
8. Row 12, "Exposure amounts considered for regulatory purposes", are disclosed only for Credit Risk, CCR and Securitisation frameworks, where applicable (columns b – d). No exposures are reported against the Market Risk framework (column e).

5. Capital Management

The MSEHSE Group and MSESE Consol view capital as an important source of financial strength. They manage and monitor their capital in line with established policies and procedures and in compliance with regulatory requirements. In line with Morgan Stanley Group capital management policies, the MSEHSE Group and MSESE Consol manage their capital position based upon, among other things, business opportunities, risks, capital availability and rate of return together with, internal capital policies, regulatory requirements, and rating agency guidelines.

MSEHSE Group and MSESE Consol may adjust their capital base in reaction to the changing needs of their businesses. The appropriate level of capital is determined at the MSEHSE Group and MSESE Consol levels to safeguard their ability to continue as a going concern and ensure that they meet all normative and economic capital requirements.

The key components of the capital management framework used by the MSEHSE Group and MSESE Consol are set out in the MSEHSE Group Capital Planning and Management Policy and include a point in time risk and leverage-based capital assessment, forward-looking capital projections and stress testing. The MSEHSE Group and MSESE Consol conduct an ICAAP at least quarterly to meet their obligations under the CRR.

The ICAAP is a key tool used to inform the MSEHSE Group Management Boards and executive management on the risk profile and capital adequacy of the MSEHSE Group and MSESE Consol:

- it is designed to ensure that the risks to which the MSEHSE Group and MSESE Consol are exposed are appropriately capitalised and risk managed, including those risks that are either not captured, or not fully captured under Pillar 1;
- it uses stress testing to size a capital buffer aimed at ensuring the MSEHSE Group and MSESE Consol will continue to operate above normative and economic requirements under a range of severe but plausible stress scenarios;
- it assesses capital adequacy under normal and stressed operating environments over the three-year capital planning horizon to ensure the MSEHSE Group and MSESE Consol maintain a capital position in line with internal pre and post stress minimum levels.

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

The Joint Supervisory Team ("JST", with representatives of ECB, BaFin and Deutsche Bundesbank) reviews the ICAAP through its SREP and sets a Total SREP Capital Requirement ("TSCR"), comprising of Pillar 1 and Pillar 2 Requirements ("P2R") and Pillar 2 Guidance ("P2G"), which establishes the minimum level of regulatory capital for the MSEHSE Group and MSESE Consol.

MSEHSE Group and MSESE Consol capital is managed to ensure risk and leverage-based requirements assessed through the ICAAP and SREP are met. Internal capital ratio minima are set by the MSEHSE Group Management Boards to ensure the MSEHSE Group and MSESE Consol both have sufficient capital to meet their regulatory and internal requirements at all times.

The capital managed by the MSEHSE Group and MSESE Consol broadly includes share capital, AT1 capital instruments, subordinated debt, and reserves. To maintain or adjust their capital structure, the MSEHSE Group and MSESE Consol may pay dividends, return capital to its shareholders, issue new shares, or issue or repay AT1 capital instruments or subordinated debt.

There are no current or foreseen material, practical or legal impediments to the prompt transfer of capital resources or repayment of liabilities among MSEHSE and its subsidiaries as of 31 December 2023.

6. Capital Resources

The capital resources of the MSEHSE Group & MSESE Consol are set out in Table 4.

Table 4: Own funds - MSEHSE Group and MSESE Consol

€MM	MSEHSE Group Q4’23	MSESE Consol Q4'23
Capital instruments eligible as CET1 capital	4,650	3,901
Prior Year Retained earnings[1]	370	370
Independently reviewed interim profits net of any foreseeable charge or dividend	-	-
Accumulated other comprehensive income	1	1
Other reserves	1,472	1,863
Adjustments to CET1 due to prudential filters	(120)	(120)
Other intangible assets	-	-
Internal Ratings Based shortfall of credit risk adjustments to expected losses	(10)	(9)
Defined-benefit pension fund assets	-	-
Insufficient coverage for non-performing exposures	0	0
Deferred tax assets that rely on future profitability and do not arise from temporary differences net of associated tax liabilities	(8)	(8)
CET1 capital elements or deductions - other	-	-
CET1 capital	**6,355**	**5,998**
AT1 capital	1,000	1,000
T1 capital	**7,355**	**6,998**
Capital instruments and subordinated loans eligible as T2 capital	1,000	1,000
Instruments issued by subsidiaries that are given recognition in T2 capital	-	-
T2 capital	**1,000**	**1,000**
Total own funds	**8,355**	**7,998**

1. Prior year retained earnings includes audited profits for year ended 31 December 2022 profits for MSEHSE Group.

During 2023 the MSEHSE Group's total own funds increased by €1,163MM to €8,355MM due to a capital infusion into other reserves and profit recognition.

The MSEHSE Group relies on its policies, procedures, controls, and systems to determine the adequacy of valuation for financial assets and compliance with accounting standards. To comply with the CRR and the CRD, Additional Valuation Adjustments ("AVAs") are taken in addition to those adjustments previously taken to comply with the accounting requirements. The regulatory adjustments are referred to in the above table as prudential filters.

The capital resources of the MSEHSE Group are based upon audited consolidated statutory financial statements and for MSESE Consol are based upon consolidated non-statutory financial information.

Table 5 provides a reconciliation of shareholders' equity to regulatory capital. It provides a bridge from balance sheet equity to regulatory own funds i.e., items considered or excluded to arrive at regulatory own funds.

Table 5: Reconciliation of balance sheet total equity to regulatory capital - MSEHSE Group and MSESE Consol

€MM	MSEHSE Group				MSESE Consol			
	Total capital	CET1 capital	AT1 capital	T2 capital	Total capital	CET1 capital	AT1 capital	T2 capital
Equity instruments	5,650	4,650	1,000	-	4,901	3,901	1,000	-
Other reserves	1,472	1,472	-	-	1,863	1,863	-	-
Other comprehensive income	1	1	-	-	1	1	-	-
Retained earnings	370	370	-	-	370	370	-	-
Balance sheet total equity	**7,493**	**6,493**	**1,000**	**-**	**7,135**	**6,135**	**1,000**	**-**
Add:								
Tier 2 instruments classified as debt and other borrowings	**1,000**	**-**	**-**	**1,000**	**1,000**	**-**	**-**	**1,000**
Less:								
Part of interim or year-end profit not eligible	-	-	-	-	-	-	-	-
Additional value adjustments	(63)	(63)	-	-	(63)	(63)	-	-
Negative amounts resulting from the calculation of expected loss amounts	(10)	(10)	-	-	(9)	(9)	-	-
Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	(57)	(57)	-	-	(57)	(57)	-	-
Deferred tax assets that rely on future profitability and do not arise from temporary differences net of associated tax liabilities	(8)	(8)	-	-	(8)	(8)	-	-
Insufficient coverage for non-performing exposures	0	0	-	-	0	0	-	-
CET1 capital elements or deductions - other	-	-	-	-	-	-	-	-
Other comprehensive income adjustment	0	0	-	-	0	0	-	-
Total own funds	**8,355**	**6,355**	**1,000**	**1,000**	**7,998**	**5,998**	**1,000**	**1,000**

7. Total Loss-Absorbing Capacity

The MSEHSE Group is subject to internal Total Loss Absorbing Capacity (“iTLAC”) requirements under the CRR. MSESE Consol is not subject to TLAC requirements.

These requirements are designed to enhance the resilience of the financial system by ensuring institutions have sufficient capital and eligible liabilities to absorb losses and recapitalise in resolution.

As of 31 December 2023, the minimum requirements were set at 18% of RWAs and 6.75% of leverage exposure, scaled at 90% for MSEHSE Group as a material subsidiary, on a consolidated basis, of a non-EU Global Systemically Important Institution ("G-SII").

The MSEHSE Group is subject to internal Minimum Required Eligible Liabilities (“MREL”) requirements. MSESE Consol became subject to MREL requirements from 1 January 2024.

Morgan Stanley Group'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 10-K Report and Quarterly 10-Q Report as well as the Public Section of Morgan Stanley's Title I resolution plan that can be accessed at https://www.fdic.gov/resources/resolutions/resolution-authority/resplans/index.

The MSEHSE Group TLAC key metrics are provided in the following table.

Table 6: TLAC Key Metrics - MSEHSE Group

€MM MSEHSE Group[1]	Q4’23	Q3’23	Q2’23	Q1’23	Q4’22
Total Loss Absorbing Capacity (TLAC) available	**9,255**				**8,091**
Total RWA at the level of the resolution group	**27,283**				**27,965**
TLAC as a percentage of RWA	33.92%				28.93%
Leverage ratio exposure measure at the level of the resolution group	88,641				77,190
TLAC as a percentage of leverage ratio exposure measure	10.44%				10.48%

1. As at 31 December 2023, the MSEHSE Group is in compliance with the TLAC requirements.

During the year, MSEHSE Group's TLAC available increased by €1,163MM primarily due to capital management actions and profit recognition resulting in an increase in own funds from €8,091MM to €9,255MM.

Table 7 provides details of the composition of the MSEHSE Group's TLAC.

Table 7: TLAC composition (EU iTLAC) - MSEHSE Group

€MM		b	c
MSEHSE Group[1]		Non-EU G-SII requirement for own funds and eligible liabilities (internal TLAC)	Qualitative information
	Applicable requirement and level of application		
EU-1	Is the entity subject to a Non-EU G-SII Requirement for own funds and eligible liabilities? (Y/N)		Y
EU-2	If EU 1 is answered by 'Yes', is the requirement applicable on a consolidated or individual basis? (C/I)		C
EU-2a	Is the entity subject to an internal MREL requirement? (Y/N)		Y
EU-2b	If EU 2a is answered by 'Yes', is the requirement applicable on a consolidated or individual basis? (C/I)		C
	Own funds and eligible liabilities		
EU-3	Common Equity Tier 1 capital (CET1)	6,355	
EU-4	Eligible Additional Tier 1 instruments	400	
EU-5	Eligible Tier 2 instruments	-	
EU-6	Eligible own funds	6,755	
EU-7	Eligible liabilities	2,500	
EU-8	Of which permitted guarantees		
EU-9a	(Adjustments)		
EU-9b	Own funds and eligible liabilities items after adjustments	9,255	
	Total risk exposure amount and total exposure measure		
EU-10	Total risk exposure amount	27,283	
EU-11	Total exposure measure	88,641	
	Ratio of own funds and eligible liabilities		
EU-12	Own funds and eligible liabilities (as a percentage of TREA)	33.92%	
EU-13	of which permitted guarantees		
EU-14	Own funds and eligible liabilities (as a percentage of leverage exposure)	10.44%	
EU-15	of which permitted guarantees		
EU-16	CET1 (as a percentage of TREA) available after meeting the entity's requirements	17.24%	
EU-17	Institution-specific combined buffer requirement	3.46%	
	Requirements		
EU-18	Requirement expressed as a percentage of the total risk exposure amount	16.20%	
EU-19	of which may be met with guarantees		
EU-20	Internal MREL expressed as percentage of the total exposure measure	6.08%	
EU-21	of which may be met with guarantees		
	Memorandum items		
EU-22	Total amount of excluded liabilities referred to in Article 72a(2) CRR	74,485	

1. As of 31 December 2023, the MSEHSE Group complies with the iTLAC requirements.

Over the fourth quarter of 2023, RWAs decreased and Own Funds increased due to capital management actions and profit recognition, leading to an increase in MSEHSE Group's TLAC ratio expressed as a percentage of the Total Risk Exposure Amount ("TREA"). This was partially offset by a small reduction in available TLAC resources from payment of an AT1 coupon.

Table 8 provides a breakdown of eligible instruments in the creditor hierarchy of the MSEHSE Group. Morgan Stanley, the MSEHSE Group's ultimate parent undertaking and controlling entity, is the resolution entity of the MSEHSE Group. Eligible instruments of the MSEHSE Group issued against further entities (i.e., MSI) are captured in the following table under "Other".

Table 8: Creditor ranking - Entity that is not a resolution entity (EU TLAC2a) - MSEHSE Group

		Insolvency ranking								
€MM		1 (most junior)	1 (most junior)	2	2	3	3	4 (most senior)	4 (most senior)	Sum of 1 to 4
	MSEHSE Group	Resolution entity	Other	Resolution entity	Other	Resolution entity	Other	Resolution entity	Other	
2	Description of insolvency rank (free text)									
3	Liabilities and own funds including derivative liabilities	6,355	-	400	600	-	1,000	2,500	-	10,855
4	of which excluded liabilities	-	-	-	-	-	-	-	-	-
5	Liabilities and own funds less excluded liabilities	6,355	-	400	600	-	1,000	2,500	-	10,855
6	Subset of liabilities and own funds less excluded liabilities that are own funds and eligible liabilities for the purpose of [choose as a appropriate: internal MREL]	6,355	-	400	600	-	1,000	2,500	-	10,855
7	of which residual maturity ≥ 1 year < 2 years	-	-	-	-	-	-	2,500	-	2,500
8	of which residual maturity ≥ 2 year < 5 years	-	-	-	-	-	-	-	-	-
9	of which residual maturity ≥ 5 years < 10 years	-	-	-	-	-	1,000	-	-	1,000
10	of which residual maturity ≥ 10 years, but excluding perpetual securities	-	-	-	-	-	-	-	-	-
11	of which perpetual securities	6,355	-	400	600	-	-	-	-	7,355

As of 31 December 2023, the MSEHSE Group's TLAC total capital and liabilities consist of total own funds of €6,755MM and €2,500MM senior subordinated debt issuances. Additionally, €600MM AT1 and €1,000MM Tier 2 ("T2") capital are eligible for the purposes of internal MREL.

8. Leverage

Leverage Ratio requirements in accordance with the CRR

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 leverage ratios of the MSEHSE Group and MSESE Consol are calculated in accordance with Article 429 to 429g CRR.

MSEHSE Group and MSESE Consol have been compliant with the regulatory minimum leverage ratio requirements of 3% throughout the financial year 2023.

Risk of excessive leverage

Risk of Excessive Leverage refers to the risk resulting from an institution's vulnerability due to leverage or contingent leverage that may require unintended corrective measures to its business plan, including distressed selling of assets which might result in losses or in valuation adjustments to its remaining assets.

The MSEHSE Group’s and MSESE Consol's ALCO are the primary governance committees responsible for monitoring leverage ratio and for ensuring that they remain within the risk appetite approved by the MSEHSE Group Management Boards.

The MSEHSE Group manages the risk of excessive leverage through the application and allocation of leverage ratio exposure limits of business unit and internal leverage ratio early warning indicator (“EWI”) levels. If internal limits are exceeded, cross-functional teams identify the key drivers of the elevated exposures and consider appropriate remediation actions. EWI levels are monitored weekly to ensure that any increases above the internal thresholds are escalated to governance forums to allow for any appropriate management actions to be taken, i.e. T1 capital increases and/or leverage exposure reductions, on a timely manner.

The leverage ratio exposures of the MSEHSE Group and MSESE Consol (including business unit limit utilisation) are regularly calculated and reported to the MSEHSE Group ALCO and MSESE ALCO alongside other additional factors that are considered, such as maturity and funding profiles considering both assets and liabilities and asset encumbrance metrics. Additionally, weekly capital resource meetings occur between senior cross-functional stakeholders to monitor, analyse, and optimise resources including but not limited to leverage ratio exposure.

Moreover, robust capital planning ensures future leverage ratio requirements are considered. The capital planning focuses on, but is not limited to, forecasted business activity, planned mitigation, future regulatory changes, net income forecasts and required capital.

In addition to capital planning, the Large Transaction Approval (“LTA”) process requires the leverage ratio exposure impact to be assessed prior to execution. Trades are approved based on, amongst others, capacity and return metrics. Large Transactions are defined as transactions that are anticipated to utilise capital resources in excess of defined thresholds. Thresholds relate to RWAs, leverage ratio exposure, liquidity, and funding. If a transaction exceeds the defined thresholds, the management of the MSEHSE Group provides approval before the execution takes place. Approval is based on various criteria, such as capital resources, return on investment and refinancing costs carried out.

Furthermore, a quarterly risk identification assessment is in place to monitor both qualitative and quantitative leverage ratio exposure drivers and risks to ensure compliance with internal and regulatory minimums in the event contingent leverage ratio exposure was to crystallise.

Table 9 provides a reconciliation between total assets in the financial statements and the leverage exposure measure for the MSEHSE Group as of 31 December 2023.

Table 9: Summary reconciliation of accounting assets and leverage ratio exposures (EU LR1) - MSEHSE Group and MSESE Consol

		a	a
		Applicable amount	
€MM		MSEHSE Group	MSESE Consol
1	**Total assets as per published financial statements**	**106,711**	**106,529**
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of prudential consolidation	-	-
3	(Adjustment for securitised exposures that meet the operational requirements for the recognition of risk transference)	-	-
4	(Adjustment for temporary exemption of exposures to central banks (if applicable))	-	-
5	(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) CRR)	-	-
6	Adjustment for regular-way purchases and sales of financial assets subject to trade date accounting	-	-
7	Adjustment for eligible cash pooling transactions	-	-
8	Adjustment for derivative financial instruments	(11,694)	(11,694)
9	Adjustment for securities financing transactions (SFTs)	1,188	1,188
10	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	5,598	5,597
11	(Adjustment for prudent valuation adjustments and specific and general provisions which have reduced Tier 1 capital)	-	-
EU-11a	(Adjustment for exposures excluded from the total exposure measure in accordance with point (c) of Article 429a(1) CRR)	-	-
EU-11b	(Adjustment for exposures excluded from the total exposure measure in accordance with point (j) of Article 429a(1) CRR)	-	-
12	Other adjustments	(13,162)	(13,161)
13	**Total exposure measure**	**88,641**	**88,459**

During 2023 the MSEHSE Group's total assets decreased due to a reduction in OTC derivatives, a reduction in cash collateral pledged in relation to OTC derivatives and a reduction in cash deposits placed with the Deutsche Bundesbank. These decreases were partially offset by increases in European government bond inventory and SFTs.

Table 10 provides a detailed breakdown of the components of the leverage ratio exposure for the MSEHSE Group and MSESE Consol as of 31 December 2023.

Table 10: Leverage ratio common disclosure (EU LR2) - MSEHSE Group and MSESE Consol

MSEHSE Group		a	b
		CRR leverage ratio exposures	
€MM		Q4'23	Q4'22
	On-balance sheet exposures (excluding derivatives and SFTs)		
1	On-balance sheet items (excluding derivatives, SFTs, but including collateral)	35,967	42,067
2	Gross-up for derivatives collateral provided, where deducted from the balance sheet assets pursuant to the applicable accounting framework	1,962	5,253
3	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	(13,149)	(21,161)
4	(Adjustment for securities received under securities financing transactions that are recognised as an asset)	-	-
5	(General credit risk adjustments to on-balance sheet items)	-	-
6	(Asset amounts deducted in determining Tier 1 capital)	(82)	(83)
7	**Total on-balance sheet exposures (excluding derivatives and SFTs)**	**24,698**	**26,076**
	Derivative exposures		
8	Replacement cost associated with SA-CCR derivatives transactions (ie net of eligible cash variation margin)	9,089	11,300
EU-8a	Derogation for derivatives: replacement costs contribution under the simplified standardised approach	-	-
9	Add-on amounts for potential future exposure associated with SA-CCR derivatives transactions	19,658	18,816
EU-9a	Derogation for derivatives: Potential future exposure contribution under the simplified standardised approach	-	-
EU-9b	Exposure determined under Original Exposure Method	-	-
10	(Exempted CCP leg of client-cleared trade exposures) (SA-CCR)	(1,495)	(1,770)
EU-10a	(Exempted CCP leg of client-cleared trade exposures) (simplified standardised approach)	-	-
EU-10b	(Exempted CCP leg of client-cleared trade exposures) (Original Exposure Method)	-	-
11	Adjusted effective notional amount of written credit derivatives	26,534	42,826
12	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	(24,957)	(41,796)
13	**Total derivatives exposures**	**28,829**	**29,376**
	Securities financing transaction (SFT) exposures		
14	Gross SFT assets (with no recognition of netting), after adjustment for sales accounting transactions	47,640	17,655
15	(Netted amounts of cash payables and cash receivables of gross SFT assets)	(18,955)	-
16	Counterparty credit risk exposure for SFT assets	1,188	414
EU-16a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Articles 429e(5) and 222 CRR	-	-
17	Agent transaction exposures	-	-
EU-17a	(Exempted CCP leg of client-cleared SFT exposure)	-	-
18	**Total securities financing transaction exposures**	**29,873**	**18,069**
	Other off-balance sheet exposures		
19	Off-balance sheet exposures at gross notional amount	17,669	10,696
20	(Adjustments for conversion to credit equivalent amounts)	(12,428)	(7,026)
21	(General provisions deducted in determining Tier 1 capital and specific provisions associated associated with off-balance sheet exposures)	-	-
22	**Off-balance sheet exposures**	**5,241**	**3,670**
	Excluded exposures		
EU-22a	(Exposures excluded from the total exposure measure in accordance with point (c) of Article 429a(1) CRR)		
EU-22b	(Exposures exempted in accordance with point (j) of Article 429a(1) CRR (on and off balance sheet))		
EU-22c	(Excluded exposures of public development banks (or units) - Public sector investments)		
EU-22d	(Excluded exposures of public development banks (or units) - Promotional loans)		
EU-22e	(Excluded passing-through promotional loan exposures by non-public development banks (or units))		
EU-22f	(Excluded guaranteed parts of exposures arising from export credits)		
EU-22g	(Excluded excess collateral deposited at triparty agents)		
EU-22h	(Excluded CSD related services of CSD/institutions in accordance with point (o) of Article 429a(1) CRR)		
EU-22i	(Excluded CSD related services of designated institutions in accordance with point (p) of Article 429a(1) CRR)		
EU-22j	(Reduction of the exposure value of pre-financing or intermediate loans)		
EU-22k	(Total exempted exposures)	-	-

	Capital and total exposure measure		
23	Tier 1 capital	7,355	6,191
24	Total exposure measure	88,641	77,190
	Leverage ratio		
25	Leverage ratio (%)	8.30%	8.02%
EU-25	Leverage ratio (excluding the impact of the exemption of public sector investments and promotional loans) (%)	8.30%	8.02%
25a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) (%)	8.30%	8.02%
26	Regulatory minimum leverage ratio requirement (%)	3.00%	3.00%
EU-26a	Additional own funds requirements to address the risk of excessive leverage (%)	0.00%	0.00%
EU-26b	of which: to be made up of CET1 capital	0.00%	0.00%
27	Leverage ratio buffer requirement (%)	0.00%	0.00%
EU-27a	Overall leverage ratio requirement (%)	3.00%	3.00%
	Choice on transitional arrangements and relevant exposures		
EU-27b	Choice on transitional arrangements for the definition of the capital measure	Fully Phased-in	Fully Phased-in
	Disclosure of mean values		
28	Mean of daily values of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivable	20,379	17,240
29	Quarter-end value of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables	28,684	17,655
30	Total exposure measure (including the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	80,335	76,775
30a	Total exposure measure (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	80,335	76,775
31	Leverage ratio (including the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	9.15%	8.06%
31a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	9.15%	8.06%

MSESE Consol €MM		a CRR leverage ratio exposures Q4'23
	On-balance sheet exposures (excluding derivatives and SFTs)	
1	On-balance sheet items (excluding derivatives, SFTs, but including collateral)	35,784
2	Gross-up for derivatives collateral provided, where deducted from the balance sheet assets pursuant to the applicable accounting framework	1,962
3	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	(13,149)
4	(Adjustment for securities received under securities financing transactions that are recognised as an asset)	-
5	(General credit risk adjustments to on-balance sheet items)	-
6	(Asset amounts deducted in determining Tier 1 capital)	(81)
7	**Total on-balance sheet exposures (excluding derivatives and SFTs)**	**24,516**
	Derivative exposures	
8	Replacement cost associated with SA-CCR derivatives transactions (ie net of eligible cash variation margin)	9,089
EU-8a	Derogation for derivatives: replacement costs contribution under the simplified standardised approach	-
9	Add-on amounts for potential future exposure associated with SA-CCR derivatives transactions	19,659
EU-9a	Derogation for derivatives: Potential future exposure contribution under the simplified standardised approach	-
EU-9b	Exposure determined under Original Exposure Method	-
10	(Exempted CCP leg of client-cleared trade exposures) (SA-CCR)	(1,495)
EU-10a	(Exempted CCP leg of client-cleared trade exposures) (simplified standardised approach)	-
EU-10b	(Exempted CCP leg of client-cleared trade exposures) (Original Exposure Method)	-
11	Adjusted effective notional amount of written credit derivatives	26,534
12	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	(24,957)
13	**Total derivatives exposures**	**28,830**
	Securities financing transaction (SFT) exposures	
14	Gross SFT assets (with no recognition of netting), after adjustment for sales accounting transactions	47,640
15	(Netted amounts of cash payables and cash receivables of gross SFT assets)	(18,955)
16	Counterparty credit risk exposure for SFT assets	1,187
EU-16a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Articles 429e(5) and 222 CRR	-
17	Agent transaction exposures	-
EU-17a	(Exempted CCP leg of client-cleared SFT exposure)	-
18	**Total securities financing transaction exposures**	**29,872**
	Other off-balance sheet exposures	
19	Off-balance sheet exposures at gross notional amount	17,669
20	(Adjustments for conversion to credit equivalent amounts)	(12,428)
21	(General provisions deducted in determining Tier 1 capital and specific provisions associated associated with off-balance sheet exposures)	
22	**Off-balance sheet exposures**	**5,241**
	Excluded exposures	
EU-22a	(Exposures excluded from the total exposure measure in accordance with point (c) of Article 429a(1) CRR)	
EU-22b	(Exposures exempted in accordance with point (j) of Article 429a(1) CRR (on and off balance sheet))	
EU-22c	(Excluded exposures of public development banks (or units) - Public sector investments)	
EU-22d	(Excluded exposures of public development banks (or units) - Promotional loans)	
EU-22e	(Excluded passing-through promotional loan exposures by non-public development banks (or units))	
EU-22f	(Excluded guaranteed parts of exposures arising from export credits)	
EU-22g	(Excluded excess collateral deposited at triparty agents)	
EU-22h	(Excluded CSD related services of CSD/institutions in accordance with point (o) of Article 429a(1) CRR)	
EU-22i	(Excluded CSD related services of designated institutions in accordance with point (p) of Article 429a(1) CRR)	
EU-22j	(Reduction of the exposure value of pre-financing or intermediate loans)	
EU-22k	(Total exempted exposures)	-
	Capital and total exposure measure	
23	Tier 1 capital	6,998
24	Total exposure measure	88,459

	Leverage ratio	
25	Leverage ratio (%)	7.91%
EU-25	Leverage ratio (excluding the impact of the exemption of public sector investments and promotional loans) (%)	7.91%
25a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) (%)	7.91%
26	Regulatory minimum leverage ratio requirement (%)	3.00%
EU-26a	Additional own funds requirements to address the risk of excessive leverage (%)	0.00%
EU-26b	of which: to be made up of CET1 capital	0.00%
27	Leverage ratio buffer requirement (%)	0.00%
EU-27a	Overall leverage ratio requirement (%)	3.00%
	Choice on transitional arrangements and relevant exposures	
EU-27b	Choice on transitional arrangements for the definition of the capital measure	Fully Phased-in
	Disclosure of mean values	
28	Mean of daily values of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivable	20,379
29	Quarter-end value of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables	28,684
30	Total exposure measure (including the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	80,287
30a	Total exposure measure (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	80,287
31	Leverage ratio (including the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	8.89%
31a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	8.89%

The off-balance sheet positions principally comprise of FSRs and relationship loans (mainly undrawn credit facilities).

Table 11 provides a breakdown of on-balance sheet exposures into trading and non-trading (banking) book as of 31 December 2023.

Table 11: Split of on-balance sheet exposures (excluding derivatives, SFTs and exempted exposures) (EU LR3) - MSEHSE Group and MSESE Consol

		a	a
		CRR leverage ratio exposures	
€MM		MSEHSE Group	MSESE Consol
EU-1	**Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:**	**24,779**	**24,597**
EU-2	Trading book exposures	13,396	13,258
EU-3	Banking book exposures, of which:	11,383	11,339
EU-4	Covered bonds	-	-
EU-5	Exposures treated as sovereigns	10,082	9,994
EU-6	Exposures to regional governments, MDB, international organisations and PSE, not treated as sovereigns	1	1
EU-7	Institutions	740	914
EU-8	Secured by mortgages of immovable properties	-	-
EU-9	Retail exposures	-	-
EU-10	Corporates	431	365
EU-11	Exposures in default	0	0
EU-12	Other exposures (eg equity, securitisations, and other non-credit obligation assets)	130	65

Over the year, MSEHSE Group's on-balance sheet exposures decreased primarily due to banking book exposures treated as sovereigns, partially offset by trading book exposures.

9. Capital Requirements and RWAs

General Overview of 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 CCR refers to the risk of loss arising when a borrower, counterparty or issuer does not meet its financial obligations to the MSEHSE Group. Credit and CCR capital requirements are derived from RWAs, determined using the regulatory approved internal modelling approach - the Internal Model Method ("IMM") for CCR exposure. Standardised methods are applied for exposures not covered by internal models. Regulatory approved foundation Internal Ratings Based approach ("F-IRB") for credit risk or Standardised Approach ("SA") Risk Weights are applied as applicable.

CVA capital requirements cover the risk of mark-to-market losses on the counterparty risk of derivatives. They are calculated using a combination of Advanced Method based on internal modelling approaches and Standardised Method.

Settlement risk capital requirements cover 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 will result in losses for a position or portfolio. Market prices that could drive losses may include security prices, rates, indices, implied volatilities, correlations or market liquidity. The market risk capital requirements are calculated using the regulatory approved Internal Model Approach ("IMA") and the Standardised Approach, consistent with its regulatory approvals.

Large exposures refer to 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").

The MSEHSE Group and MSESE Consol enhance their risk management strategies by incorporating improvements in modelling techniques whilst maintaining compliance with regulatory requirements. For further discussion, refer to the chapters on credit risk, CCR, market risk and operational risk.

RWAs Overview

Table 12 summarises RWAs and Total Own Funds Requirements (“TOFR”) for the MSEHSE Group and MSESE Consol by risk type. The MSEHSE Group and MSESE Consol calculate Pillar 1 capital requirements as 8% of RWAs.

Table 12: Overview of risk weighted exposure amounts (EU OV1) - MSEHSE Group and MSESE Consol

		a	b	c	a	c
		MSEHSE Group			MSESE Consol	
		TREA	TREA	TOFR	TREA	TOFR
€MM		Q4'23	Q4'22	Q4'23	Q4'23	Q4'23
1	**Credit risk (excluding CCR)**	**2,812**	**2,563**	**225**	**2,736**	**219**
2	Of which the standardised approach	562	465	45	473	38
3	Of which the Foundation IRB (F-IRB) approach	2,249	2,028	180	2,262	181
4	Of which slotting approach	-	-	-	-	-
EU 4a	Of which equities under the simple riskweighted approach	1	70	-	1	-
5	Of which the Advanced IRB (A-IRB) approach	-	-	-	-	-
6	**Counterparty credit risk - CCR**	**15,247**	**15,745**	**1,220**	**15,247**	**1,220**
7	Of which the standardised approach	1,990	1,906	159	1,990	159
8	Of which internal model method (IMM)	6,997	8,165	560	6,997	560
EU 8a	Of which exposures to a CCP	151	138	12	151	12
EU 8b	Of which credit valuation adjustment - CVA	4,246	3,415	340	4,246	340
9	Of which other CCR	1,863	2,121	149	1,863	149
15	**Settlement risk**	**7**	**44**	**1**	**7**	**1**
16	**Securitisation exposures in the non-trading book (after the cap)**	**-**	**5**	**-**	**-**	**-**
17	Of which SEC-IRBA approach	-	-	-	-	-
18	Of which SEC-ERBA (including IAA)	-	5	-	-	-
19	Of which SEC-SA approach	-	-	-	-	-
EU 19a	Of which 1250% / deduction	-	-	-	-	-
20	**Position, foreign exchange and commodities risks (Market risk)**	**7,816**	**8,603**	**625**	**7,814**	**625**
21	Of which the standardised approach	88	81	7	86	7
22	Of which IMA	7,728	8,522	618	7,728	618
EU 22a	**Large exposures**	**-**	**-**	**-**	**-**	**-**
23	**Operational risk**	**1,401**	**1,005**	**112**	**1,262**	**100**
EU 23a	Of which basic indicator approach	1,401	1,005	112	1,262	100
EU 23b	Of which standardised approach	-	-	-	-	-
EU 23c	Of which advanced measurement approach	-	-	-	-	-
24	**Amounts below the thresholds for deduction (subject to 250% risk weight) (For information)[1]**	**56**	**40**	**5**	**44**	**4**
29	**Total**	**27,283**	**27,965**	**2,183**	**27,066**	**2,165**

1.“Amounts below the thresholds for deduction (subject to 250% risk weight)” is for information purposes. Amount is included in “Credit risk (excluding CCR)”.

Over the year, total RWAs decreased primarily driven by CCR due to Over-the-Counter ("OTC") derivatives.

10. Credit Risk

10.1 Credit Risk Management

Credit and CCR refer to the risk of loss arising when a borrower, counterparty or issuer does not meet its financial obligations to the MSEHSE Group. The MSEHSE Group is exposed to credit risk from the extension of credit to clients through lending commitments, derivatives, and securities financing activities. The MSEHSE Group primarily incurs credit risk exposure to Corporates, Institutions, Central Governments and Central Banks through its Institutional Securities business segment.

The MSEHSE Group Credit Risk Management Department ("CRMD") is an independent risk oversight group headed by the MSEHSE Group Head of Credit Risk who reports directly to the MSEHSE Group CRO. The MSEHSE Group CRMD is responsible for managing and overseeing the credit risk profile of the MSEHSE 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 MSEHSE 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 to ensure that the creditworthiness of the MSEHSE 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 MSEHSE Group and/or MSESE Consol 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 MSESE Consol Credit Limits Framework ("CLF") is one of the primary tools used to monitor, manage, and control credit risk exposures. The MSEHSE Group Management Boards approve limits that reflect the credit risk appetite of MSESE Consol 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 MSESE Consol credit limits restrict potential credit exposure to any one borrower or counterparty and to groups of connected borrowers or counterparties. The limits are assigned based on multiple factors including the size of counterparty, the counterparty's Probability of Default ("PD"), the perceived correlation between the credit exposure and the counterparty's credit quality, the Loss-Given Default ("LGD") and the tenor profile of the specific credit exposure considering the effect of enforceable netting and eligible collateral.

To ensure that credit limits are consistent with the MSESE Consol's credit risk appetite, a comprehensive process has been established whereby CRMD evaluates relevant quantitative and qualitative factors to make an informed decision when recommending or setting credit limits. CRMD develops and calibrates MSEHSE Group Management Boards and MSESE ERC Single Name and Portfolio credit risk limits by assuming full utilisation of the corresponding credit limit (i.e., "limit-long" assumption) to derive a limit-long stress loss. Limit-long stress losses are then compared to concentration thresholds which vary by the type of credit limit (i.e., Single Name or Portfolio). For example, any single industry limit-long stress loss may account for no more than a specified percentage (i.e., the concentration threshold) of MSESE Consol's Risk Appetite.

Credit Evaluation

Credit Professionals in the CRMD evaluate obligors and determine Credit Risk appetite before an initial transaction is approved. The evaluation may involve due diligence meetings and ongoing direct interaction with clients. Through close coordination with the first line of defense and regular meetings with Sales & Trading representatives, Credit Professionals are informed about business initiatives and new requests but are also able to communicate credit decisions effectively and highlight credit concerns early. This allows the Credit Professionals to influence the structure of a proposed transaction prior to it being submitted for approval.

10.2 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 MSEHSE 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 derivatives and SFTs. The distinction between credit risk and CCR exposures is due to the bilateral nature of the risk for CCR exposures, see section 10.4 Counterparty Credit Exposures.

RWAs are determined using the regulatory approved F-IRB approach which reflects the MSEHSE Group's internal estimate of a borrower's or counterparty's creditworthiness.

For exposures not covered by the F-IRB approach, the SA 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. This is consistent with the scope of MSEHSE Group's regulatory approved F-IRB approach. The SA assigns fixed risk weights to the exposure classes in accordance with the CRR using external credit rating assessments.

Credit Risk RWAs flow statements

Table 13 summarises the movement of RWAs for MSEHSE Group credit risk exposures under the Internal ratings-based ("IRB") approach.

Table 13: RWA flow statements of credit risk exposures under the IRB approach (EU CR8) - MSEHSE Group

		a
€MM		MSEHSE Group RWEAs
1	**Risk weighted exposure amount as at the end of the previous reporting period[1]**	**2,028**
2	Asset size (+/-)	302
3	Asset quality (+/-)	(81)
4	Model updates (+/-)	-
5	Methodology and policy (+/-)	-
6	Acquisitions and disposals (+/-)	-
7	Foreign exchange movements (+/-)	-
8	Other (+/-)	-
9	**Risk weighted exposure amount as at the end of the reporting period**	**2,249**

1.Previous reporting period is 31 December 2022.

During the year, MSEHSE Group's RWAs increased primarily due to undrawn lending commitments.

For MSESE Consol, RWAs were not reported as of 31 December 2022 so no RWA flow statement is presented. The RWAs reported as of 31 December 2023 were €2,262MM. This amount will be reported as the opening balance (end of previous reporting period) for the RWA flow statement within the disclosure report for the year ended 31 December 2024.

External Credit Risk Assessments

External credit risk assessments are used within the MSEHSE Group as part of the determination of risk weightings for exposure classes.

The MSEHSE Group has nominated three External Credit Assessment Institutions ("ECAI") for this purpose – Moody's Investor Service ("Moody's"), Standard and Poor's rating agency ("S&P") and Fitch Ratings ("Fitch").

When calculating the risk-weighted value of an exposure using ECAI risk assessments, the ratings are pulled from a central database using client identifiers. The systems then map ECAI ratings to Credit Quality Steps ("CQS") to derive the relevant risk weight. All other exposure classes are assigned risk weightings as prescribed in the CRR.

If more than one rating is available for a specific counterparty, the selection criteria as set out in Article 138 CRR are applied in order to determine the relevant risk weight for the capital calculation.

Table 14 summarises the CQS and associated ratings for the three nominated ECAIs used within MSEHSE Group and MSESE Consol for the determination of Standardised risk weights.

Table 14: External Credit Assessments Institutions - MSEHSE Group

CQS	Moody's	Standard & Poor's/Fitch
1	Aaa to Aa3	AAA to AA-
2	A1 to A3	A+ to A-
3	Baa1 to Baa3	BBB+ to BBB-
4	Ba1 to Ba3	BB+ to BB-
5	B1 to B3	B+ to B-
6	Caa1 and below	CCC+ and below

The ECAI risk assessments of the three rating agencies are applicable to all exposure classes.

Internal Ratings Based Approach

The MSEHSE Group has permission to use the F-IRB approach for the calculation of credit and CCR capital requirements. The permission covers material portfolios and is applicable to exposures to Institutions and Corporates.

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

Rating Process

Credit Risk Management expresses the creditworthiness of each obligor by assigning it a rating. The rating scale includes 17 grades on a scale from AAA to CCC, plus a single category for defaulted obligors.

Each rating is linked to a single name credit limit appetite and mapped to a specific PD. To monitor the credit risk of the portfolio, the MSEHSE Group uses internally approved rating models to estimate various risk parameters related to each obligor.

Ratings are assigned using methodologies based on quantitative and qualitative obligor risk drivers. These include but are not limited to obligor's financial statements, market position, strategy, management, legal and environmental, industry dynamics and relevant other financial data. Outputs from the models are supplemented by expert judgment to include exogenous factors not captured by the methodology in the final rating.

MSEHSE Group's F-IRB wholesale exposures fall into the following exposure classes: Institutions and Corporates.

The Institutions exposure class mainly includes traded products, lending and treasury exposures to banks and broker-dealers.There are 3 key models in this portfolio. The ratings process for Institutions applies a statistical shadow rating methodology that is based on a range of risk factors including capital adequacy, asset quality, earnings, funding, and management. The regulatory environment and implicit government support is incorporated where applicable and permitted. The differences observed between PD and actual default rates can be attributed to the high-quality portfolio and conservative PD, resulting in fewer observed defaults.

The Corporates exposure class mainly includes traded products and lending to wholesale counterparties. There are six key models in this portfolio. The ratings process for Corporates applies different statistical shadow rating methodologies depending on the industry to which the obligor belongs. The general characteristics employed include quantitative factors such as leverage, interest coverage, cash flow and company size, as well as qualitative factors such as industry and business risk, market position, liquidity/funding, event risk, management, and corporate governance. Implicit government support may be incorporated where applicable and permitted. The differences observed between PD and actual default rates can be attributed to the high-quality portfolio and conservative PD, resulting in fewer observed defaults.

Rating Philosophy and PD Estimation

The MSEHSE Group internal rating process and philosophy are similar to S&P's, and the qualitative definitions of rating grades are aligned. MSEHSE Group uses several rating models to rate its client portfolio. Ratings are applied consistently for both credit risk capital and risk management purposes. Rating outputs from the models map to a uniform PD Master Scale, employed for all wholesale exposures.

For the calibration of the PD Master Scale, Credit Risk Management maps internal ratings to S&P ratings and then applies S&P's extensive default history to determine the PD. Minor adjustments are made for specific items, such as preserving the monotonic relationship among rating grade PDs. The regulatory floor of 0.03% is applied for counterparties which are not defined as Sovereign. The appropriateness and conservatism of the S&P default rates are modelled and validated statistically.

The MSEHSE Group takes different approaches to estimate PDs for its low default portfolio ("LDP") and its non-LDP.

The MSEHSE Group calculates PD for the non-LDP based on the long-run average of S&P's annual corporate default rates from 1981 to 2014. The incorporation of this data period ensures that the PD is representative of a long-run average default rate and therefore appropriate. The methodology employs an update rule, to determine the appropriateness of an update in the PDs based on annual data becoming available.

Portfolios where the MSEHSE Group has experienced less than 20 defaults historically, and where no external default data is available for the reliable estimation of PDs, are classified as low default. The methodology for deriving PDs for the LDP, is based on a Bayesian approach, and derives a single scaling factor that is used to scale the non-LDP PD into an appropriate and conservative PD for the LDP.

The MSEHSE Group confirms through an internal validation process that the PD values it uses are prudent when compared to actual Morgan Stanley Group default experience. The MSEHSE Group uses supervisory-prescribed factors to calculate LGDs and conversion factors.

Control Mechanisms for the Rating System

The rating system and its components are validated on a periodic basis. The model validation process is independent of the internal models' development, implementation and operation and is run by the Model Risk Management ("MRM") group as the second line of defence. The validation process includes independent review of the model's performance and conceptual soundness in line with the validation activity required every time. There are three main validation activities: initial review, annual recertification and revalidation. Additional to these activities, MRM reviews any material model changes. The validation process includes the following activities: assessment of the model's conceptual soundness, evaluation of the model specialist document, assessment of DQ and developmental tests, attestation of the model's sensitivity to key inputs and assumptions, the model performance, benchmarking to alternative models and diagnostic testing. The MSEHSE Group Model Oversight Committee ("MOC") and MSESE MOC are in place to provide appropriate technical and business review and oversight. IAD serves as the third line of defence with regard to the internal rating model development process and practices, through independent review it performs periodically.

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

On a quarterly basis a Model Risk Update is provided to relevant governance forums including the MSEHSE Group Management Boards which contains a model health assessment of the IRB models across rating templates and PD Calibration.

Non-Trading Book Equity Exposure

The MSEHSE Group applies the IRB simple risk weight approach for equity exposures falling outside of the Trading Book.

Table 15 shows the MSEHSE Group's and MSESE Consol's equity exposures using the simple risk-weighted approach.

Table 15: IRB (Specialised Lending and Equities) (EU CR10.5) - MSEHSE Group and MSESE Consol

	a	b	c	d	e	f
	Equity exposures under the simple risk-weighted approach					
	On-balance sheet exposure	Off-balance sheet exposure	Risk weight	Exposure value	Risk weighted exposure amount	Expected loss amount
MSEHSE Group[1]	€MM	€MM	%	€MM	€MM	€MM
Private equity exposures	-	-	190%	-	-	-
Exchange-traded equity exposures	-	-	290%	-	-	-
Other equity exposures[2]	0	-	370%	0	1	0
	-	-	1250%	-	-	-
Total	**0**	**-**	**-**	**0**	**1**	**0**
MSESE Consol						
Private equity exposures	-	-	190%	-	-	-
Exchange-traded equity exposures	-	-	290%	-	-	-
Other equity exposures[2]	0	-	370%	0	1	0
	-	-	1250%	-	-	-
Total	**0**	**-**	**-**	**0**	**1**	**0**

1. MSEHSE Group has no specialised lending.
2. Equity exposures subject to 1250% risk weight have been included under "Other equity exposures".

During 2023 the exposure value of exchanged-traded equity exposures decreased due to a reduction in exposure to Morgan Stanley shares.

Credit Risk Adjustments

The calculation of credit risk adjustments and allowances is based on the Expected Credit Loss ("ECL").

The MSEHSE Group recognises ECL for the following financial instruments that are not measured at Fair Value through Profit and Loss ("FVPL"):

- financial assets measured at amortised cost;
- loan commitments, except those that can be net settled in cash or with another financial instrument; and
- financial guarantees.

ECL is calculated using three main components:

- PD: for accounting purposes, the 12 month and lifetime PD represent the expected point-in-time probability of a default over the next 12 months and over the remaining lifetime of the financial instrument respectively, based on conditions and information existing at the balance sheet date;
- LGD: the LGD represents expected loss conditional on default, considering the mitigating effect of collateral, including the expected value of the collateral when realised and the time value of money;
- EAD: this represents the expected EAD, considering the expected repayment of principal and interest from the balance sheet date to the date of default event together with any expected drawdowns of a facility over that period.

These parameters are generally derived from internally developed statistical models, incorporating historical, current, and forward-looking macro-economic data and country risk expert judgement. The macro-economic scenarios are reviewed quarterly.

A financial asset is considered 'past due' where any amount of principal, interest or fee has not been paid at the date it was due. This definition is consistent for accounting and regulatory purposes. A financial instrument asset is considered 'impaired' when an ECL is recognised and presented as ECL allowance (loss allowance).

- If, at the reporting date, there has not been a Significant Increase in Credit Risk ("SICR") of the financial asset since initial recognition then the loss allowance is calculated as the 12-month ECL, which represents the lifetime cash shortfalls that will result if a default occurs in the 12 months after the reporting date, on a collective basis, weighted by the probability of that default occurring. Interest revenue is calculated on the gross asset carrying amount without deduction for credit loss allowance. Such financial instruments are referred to as being in Stage 1 of the impairment framework;
- If there has been a SICR since initial recognition, the loss allowance is calculated as the lifetime ECL, that is, the ECLs that result from all possible default events over the remaining life of the financial instrument. Such financial instruments are referred to as being in Stage 2 of the impairment framework;
- If the credit risk has increased further, to the extent that the financial instrument is considered credit-impaired, these assets are referred to as being non-performing and thus in Stage 3 of the framework.

In assessing the impairment of financial instruments under the ECL model, the MSEHSE Group defines default in accordance with CRMD's policies and procedures. This considers whether the borrower is unlikely to pay its credit obligations to the MSEHSE Group in full and takes into account qualitative indicators, such as breaches of covenants. For regulatory purposes, the definition of default includes a presumption that an obligor which is more than 90 days past due on a material credit obligation[4] to MSEHSE Group has defaulted; conversely, for accounting purposes, financial assets which are 90 days past on any obligation are presumed to have defaulted.

10.3 Credit Risk Mitigation

The MSEHSE 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 MSEHSE Group seeks to mitigate risk through management of key risk elements such as size, tenor, financial covenants, seniority and collateral. At the obligor level, the MSEHSE Group may reduce credit risk to a direct obligor by means of third party guarantees. Moreover, the MSEHSE Group actively hedges its credit exposure through various financial instruments that may include single-name and structured credit derivatives.

In connection with its derivatives trading activities, the MSEHSE Group generally enters master netting and collateral arrangements with counterparties.

In connection with its lending activities, the MSEHSE Group may use participations to transfer some rights and obligations of the lender without transferring record ownership. Additionally, the MSEHSE Group may sell, assign or syndicate funded loans and lending commitments to other financial institutions in the primary and secondary loan market.

Netting

The MSEHSE Group has policies and procedures in place for assessing the validity, enforceability and treatment of netting agreements with clients in connection with its derivative trading activities.

In order to net a group of similar exposures with a counterparty, a qualifying master netting agreement must be in place between the Morgan Stanley entity and the counterparty. The agreement must be valid and legally enforceable. Upon an event of default, including the event of bankruptcy or insolvency of the counterparty, all transactions within the netting set are terminated in a timely manner and a single net close-out amount is determined under a qualifying master netting agreement. Repo-style transactions must also be executed under an agreement that provides for the close-out on a net basis. The MSEHSE Group does not make use of on-balance-sheet netting of loans and deposits in regulatory capital calculations. Off-balance sheet netting is not applied for CRM purposes.

4. Material credit obligations in line with the PRA Policy Statement 17/19 and EBA Guidelines on Definition of Default EBA/GL/2016/07.

Collateral

The amount and type of collateral required by the MSEHSE Group depends on an assessment of the creditworthiness of the counterparty, and any relevant regulation. Collateral held is managed in accordance with the MSEHSE Group's guidelines and the relevant underlying agreements.

The MSEHSE Group actively manages its credit exposure through the application of collateral arrangements. The use of collateral in managing OTC derivative risk is standard in the marketplace, and is governed by appropriate documentation, for example, the Credit Support Annex ("CSA") to the International Swaps and Derivatives Association documentation. In line with these standards, the MSEHSE Group generally accepts only cash and G7 government bonds, corporate debt and main index equities as eligible collateral. Other securities may be accepted in securities lending and repo, subject to haircuts based on assessments of collateral volatility and liquidity.

The MSEHSE Group utilises an established infrastructure to manage, maintain and value collateral daily. Haircuts are taken on eligible collateral to act as a buffer against adverse price movements prior to liquidation of the collateral during the close-out process following a counterparty's default. Standard haircuts are reviewed periodically and during volatile markets.

For issuer concentration, where there is potentially no meaningful recourse in the event of a counterparty default, the reliance on any single issuer would be reflected directly against the credit limits of the issuer. Monitoring of issuer concentration across Prime Brokerage ("PB") collateral, SFT collateral and OTC collateral is reviewed each month at the MSEHSE Group Credit Risk Committee.

Guarantees

A guarantee may reduce the MSEHSE Group's credit risk to a direct obligor through a documented arrangement in which a third party agrees to be responsible for some portion or all the debt or obligation of a counterparty.

A guarantee is a financial guarantee, letter of credit, insurance or other similar financial instrument (other than a credit derivative) that allows one party (beneficiary) to transfer the credit risk of one or more specific exposures (guaranteed or reference exposure) to another party (guarantor or protection provider).

The MSEHSE Group maintains policies and procedures which set out the process for determining the eligibility of the guarantee. Only eligible guarantees can be used for risk mitigation purposes. The acceptable types of guarantors are sovereigns, certain supranational and multilateral development banks, banks and other financial institutions, and corporates that are rated at least investment grade.

Participations

The MSEHSE Group also uses participations as one of the CRM techniques. A participation is a documented agreement through which a lender transfers to a third party (which may include an affiliate), certain rights and obligations of the lender under the applicable credit agreement(s), or a portion thereof, without transferring record ownership (i.e., the participant does not become lender of record on the agent's books and records).

The TREA covered by eligible credit mitigations are displayed in Tables CR3 and CR4. For further detail, refer to Chapter 23 "Appendix V: Additional Credit and CCR Tables".

10.4 Counterparty Credit Exposures

Counterparty credit exposures arise from client and business activities in derivatives and SFTs. The MSEHSE Group leverages models under regulatory approved IMM and Standardised Methods for calculation of CCR exposures. The majority of OTC derivatives within the MSEHSE 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, including Standardised Approach for Counterparty Credit Risk ("SA-CCR") for derivatives and Financial Collateral Comprehensive Method/Master Netting Agreement for SFTs.

Under SA-CCR, the EAD is comprised of the sum of two components, the Replacement cost ("RC") and the Potential Future Exposure ("PFE"), multiplied by a supervisory multiplier, alpha (1.4).

Table 16 shows a comprehensive view of the methods used to calculate CCR regulatory requirements and the main parameters used within each method for the MSEHSE Group as of 31 December 2023.

Table 16: Analysis of CCR exposure by approach (EU CCR1) - MSEHSE Group

€MM		a	b	c	d	e	f	g	h
MSEHSE 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	RWEA
EU1	EU - Original Exposure Method (for derivatives)	-	-		1.4	-	-	-	-
EU2	EU - Simplified SA-CCR (for derivatives)	-	-		1.4	-	-	-	-
1	SA-CCR (for derivatives)	1,398	2,093		1.4	6,132	4,850	4,828	1,990
2	IMM (for derivatives and SFTs)			7,248	1.45	32,142	10,499	10,426	6,997
2a	*Of which securities financing transactions netting sets*								
2b	*Of which derivatives and long settlement transactions netting sets*			7,248		32,142	10,499	10,426	6,997
2c	*Of which from contractual cross-product netting sets*					-	-	-	-
3	Financial collateral simple method (for SFTs)					-	-	-	-
4	Financial collateral comprehensive method (for SFTs)[1]					4,185	4,185	4,185	1,863
5	VaR for SFTs					-	-	-	-
6	**Total**					**42,459**	**19,534**	**19,439**	**10,850**

1.SFTs exposure are reported net.

The Effective Expected Positive Exposure ("EEPE") relates to derivatives only. Simplified SA-CCR according to Article 237a CRR is not applicable to the MSEHSE Group.

During 2023 IMM OTC derivative RWAs decreased as a result of business activity and market movements.

Table 17 summarises RWA movements for MSEHSE Group's CCR exposures under IMM.

Table 17: RWA flow statements of CCR exposures under IMM (EU CCR7) - MSEHSE Group

€MM		a MSEHSE Group RWEAs
1	**RWAs as at the end of the previous reporting period[1]**	**8,165**
2	Asset size	(934)
3	Credit quality of counterparties	(544)
4	Model updates (IMM only)	57
5	Methodology and policy (IMM only)	253
6	Acquisitions and disposals	-
7	Foreign exchange movements	-
8	Other	-
9	**RWAs as at the end of the current reporting period**	**6,997**

1. Previous reporting period was 31 December 2022.

The decrease in MSEHSE Group's RWAs over the year is primarily due to OTC derivative business activity and market movements.

For MSESE Consol, RWAs were not reported as of 31 December 2022 so no RWA flow statement is presented. The RWAs reported as of 31 December 2023 were €6,997MM. This amount will be reported as the opening balance (end of previous reporting period) for the RWA flow statement within the disclosure report for the year ended 31 December 2024.

Exposures to CCPs

Table 18 shows the breakdown of the exposures to Qualifying Central Counterparties ("QCCPs") as of 31 December 2023 for the MSEHSE Group. The MSEHSE Group did not have any exposures to non-QCCPs as of 31 December 2023.

Table 18: Exposures to CCPs (EU CCR8) - MSEHSE Group

€MM MSEHSE Group		a Exposure value	b RWEAs
1	**Exposures to QCCPs (total)**		**151**
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	3,337	67
3	(i) OTC derivatives	891	18
4	(ii) Exchange-traded derivatives	1,375	28
5	(iii) SFTs	1,071	21
6	(iv) Netting sets where cross-product netting has been approved	-	-
7	Segregated initial margin	-	
8	Non-segregated initial margin	4,288	-
9	Prefunded default fund contributions	393	84
10	Unfunded default fund contributions	853	-
11	**Exposures to non-QCCPs (total)**		**-**
12	Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions); of which	-	-
13	(i) OTC derivatives	-	-
14	(ii) Exchange-traded derivatives	-	-
15	(iii) SFTs	-	-
16	(iv) Netting sets where cross-product netting has been approved	-	-
17	Segregated initial margin	-	
18	Non-segregated initial margin	-	-
19	Prefunded default fund contributions	-	-
20	Unfunded default fund contributions	-	-

During 2023 the exposure value of exchange-traded derivatives and SFTs increased.

Wrong Way Risk

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

General wrong way risk arises when the counterparty PD is correlated with market or macroeconomic factors that affect the value of the counterparty's trades. General wrong way risk includes exposures correlated to sovereign default risk, which is subject to heightened monitoring and limits where appropriate, and exposure correlated to other market risk factors which is identified via single-factor stress tests. Where positions raise concerns, a risk mitigation strategy is agreed between CRMD and the business units.

Credit Valuation Adjustment

CVA capital requirements cover the risk of mark-to-market losses on the counterparty risk of derivatives. They are calculated using a combination of the Advanced Method based on internal modelling approaches and the Standardised Method.

Table 19 shows CVA by approach for the MSEHSE Group as of 31 December 2023.

Table 19: Transactions subject to own funds requirements for CVA risk (EU CCR2) - MSEHSE Group

€MM		a	b
	MSEHSE Group	Exposure value	RWEAs
1	Total transactions subject to the Advanced method	5,350	2,563
2	(i) VaR component (including the 3× multiplier)		688
3	(ii) stressed VaR component (including the 3× multiplier)		1,875
4	Transactions subject to the Standardised method	4,565	1,683
EU-4	Transactions subject to the Alternative approach (Based on the Original Exposure Method)	-	-
5	**Total transactions subject to own funds requirements for CVA risk**	**9,915**	**4,246**

During 2023 the increase in CVA RWAs is due to higher exposures under the Standardised Method.

Derivatives and SFTs Composition of Collateral

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 20 shows the breakdown of all types of collateral posted or received to support or reduce CCR exposures related to derivative transactions or SFTs, including transactions cleared through a Central Counterparty (“CCP”) as of 31 December 2023 for the MSEHSE Group. The MSEHSE Group does not hold any Segregated Collateral Received.

Table 20: Composition of collateral for CCR exposures (EU CCR5) - MSEHSE Group

		a	b	c	d	e	f	g	h
€MM		Collateral used in derivative transactions				Collateral used in SFTs			
		Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received		Fair value of posted collateral	
MSEHSE Group		Segregated	Unsegregated	Segregated	Unsegregated	Segregated	Unsegregated	Segregated	Unsegregated
1	Cash – domestic currency	-	15,498	-	14,270	-	45,773	-	51,259
2	Cash – other currencies	-	4,786	-	4,492	-	1,871	-	4,494
3	Domestic sovereign debt	-	2,501	27	540	-	11,034	-	9,415
4	Other sovereign debt	-	4,172	620	1,316	-	41,598	-	36,498
5	Government agency debt	-	50	-	15	-	342	-	268
6	Corporate bonds	-	690	10	33	-	1,140	-	906
7	Equity securities	-	468	-	-	-	3,490	-	1,845
8	Other collateral	-	174	115	658	-	2,575	-	1,941
9	**Total**	**-**	**28,339**	**772**	**21,324**	**-**	**107,823**	**-**	**106,626**

Over the year, unsegregated cash collateral used in SFTs, received and posted, increased offset by decrease in derivatives collateral.

Credit Derivative Transactions

Table 21 shows the extent of an institution’s exposures to credit derivative transactions broken down between protection bought or sold for the MSEHSE Group.

Table 21: Credit derivatives exposures (EU CCR6) - MSEHSE Group

		a	b
€MM			
MSEHSE Group[1]		Protection bought	Protection sold
	Notionals		
1	Single-name credit default swaps	8,438	7,311
2	Index credit default swaps	12,148	13,685
3	Total return swaps	1,111	885
4	Credit options	1,894	1,894
5	Other credit derivatives	5,967	5,708
6	**Total notionals**	**29,558**	**29,483**
	Fair values		
7	Positive fair value (asset)	162	759
8	Negative fair value (liability)	(744)	(153)

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

This table represents notional value and fair value of credit derivatives mainly comprising of Index Credit Default Swaps ("CDS"). During 2023 there was a decrease in the gross notionals of credit derivatives primarily driven by Index CDS.

Collateral Impact of a Downgrade

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

The additional collateral or termination payments that may be called in the event of a future credit rating downgrade vary by contract and can be based on ratings by either or both of Moody's and S&P.

As of 31 December 2023, the future potential collateral amounts and termination payments that could be called or required by counterparties or exchanges and clearing organisations, in the event of one-notch or two-notch downgrade scenarios, from the lowest of Moody's or S&P ratings, based on the relevant contractual downgrade triggers, were €0.6MM and an incremental €25.3MM, respectively.

11. Securitisation

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 MSEHSE Group is applied to facilitate distribution of securitised bonds to clients in certain jurisdictions and does not hold any End-Of-Day ("EOD") risk in securitised bonds.

The CRR defines securitisation positions as a transaction or investment in which the credit risk associated with a receivable or pool of receivables is split into tranches and also has the following characteristics:

- Payments are dependent on the performance of the exposure or pool of exposures;
- Subordination of the tranches defines the distribution of losses during the lifecycle.

Within the scope of the securitisation, the roles of originator, sponsor and investor are defined in accordance with the regulatory rules. In addition, a distinction is made between traditional and synthetic securitisation.

The MSEHSE Group's strategy is to trade securitisations for the purposes of customer placement of newly securitised positions.

In 2023 the MSEHSE Group did not originate or sponsor any new securitisations. The below process description applies only where the MSEHSE Group acts as a securitisation originator or sponsor, and if the MSEHSE Group is exposed to any securitisation position.

In contrast to the previous year, the MSEHSE Group has no securitisation exposures as of 31 December 2023. Therefore, EU-SEC1, EU-SEC2, EU-SEC3, EU-SEC4 and EU-SEC5 disclosure standards are not applicable.

Calculation of Risk Weighted Assets for securitised positions

Based on the securitisation framework the following approaches are applied by the MSEHSE Group to determine Own Fund requirements:

- Securitisation Standardised Approach ("SEC-SA"),
- Securitisation External Ratings Based Approach ("SEC-ERBA") and
- Default 1,250% Approach to calculate the capital requirement on its securitisation positions.

The Securitisation IRB Approach ("SEC-IRBA") is not applied by the MSEHSE Group. The MSEHSE Group uses the following three ECAIs: Moody's, S&P and Fitch Ratings.

Securitisation or transfers of financial assets in the transaction are generally accounted for as sales when the originator 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.

The originator 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 of the entity holding such interests.

Management and monitoring of securitised positions

The credit risk of the institution's securitisation positions are controlled by actively monitoring and managing the associated credit exposures. The MSEHSE Group has processes and procedures in place to evaluate collateral quality, credit subordination levels and structural characteristics of securitisation transactions at inception and on an ongoing basis and manages exposures against internal limits.

12. Market Risk

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

The MSEHSE 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 MSEHSE Group is responsible for ensuring that market risk exposures are well-managed and monitored. The MSEHSE 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 MSEHSE Group Head of Market Risk, who reports to the MSEHSE Group CRO.

To execute these responsibilities, MRD monitors the market risk against limits on aggregate risk exposures and performs a variety of risk analysis. Aggregate market risk limits are approved for the MSEHSE Group and MSESE Consol in line with the risk appetite set by the MSEHSE Group Management Boards. Additional market risk limits are assigned, as appropriate, to trading desks, products and/or regions and are commensurate with the aggregate limits. MRD monitors market risk measures against limits in accordance with policies set by the MSEHSE Group Management Boards. Risk analysis includes monitoring VaR, stress testing and scenario analyses, regular 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.

The MSEHSE Group and MSESE Consol have been granted regulatory permission to use the IMA to calculate own funds requirements for market risk. 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 MRM, and changes to methodologies are approved by the MOCs.

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 MSEHSE Group are consistent with those of the Morgan Stanley Group and include escalation to the MSEHSE Group Management Boards.

Risk Mitigation Policies

The MSEHSE 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 payoff characteristics or other basis risks that may exist between the hedge instrument and the risk exposure that is being hedged. Risk models are designed to ensure these differences are captured and appropriately capitalised.

The MSEHSE Group manages and monitors its market risk exposures, including outright and basis risks, in such a way as to maintain a portfolio that the MSEHSE Group believes is well-diversified in the aggregate with respect to market risk factors, and that reflects the MSEHSE Group's aggregate risk appetite as established by the MSEHSE Group Management Boards. The effectiveness of hedges and mitigants is monitored using processes such as risk and limit reporting.

12.1 Positions Included in the Trading Book

Morgan Stanley 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 around banking/trading boundary is provided by the firm's Banking Trading Committee whose role is to oversee the determination of the covered positions and the Banking or Trading designation in accordance with regulatory requirements. The committee acts as the adjudication forum for any positions where the appropriate designation is unclear. The Banking Trading Committee reports to the Morgan Stanley 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.

Morgan Stanley's methodology for determining Non-Trading Book versus Trading Book classification is documented within the Morgan Stanley 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.

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

12.2 Value at Risk

The MSEHSE 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 MSEHSE Group calculates VaR using a model based on historical simulation for general market risk factors and for name-specific equity risk and based on Monte Carlo simulation for issuer-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 log-normal 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 considering both systematic and specific risk components of the market factor move. 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 MSEHSE Group are included in VaR. The MSEHSE 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 MSEHSE 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 MSEHSE Group is aware of these and other limitations and therefore uses VaR as only one component in its risk management oversight process. This process incorporates stress testing and scenario analysis and extensive risk monitoring, analysis, quantification of risk not captured in VaR, and control at the trading desk, division and the MSEHSE Group and MSESE Consol levels.

The MSEHSE Group performs 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 estimate risks more accurately for 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 MSEHSE Group’s future revenues or financial performance. There can be no assurance that the MSEHSE 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 institutions because of differences in the institutions’ portfolios, modelling assumptions and methodologies. These differences can result in materially different VaR estimates across institutions 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 an institutions’ risk profile rather than as an absolute measure of risk to be compared across institutions.

Backtesting

Morgan Stanley performs regulatory backtesting for the MSEHSE Group and MSESE Consol 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 Morgan Stanley’s Backtesting Policy and Procedures.

As of 31 December 2023, 99% of the MSEHSE Group and MSESE Consol 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 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 EOD 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 EOD 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 fees, commissions and NII. For the purposes of the regulatory backtest, actual profit and loss incorporates funding, bid/offer and model-driven valuation adjustments, whilst hypothetical profit and loss retains only the Funding Valuation Adjustments ("FVA").

Performance is measured across a rolling 250 business day period and is expressed by the number of exceptions observed (instances where the MSEHSE Group or MSESE Consol level, actual or hypothetical, losses exceed 99% VaR). These exceptions are reported to the regulator. Institutions observing five or more exceptions within the measurement period are required to set aside additional market risk capital based on a sliding scale.

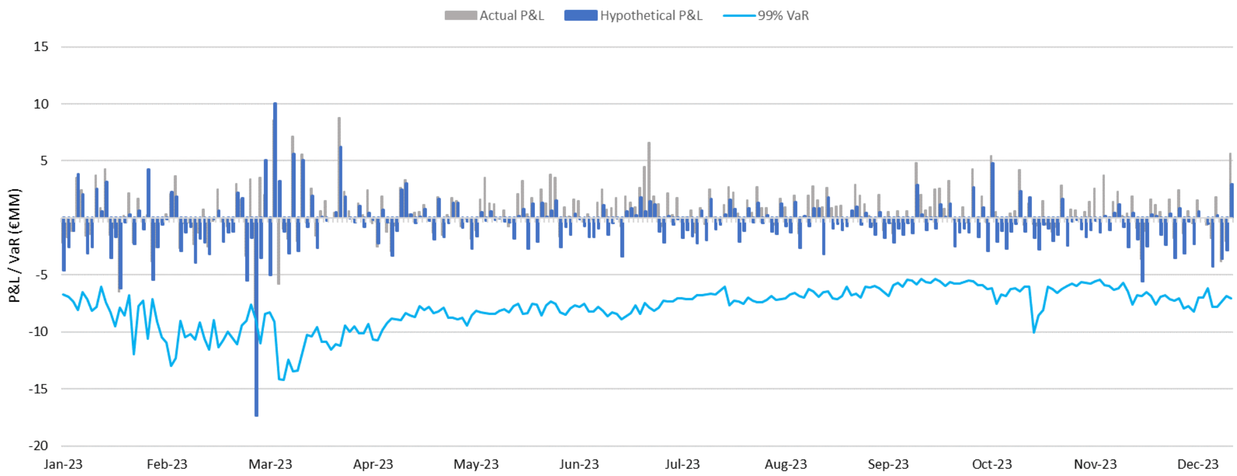
Backtesting results are reported, analysed, and discussed by the MSI Group Market Risk Backtesting Review Forum. Findings or recommendations from this forum are escalated to the MOCs, which are responsible for authorising any further model analysis or model remediation efforts. The results of backtesting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

For the measurement period ended 29 December 2023, one hypothetical and zero actual profit and loss exception was observed for the MSEHSE Group which equates to the Green zone for capital multiplier addend purposes (less than five exceptions). Morgan Stanley's analysis of the March 2023 hypothetical only exception concluded that this was primarily due to elevated market moves in risk factors that were captured in the VaR model with sufficient granularity and did not indicate any model deficiencies.

The plots of actual and hypothetical profit and loss, covering 250 business days of MSEHSE Group backtesting monitoring to 31 December 2023 are displayed below.

The graph below shows the 1-day Regulatory VaR against actual and hypothetical profit and loss for the MSEHSE Group and MSESE Consol as of 31 December 2023, values in €MM:

Figure 4: Comparison of VaR Estimates with Gains/Losses (EU MR4)



12.3 Stressed VaR

SVaR uses the same underlying models as VaR to produce a 1-day 99% VaR constructed over a 1-year period of stress. SVaR uses historical simulations for the general market risk factors and for name-specific risk in corporate shares, and Monte Carlo simulation for name-specific risk in bonds, loans, and related derivatives. The SVaR model has been approved by the regulator for use in regulatory calculations. Stressed 10-day VaR is constructed by scaling the Stressed 1-day VaR.

The SVaR window for regulatory calculations is periodically set as the 1-year Unadjusted VaR window since the start of 2 January 2006 that generates the largest financial stress to the MSEHSE Group's portfolio as measured by the resulting VaR.

12.4 Incremental Risk Charge

The Incremental Risk Charge ("IRC") covers possible losses arising from correlated credit rating migration events and potentially joint default events for credit products in the Trading Book portfolio. The model is applied to instruments with credit-like characteristics referencing corporate, sovereign, regional, supranational and agency obligors that are approved for specific risk treatment.

This excludes securitisations and correlation trading products as these are capitalised separately. The model captures basis risks between credit derivatives and underlying reference instruments, maturity mismatches, regional and industry concentration risks, and simulates stochastic recovery rates.

The underlying model is based on a Merton style default modelling with a correlation structure between regions and industries that is calibrated to market implied default probabilities, and that uses through the cycle, historical transition matrices for rating migrations. The IRC model applies a constant level of risk with varying liquidity horizons of 3, 6 or 12 months reflective of underlying market liquidity and position concentrations in individual issuers. Table 22 outlines the average liquidity horizons for each division, which are assigned based on the constituent issuer's rating and concentration.

MSESE Consol monitors various IRC model sensitivities and assumptions, including concentration sensitivities across industry, region, rating and security type, sensitivity to the "constant level of risk" assumption, and conservatism of stochastic LGD.

Table 22: IRC liquidity horizon for material sub portfolios - MSESE Consol

MSESE Consol	Liquidity horizon (months)
Fixed Income Division	4.13
Institutional Equity Division	3.18
Overall Portfolio	**3.70**

12.5 Market Risk Capital Requirements

The market risk capital requirements of the MSEHSE Group and MSESE Consol comprise of capital which is calculated using IMA in accordance with regulatory approved models and of capital which is calculated under the SA.

Standardised Approach

Table 23 shows the market risk RWAs for the MSEHSE Group as of 31 December 2023, calculated in accordance with the SA and categorised by component type.

Table 23: Market risk under the standardised approach (EU MR1) - MSEHSE Group

€MM		a
	MSEHSE Group	RWEAs
	Outright products	
1	Interest rate risk (general and specific)	-
2	Equity risk (general and specific)	-
3	Foreign exchange risk	10
4	Commodity risk	78
	Options	
5	Simplified approach	-
6	Delta-plus approach	-
7	Scenario approach	-
8	Securitisation (specific risk)	-
9	**Total**	**88**

MSEHSE Group's capital requirements under the SA are due to commodities risk and foreign exchange risk.

Internal Model 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, and the 10-day VaR/10-day SVaR for the relevant day. The IRC is determined by the higher of the average of the latest 12 weeks IRC and the IRC charge for the relevant day.

Table 24 shows the VaR, SVaR and IRC measures for the MSEHSE Group, as of 31 December 2023.

Table 24: Market risk under Internal Model Approach (EU MR2-A) - MSEHSE Group

€MM		a	b
	MSEHSE Group	RWEAs	Own funds requirements
1	**VaR (higher of values a and b)**	**951**	**76**
(a)	Previous day's VaR (VaRt-1)	271	22
(b)	Multiplication factor (mc) x average of previous 60 working days (VaRavg)	951	76
2	**SVaR (higher of values a and b)**	**3,657**	**293**
(a)	Latest available SVaR (SVaRt-1)	1,036	83
(b)	Multiplication factor (ms) x average of previous 60 working days (sVaRavg)	3,657	293
3	**IRC (higher of values a and b)**	**2,296**	**184**
(a)	Most recent IRC measure	1,537	123
(b)	12 weeks average IRC measure	2,296	184
4	**Comprehensive Risk Measure (higher of values a, b and c)[1]**	**-**	**-**
(a)	Most recent risk measure of comprehensive risk measure	-	-
(b)	12 weeks average of comprehensive risk measure	-	-
(c)	Comprehensive Risk Measure - Floor	-	-
5	**Other**	**824**	**65**
6	**Total**	**7,728**	**618**

1. Comprehensive Risk Measure ("CRMe") does not form part of the product scope for MSEHSE Group.

During 2023 the MSEHSE Group's market risk RWAs under the IMA approach decreased due to a reduction in Risks not in VaR ("RNIV") RWAs, reported within Other in the table above. The decrease in RNIV RWAs was partially offset by an increase in IRC and SVaR RWAs due to a change in risk profile.

Table 25 summarises the key drivers of RWAs/TOFR for the MSEHSE Group market risk exposures under the IMA. The VaR and SVaR capital measures presented are based on the 60-day averages, as they were higher than the daily measures as of 31 December 2023.

Table 25: RWA flow statements of market risk exposures under the IMA (EU MR2-B) - MSEHSE Group

€MM		a	b	c	d	e	f	g
MSEHSE Group		VaR	SVaR	IRC	Comprehensive risk measure	Other[4]	Total RWEAs	TOFR
1	**RWEAs at previous period end[1]**	1,057	2,921	752	-	3,792	8,522	682
1a	Regulatory adjustment[2]	(790)	(1,862)	-	-	(2,144)	(4,796)	(384)
1b	RWEAs at the previous quarter-end (end of the day)	267	1,059	752	-	1,648	3,726	298
2	Movement in risk levels	46	(112)	371	-	486	791	63
3	Model updates/changes	(37)	80	420	-	(1,252)	(789)	(63)
4	Methodology and policy	-	-	-	-	-	-	-
5	Acquisitions and disposals	-	-	-	-	-	-	-
6	Foreign exchange movements	-	-	-	-	-	-	-
7	Other[3]	(5)	9	(6)	-	(807)	(809)	(65)
8a	RWEAs at the end of the disclosure period (end of the day)	271	1,036	1,537	-	75	2,919	233
8b	Regulatory adjustment[2]	680	2,621	759	-	749	4,809	385
8	**RWEAs at the end of the disclosure period**	**951**	**3,657**	**2,296**	**-**	**824**	**7,728**	**618**

1. Previous reporting period was 31 December 2022.
2. Regulatory adjustment accounts for the difference between the RWA calculated based on the EOD position, compared with the RWA calculated based on the 60-day average position in the case of VaR/SVaR and 12-week average position in the case of IRC and CRM. The regulatory adjustments also account for the multiplication factors mc and ms, per Article 366 of the CRR, for the VaR, SVaR and Other respectively.
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 RNIV.

Over the year, market risk RWAs under Internal Models decreased due to a reduction in RNIV RWAs. This was partially offset by higher IRC due to increased sovereign exposure and higher stressed VaR attributable to changes in the Fixed Income risk profile.

For MSESE Consol, RWAs were not reported as of 31 December 2022 so no RWA flow statement is presented. The balances as of 31 December 2023 were €951MM (VaR), €3,657MM (SVaR), €2,296MM (IRC), €824MM (Other), €7,728MM (Total RWEAs) and €618MM (TOFR). These amounts will be reported as the opening balances (end of previous reporting period) for the RWA flow statement within the disclosure report for the year ended 31 December 2024.

Table 26 provides a summary of the maximum, minimum, average, and period-end values over 2023, for the MSEHSE Group, resulting from the different types of models approved to be used for computing the regulatory capital charge.

Table 26: IMA values for trading portfolios (EU MR3) - MSEHSE Group

	MSEHSE Group	a €MM
	VaR (10 day 99%)	
1	Maximum value	45
2	Average value	25
3	Minimum value	17
4	Period end	22
	SVaR (10 day 99%)	
5	Maximum value	101
6	Average value	76
7	Minimum value	61
8	Period end	83
	IRC (99.9%)	
9	Maximum value	315
10	Average value	139
11	Minimum value	51
12	Period end	123
	Comprehensive risk measure (99.9%)	
13	Maximum value	-
14	Average value	-
15	Minimum value	-
16	Period end	-

The MSEHSE Group VaR and SVaR both remained relatively stable during 2023. The increase in IRC was due to changes in the fixed income risk profile.

12.6 Stress Testing

The MSEHSE Group has a comprehensive and dynamic Stress Testing Framework incorporating deterministic group-wide Macroeconomic and Climate Risk Stress tests, business area single and multi-factor scenarios, and reverse stress testing scenarios.

Stress testing is one of the MSEHSE Group's principal risk management tools used to identify and assess the impact of severe stresses on its portfolios. It complements other risk metrics by providing an assessment of MSEHSE Group's resilience under stress scenarios over a range of severities. Stress testing methodologies are applied consistently across all sub-portfolios according to the MSEHSE Group Stress Testing Procedure.

In addition to helping the MSEHSE Group understand the risks it is exposed and/or vulnerable to under a range of scenarios, Stress Testing is also used by the MSEHSE Group Management Boards to set the boundary for risk taking within the loss capacity of the MSEHSE Group and MSESE Consol.

13. Interest Rate Risk in the Banking Book

Interest Rate Risk ("IRRBB") and Credit Spread Risk ("CSRBB") in the Banking Book is defined as the risk of losses arising from adverse changes in the interest rate curves within the Banking Book .

The MSEHSE Group is exposed to interest rate risk primarily through the Trading Book which is captured in VaR. The MSEHSE Group has IRRBB primarily arising from MSEHSE Group's funding and liquidity management. The interest rate risk is measured on a daily basis through institution-wide risk systems, except for the risks on internal funding positions which are measured on a quarterly basis. The IRRBB risk is mitigated by Treasury executing financial products to manage liquidity, funding, and capital, including cash, repo, and reverse repo and interest rate derivatives as needed.

The Economic Value of Equity ("EVE") sensitivity measures the present value of cash flows assuming a static balance sheet over the life of underlying assets and liabilities while factoring in any embedded optionality. The sensitivity is measured using proprietary Position Valuation and Risk Models ("PVRM") in the Front Office technology systems where the positions are captured and monitored using the PV01 interest rate delta sensitivity.

The NII sensitivity measures the potential loss on NII due to a predefined market rate stress event on a certain time horizon. Quantitative Risk Management ("QRM"), an external application, is used to measure and monitor the NII sensitivity of the MSEHSE Group's Banking Book.

Both EVE and NII are calculated for IRRBB and CSRBB. The EVE and NII calculations use modelling and parametric assumptions that align to those referred to in Article 98(5a) of Directive 2013/36/EU. Changes in the EVE are evaluated using the regulatory defined scenarios that impact the level and shape of the yield curve, as listed in Table 27. Impacts on NII are measured using parallel interest rate rally and sell-off scenarios across currencies.

Table 27: Interest rate risks of non-trading book activities (EU IRRBB1) - MSEHSE Group

€MM		a	b	c	d
Supervisory shock scenario		Changes of the economic value of equity		Changes of the net interest income	
		Current period[1]	Last period	Current period	Last period
1	Parallel shock up	1	3	159	132
2	Parallel shock down	(3)	(5)	(156)	(130)
3	Steepener shock	(1)	(3)		
4	Flattener shock	1	1		
5	Short rates shock up	1	3		
6	Short rates shock down	(2)	(5)		

1. Current period refers to 31 December 2023, last period refers to 31 December 2022.

As of 31 December 2023, IRRBB risk was a €14K gain per 1 basis point increase in Interest rate levels, reduced from €24k gains as of 31 December 2022.

For the period, the NII sensitivity has increased to €(156)MM, mainly due to a higher equity balance and assuming a parallel shift of the yield curve by (200) basis points.

There are limits on the impact to NII under a shock of 200 basis points down and on the total IRRBB PV01 exposure. Both risk exposures stayed within their pre-defined limits during 2023.

14. Operational Risk

Risk Management and Control

Operational risk refers to the risk of loss, or of damage to the MSEHSE Group's reputation, resulting from inadequate or failed processes, people, and systems or from external events (e.g., fraud, theft, legal and compliance risks, cyber-attacks, or damage to physical assets).

Operational risk relates to the following risk event categories as defined by Basel Capital Standards: internal fraud; external fraud; employment practices and workplace safety; clients, products, and business practices; business disruption and system failure; damage to physical assets; and execution, delivery, and process management.

The MSEHSE Group may incur operational risk across the full scope of its business activities. The MSEHSE Group has established an operational risk framework to identify, measure, monitor and control risk across the MSEHSE Group. This framework is consistent with the framework established by the Morgan Stanley Group and includes escalation to the MSEHSE Group Management Boards. Effective operational risk management is essential to reducing the impact of operational risk incidents and mitigating legal and reputational risks. The framework is continually evolving to reflect changes in the MSEHSE Group and to respond to the changing regulatory and business environment.

The MSEHSE Group has implemented operational risk data and assessment systems to monitor and analyse internal and external operational risk events, to assess business environment and internal control factors and to perform scenario analysis. The collected data elements are incorporated in the operational risk capital model. The model encompasses both quantitative and qualitative elements. Internal loss data and scenario analysis results are direct inputs to the capital model, while external operational incidents, business environment and internal control factors are evaluated as part of the scenario analysis process.

In addition, the MSEHSE Group employs a variety of risk processes and mitigants to manage its operational risk exposures. These include a governance framework, a comprehensive risk management programme and insurance.

Identification of Top Operational Risks Pathways and End Risks

The MSEHSE Group has a structured process in place to determine its Top Operational Risks ("TORs"). Pathways are defined as a means or threat by which a detrimental impact to the firm, markets or clients is generated. End Risks are defined as the final manifestation of risks. The MSEHSE Group's ORD reviews Operational Risk data elements and forms an understanding of the risk issues within the business units and infrastructure areas. ORD proposes additions, edits, and deletions of the MSEHSE Group's TORs, supported by information and analytics performed. These proposals are presented to the governance committees to review, challenge and ultimately to recommend for adoption by the MSEHSE Group Management Boards.

As of 31 December 2023, the MSEHSE Group Management Boards approved TOR Pathways and End Risks are:

- Pathways:
    - Cyber
    - Third Party
    - Conduct
- End Risks:
    - Business Disruption and Resilience
    - Financial Crimes
    - Information Security
    - Market Abuse and Trading Practices
    - Reporting Errors
    - Sales Practice, Product and Investment Advisory Risk
    - Transaction Processing and Execution
    - Unauthorised Trading, Theft and Fraud

Management of Operational Risk

A variety of risk processes and mitigants are used to manage operational risk exposures. These include a strong governance framework, a comprehensive risk management programme and insurance. Operational risks and associated risk exposures are assessed relative to the risk tolerance established by the MSEHSE Group Management Boards and are prioritised accordingly. The breadth and variety of operational risk are such that the types of mitigating activities are wide-ranging. Examples of such activities include enhancement of defences against cyber-attacks; use of legal agreements and contracts to transfer and/or limit operational risk exposures; due diligence; implementation of enhanced policies and procedures; and segregation of duties.

The ORD provides oversight of operational risk management and independently assesses, measures, and monitors operational risk. The ORD works with the business units and control groups to help ensure a transparent, consistent, and comprehensive framework for managing operational risk within each area and across the MSEHSE Group. The ORD scope includes oversight of the technology and data risk management programmes (e.g., cybersecurity), fraud risk management and prevention programme and a third-party risk management programme.

Morgan Stanley's Firm Resilience organisation is responsible for maintaining global programmes for Business Continuity Management and Disaster Recovery. The programs are designed to identify key risks and threats to the MSEHSE Group’s operational resiliency, to ensure that recovery strategies and required resources are in place for the resumption of critical business functions following a disaster or other business interruption. Disaster recovery plans are in place for critical technology assets and resources on an enterprise-wide basis.

The MSEHSE Group's Cybersecurity and information security framework, which includes policies, procedures and technologies, is designed to protect the MSEHSE Group’s environment from operational risk failures due to actions of a malicious cyber actor. This includes protecting the MSEHSE Group's own data, client data and the MSEHSE Group's employees' data against unauthorised disclosure, modification or misuse and is also designed to address regulatory requirements. This framework covers a broad range of areas, including identification of internal and external threats, access control, data security, protective controls, detection of malicious or unauthorised activity, incident response and recovery planning.

Exposures to services provided by third parties including external vendors are managed through a variety of means, such as, the performance of due diligence, consideration of operational risk, implementation of service level and other contractual agreements, and ongoing monitoring of third parties’ performance. The MSEHSE Group maintains a third-party risk management programme with policies, organisation, governance and supporting technology that aligns with our risk tolerance and is designed to meet regulatory requirements. This includes a dedicated second line of defense team that besides other governance tasks performs testing of the accuracy of supervision performed by the divisions that own services.

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

In addition, the MSEHSE Group has established procedures to mitigate the risk that a counterparty’s performance obligations will be unenforceable, including consideration of counterparty legal authority and capacity, adequacy of legal documentation, the permissibility of a transaction under applicable law and whether applicable bankruptcy or insolvency laws limit or alter contractual remedies.

Operational Risk Governance

The responsibilities of key individuals and committees for the governance of Operational Risk, up to and including the MSEHSE Group Management Boards, are clearly understood and followed throughout the MSEHSE Group. The implementation and operation of the Operational Risk Framework is overseen by forums at different levels in the MSEHSE Group's governance structure. Key forums are:

- The MSEHSE Group Operational Risk Oversight Committee
- The MSESE Operational Risk Oversight Committee
- The MSEHSE Group Executive Risk Committee
- The MSESE Executive Risk Committee
- The MSEHSE Group Supervisory Board Risk Committees

Committees and governance forums that provide oversight of particular TOR End Risks, Pathways, Risk Themes and the effectiveness of their respective management frameworks include:

- EMEA Third Party Governance Committee
- EMEA Electronic Trading Governance Committee

Operational Risk Framework

The MSEHSE Group's Operational Risk Policy and Procedures are reviewed and updated at least annually to clearly articulate the current design and implementation of the Operational Risk Management Framework. In particular:

- The MSEHSE Group Operational Risk Management Policy;
- Key elements of the Framework covered by Policy include: Risk Appetite and Tolerance; Risk Assessment and Remediation; Scenario Analysis; Operational Risk Incident Management; Industry Incident Data; Operational Risk Metrics; Risk Measurement and Operational Risk Modelling; and Reporting and Escalation;
- Underlying Procedures set out in detail the key processes which underpin the framework. In particular: Incident and Issue Reporting and Escalation; the Risk Control Self-Assessment ("RCSAs"); identification of Horizon Risks and Scenario Analysis workshops

Operational Risk Reporting, Management Information and Escalation

Reporting and management information provide awareness of the state of Operational Risk throughout the governance chain, ensures appropriate budget to address control environment concerns, and enables the MSEHSE Group Management Boards to act if Operational Risk becomes elevated within risk tolerance levels.

Key management information reports include:

- Escalated incidents on a weekly basis;
- Lessons learned for selected incidents including the actions planned or taken to mitigate the Operational Risk going-forward;
- Overall incident trends, emerging risks, and outsourcing;
- Operational Risk capital updates;
- Operational Risk levels versus tolerance and key remedial actions and timelines.

Capital Assessment

Normative Perspective (Pillar 1): Capital requirements for Operational Risk are currently calculated under the BIA. As of 31 December 2023, the MSEHSE Group's Operational Risk RWAs were €1,401MM.

Economic Perspective (Pillar 2): The MSEHSE Group recognises that the BIA is not a risk-based measure and therefore uses an Operational Risk modelling approach to calculate internal Operational Risk capital requirements. The MSEHSE Group holds sufficient capital to cover the incremental capital requirement over and above the Pillar 1 requirement.

Table 28 shows operational risk own funds requirements and risk-weighted exposure amounts for the MSEHSE Group.

Table 28: Operational risk own funds requirements and risk-weighted exposure amounts (EU OR1) - MSEHSE Group

€MM		a	b	c	d	e
MSEHSE Group		Relevant indicator				
	Banking activities	Year-3	Year-2	Last Year	Own funds requirements	Risk exposure amount
1	Banking activities subject to basic indicator approach (BIA)	608	743	891	112	1,401
2	Banking activities subject to standardised (TSA) / alternative standardised (ASA) approaches	-	-	-	-	-
3	*Subject to TSA:*	-	-	-		
4	*Subject to ASA:*	-	-	-		
5	Banking activities subject to advanced measurement approaches AMA	-	-	-	-	-

MSEHSE Group calculates RWAs for operational risk using the BIA. Capital charge of 15% is applied on adjusted average net profit of 3 prior years. RWAs is 12.5 times the capital charge.

15. Climate and Environmental Risk

15.1 Approach to ESG

ESG Strategy and Disclosures

The MSEHSE Group's approach to ESG is consistent with that of the Morgan Stanley Group.

The Morgan Stanley Group is committed to transparent disclosure of information relating to ESG and the full list of available disclosures is in the Morgan Stanley Group's ESG Report. The Report's data, content and narrative are informed by the Sustainability Accounting Standards Board ("SASB") standards for Investment Banking, Asset Management and Commercial Banking and the recommendations of the Task Force on Climate-Related Financial Disclosures ("TCFD"), both of which are now part of the International Sustainability Standards Board ("ISSB").

The Morgan Stanley Group's ESG Reports are available at https://www.morganstanley.com/en/about-us/sustainability-at-morgan-stanley. As at publication date of this Group Management Report, the latest Morgan Stanley ESG Report is the 2022 Report. The 2023 Report will be available at this link when published.

15.2 Climate and Environment

15.2.1 Climate strategy

The MSEHSE Group's strategy is to support the Morgan Stanley Group in achieving the overall goal of net-zero financed emissions across its global business by 2050. It will contribute to each of the following pillars of the Morgan Stanley Group climate strategy:

- Support the transition to a low-carbon and green economy;
- Manage climate risk (see "Climate and Environmental Risk Management" section);
- Provide relevant, transparent, useful and timely climate-related disclosures (see "ESG Strategy and Disclosures" section); and
- Enhance the climate resilience of operations.

The Morgan Stanley Group aims to meet its climate commitments and contribute to real-economy decarbonisation by supporting clients in achieving their own climate-related commitments. Its approach to meeting its net-zero commitment is described in the Morgan Stanley Group ESG Report and includes scaling low-carbon opportunities, supporting clients through climate transitions, and managing its lending portfolio.

To demonstrate progress toward its net-zero by 2050 commitment, the Morgan Stanley Group set interim 2030 financed emissions lending intensity ("FELI") targets for the three most emissions-intensive sectors: Auto Manufacturing, Energy and Power. Progress against these targets is reported in the Morgan Stanley Group ESG Report.

The MSEHSE Group maintains a KPI to monitor alignment of lending exposure retained on MSEHSE Group to Morgan Stanley Group's Net Zero commitment and global targets in these three sectors. Accountability for this KPI sits with the MSEHSE Group's Management Boards.

The Morgan Stanley Group Climate Strategy Assessment Framework ("CSAF") provides additional insight into clients' approaches to climate. The CSAF will help the Morgan Stanley Group to assess company targets, climate governance, plans and actions taken toward meeting targets, and Greenhouse Gas ("GHG") emissions performance.

The Morgan Stanley Group is also involved in industry-led initiatives that inform how financial institutions set net-zero targets, and measure and disclose financed emissions, including the Net-Zero Banking Alliance ("NZBA") and the Partnership for Carbon Accounting Financials ("PCAF"). While these initiatives help inform Morgan Stanley Group's approach to net zero, it makes independent decisions regarding climate strategy.

15.2.2 Climate and Environmental Risk Management

Climate and environmental risks include impacts to biodiversity, pollution of land, water or air, climate change, deforestation and forest degradation and other negative impacts on the environment as a result of human activities. Within climate and environmental risks, the risks arising from climate change are a particular area of focus.

The MSEHSE Group considers climate and environmental risks through two main categories: transition risks and physical risks.

- **Transition risks:** Transitioning to a low-carbon and more environmentally sustainable economy will entail extensive regulatory, policy, legal, technology and market initiatives as society adapts to climate change, mitigates its causes and promotes a more sustainable environment. Depending on the nature, speed and focus of these changes, transition risks may pose varying types and levels of financial and reputational risk to businesses and other organisations.
- **Physical risks:** These risks include both acute physical events such as flooding, and chronic physical risks related to longer-term shifts in climate patterns such as more frequent and prolonged drought and progressive shifts like biodiversity loss, land use change, habitat destruction and resource scarcity. Financial implications for organisations can range from direct damage to assets to indirect impacts from supply chain disruption, driven by factors such as changes in water availability, food security and agricultural productivity. Extreme temperature changes may affect an organisation’s physical locations, operations, supply chain, transport needs and employee safety.

In addition, the MSEHSE Group may be exposed to litigation risk or reputational risk losses arising from compliance risks related to increasing and evolving ESG-focused regulation.

15.2.2.1 Managing climate and environmental risks

The Central Climate Risk Team within Risk Management is responsible for working with stakeholders in Risk and across the Morgan Stanley Group to identify, monitor, mitigate and report on the climate-related financial risks it may face. The EMEA team is led out of the MSEHSE Group with primary responsibilities consisting on partnering with stakeholders to manage and embed climate and environmental risks in the risk management framework including regional regulatory requirements and with consideration of the MSEHSE Group’s portfolio.

Climate and environmental risks are incorporated into the MSEHSE Group Risk Management Framework as drivers of credit, market, operational and liquidity risk. The management of climate and environmental risks is also incorporated into policies and procedures. The MSEHSE Group Risk Management Framework continues to be enhanced to meet requirements set out in new and evolving regulations.

15.2.2.2 Risk identification and materiality assessment

Materiality assessment in the short-term

As part of its Risk Identification and Materiality Assessment process, the MSEHSE Group conducts granular risk assessments of short-term climate and environmental risks. These include:

- **Risk inventory:** The risk inventory captures climate and environmental risks as drivers of existing risks. In 2023, the MSEHSE Group expanded the assessment to consider additional risk events. Risk events assessed for their impact on credit, market, liquidity and operational risks include: 1) transition risk driven by climate policy (carbon repricing and accelerated green technology) and other environmental policies (reduction of pollution); and 2) physical risk driven by climate events (extreme temperature, wildfire, drought, riverine flood, coastal floods and storms) and other environmental events (biodiversity loss). In addition, the MSEHSE Group has assessed the impact of climate and environmental risks to litigation, reputational, collateral, and strategic risks.
- **Materiality assessment:** A quantitative assessment is performed across risk types to determine the materiality of the impact of climate and environmental risks. A risk is considered material if the estimated stress loss or outflow is above the existing risk identification materiality thresholds.

Results of short-term materiality assessment

In 2023 for the MSEHSE Group, climate transition risk driven by a carbon repricing or an accelerated green energy technology transition was assessed as material for credit risk exposures. Climate physical risks were assessed as nonmaterial for credit risk. Climate transition and physical risks were assessed as non-material for the MSEHSE Group's collateral positions given low concentration in the MSEHSE Group's portfolio to these types of risks. Climate and environmental risks were assessed as non-material for operational risk (business disruption, litigation risk and reputational risk), market risk, liquidity risk and strategic risk given estimated losses fall below respective materiality thresholds. The assessment is performed quarterly.

Materiality assessment in the long-term

The MSEHSE Group also performed a long-term assessment of climate risks using 30-year scenarios. Long term assessments consider a late climate policy action focusing on transition risk and a no action scenario focusing on physical risk. This materiality assessment concluded that the late action scenario focused on transition risk is material for credit risk in the long term. In 2023, the two long term scenarios were assessed as non-material for market and liquidity risks.

15.2.3 Risk appetite and limit framework

Credit and market risk limits: Climate risk

Climate transition risk is incorporated into the MSEHSE Group's Risk Appetite and Limit Frameworks. The MSEHSE Group Management Boards set a CSLL across credit and market risks which is reviewed on an annual basis.

In addition to the CSLL, climate risk is incorporated into the Credit Risk Management Framework through industry sector limits as well as country and obligor ratings. Limits and ratings are monitored as per standards in credit risk management policies and procedures.

- **Climate Stress Loss limit:** The MSEHSE Group Management Boards express risk appetite via the CSLL. To monitor potential credit and market risk losses against this limit, the MSEHSE Group runs a short-term transition risk carbon repricing scenario that assumes a global effort to address carbon emissions leads to sudden and sustained carbon repricing across all countries. The results of this scenario are reported to the MSEHSE Group's Management Boards on a monthly basis.
- **Industry Sector Limits:** Credit risk limits are established for industries that are highly exposed to climate risk. This process includes a portfolio segmentation of industries into groups with common climate risk profiles. The credit limits for the industry sectors highly exposed to transition and physical risks enable the MSEHSE Group to monitor and manage credit risks arising from climate change.
- **Country Ratings:** ESG considerations are incorporated into the internal sovereign credit rating assessment. The sovereign rating is an important input in determining country limits, therefore ESG considerations influence risk appetite at the country level.
- **Obligor Ratings:** Climate risk is incorporated into the rating assessment for corporates. The corporate rating is an important input in determining single name limits, therefore climate risk influences risk appetite at a single name level.

In addition to the credit limits, the MSEHSE Group includes an assessment of ESG risks in the lending transaction approval documentation in line with the EBA guidelines on loan origination and monitoring.

Liquidity and operational risk limits: Climate risk

In 2023, climate risks are assessed as nonmaterial for liquidity and operational risk. Hence, the MSEHSE Group has not established specific climate risk limits for liquidity and operational risks.

Credit, market, liquidity and operational risk limits: Other environmental risks

In 2023, other environmental risks were assessed as non-material for credit, market, liquidity and operational risk. Hence, the MSEHSE Group manages other environmental risks within the existing risk appetite and limit frameworks.

Scenario analysis and stress testing

Scenario Analysis is central to the MSEHSE Group's Climate Risk Management Framework.

Both transition and physical risks can materialise over different time horizons. For example, extreme flooding events present near-term physical risks to vulnerable regions and populations, while e.g., certain climate policy measures, particularly those implemented over several years, present longer-term challenges as economies adjust to increased costs and market or technological changes stemming from new policies.

Therefore, scenarios may be developed to assess potential losses over the short, medium, or long term. Morgan Stanley Risk Management defines these time horizons as:

Short Term: 0 to less than 1 year ;

Medium Term: 1 to less than 5 years ;

Long Term: longer than 5 years

The MSEHSE Group has implemented short term and long term scenarios to assess the impact of climate risks.

- **Short-term credit and market risk scenario analysis:** Informed by carbon emissions data from external providers, the MSEHSE Group employs a bottom up approach in assessing the financial impact of climate policy (carbon repricing) in a scenario that captures both counterparties' PD and market price movements. An additional credit risk scenario that considers an accelerated transition to green energy technology is assessed for the counterparties in the Energy sector and updated on a quarterly basis. As transition risk is a material credit risk, a CSLL was established for a transition risk scenario. Physical risk vulnerabilities are assessed on a quarterly basis and as of 2023 are deemed as non-material.
- **Operational risk scenario analysis:** A number of physical risk scenarios are assessed focusing on business disruption due to climate change events (including extreme weather). Physical risk scenarios are selected based on a combination of probability and severity.
- **Litigation and Reputational Risk Scenarios:** Litigation risk arising from Product Design is assessed, including inadequate due diligence and disclosure. Reputational risk losses are assessed for the scenario that is expected to result in the greatest harm to clients.
- **Strategic risk:** The transition risk carbon repricing scenario was assessed for Strategic Risk.
- **Long-term strategy scenarios:** The MSEHSE Group conducted an exploratory long term scenario analysis, running two 30-year quantitative scenarios to model late action (transition risk) and no additional action (physical risk) scenarios on a static and dynamic balance sheet, to inform the MSEHSE Group's materiality assessment and business strategy.

15.2.4 Climate Metrics and Targets

Climate Stress Loss Limit

The MSEHSE Group remained within its portfolio CSLL throughout 2023.

Credit exposures

The MSEHSE Group's exposure to industries identified as highly exposed to climate transition or physical risk is a small percentage of overall credit exposure.

Exposures to industries with high climate transition or physical risk are subject to credit industry sector limits and both independently comprise 15% of the MSEHSE Group's aggregate credit risk exposure. The increase in exposure to sectors highly vulnerable to transition and physical risks in 2023 compared to the previous year relates to the MSEHSE Group's loan retention exercise that has led to an increase in the overall MSEHSE Group loan portfolio. Regarding loans in the Energy, Power and Auto Manufacturing sectors, the MSEHSE Group monitors alignment of lending exposure retained on MSEHSE Group to Morgan Stanley Group's Net Zero commitment and global targets in these three sectors (further information can be found in the 'Climate Strategy' section). Credit exposures to climate risk in the table below include treasury placements, lending commitments and trading activities, offset by credit risk mitigants such as collateral. Trade and other receivables are excluded.

Credit exposures to climate risk

Table 29: Credit exposures to climate risk - MSEHSE Group

Climate Risk		**2023**		**2022**
€MM	**Exposure**	**% of Portfolio Total**	**Exposure**	**% of Portfolio Total**
Transition Risk[1]	3,213	15%	2,091	8%
Physical Risk	3,352	15%	2,515	9%
Portfolio Total[2]	**22,028**		**26,651**	

1.The industries identified as having high climate transition risk were updated in 2023. The 2022 figures included in this table have been revised accordingly.
2.Total portfolio exposures exclude Morgan Stanley Group Affiliates.

The table includes the credit exposure to industry sectors highly vulnerable to climate transition and climate physical risks. The vulnerability of obligors is assessed based on a segmentation approach which differentiates between low, medium, high and very high (table shows high and very high). The segments are sub-industries with consistent climate risk profile. The assessment considers expert credit assessment, GHG emissions data and external physical risk scores.

Financed emissions

The Morgan Stanley Group's financed emissions are disclosed in the 2022 Morgan Stanley Group ESG Report for lending activities in the sectors for which the Morgan Stanley Group has established interim targets. These were reported in close alignment with PCAF's Global GHG Accounting and Reporting Standard and according to the Morgan Stanley Group's FELI metric methodology. For more details on the methodology, refer to https://www.morganstanley.com/about-us/sustainability-at-morgan-stanley/net-zero-financed-emissions.

The MSEHSE Group exposure and GHG Lending Intensity for its lending portfolio is shown in the table below. This is based on the ECB 2022 Climate Risk Stress Test methodology and includes lending exposure in emissions-intensive sectors for which the Morgan Stanley Group has set interim targets as well as lending exposure in other emissions-intensive sectors. This methodology is similar but distinct from the PCAF methodology the Morgan Stanley Group utilised to calculate and report its financed emissions in the 2022 ESG Report. For further information on the ECB methodology, refer to https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.climateriskstresstest2021~a4de107198.en.pdf.

As discussed in the "Climate Data Limitations and Challenges" section, carbon data for the emissions of the MSEHSE Group's clients is evolving and improving. The MSEHSE Group has reviewed emissions data disclosed previously to determine whether a revision is warranted, given that more accurate emissions data has become accessible since last year's report. Included in the below table are the 2022 originally reported and 2022 revised values, which reflect the use of updated Scope 3 emissions based on actual emissions where now available. The sectors with the largest impact are the Energy and Other sectors. There is also a small increase in the Weighted Average Lending Intensity of 2.5%. As data and methodologies continue to improve, the MSEHSE Group may make additional revisions as appropriate.

As presented in the following table, the MSEHSE Group's credit exposure to emissions-intensive sectors has increased approximately 59% since 31 December 2022 to €3,357MM as at 31 December 2023. The weighted average GHG Lending Intensity of the portfolio decreased by 32% to 1,718 tonnes per 3-year average revenue. The decrease is primarily driven by a decrease in the average emissions intensity across Energy, Utilities, as well as Automobile and Components counterparty sectors, mostly in relation to Scope 3 emissions. The decrease in Lending Intensity is primarily driven by higher average revenues for the MSEHSE Group's counterparties. A higher allocation of total credit exposure to less emissions-intensive sectors also played a role. This is subject to the data limitations noted in the 'Note' to the table below and the "Climate Data Limitations and Challenges" section.

Table 30: GHG Lending Intensity as per ECB Climate Risk Stress Test Methodology - MSEHSE Group

	2023			2022			
				REPORTED			REVISED*
Sector	Number of Counter parties	Exposure (%)	GHG Lending Intensity (tCO2e/€ in MM of 3 years average revenue)	Number of Counter-parties	Exposure (%)	GHG Lending Intensity (tCO2e/€ in MM of 3 years average revenue)	GHG Lending Intensity (tCO2e/€ in MM of 3 years average revenue)
Utilities	10	33%	1,311	10	29%	2,205	2,142
Transportation	5	12%	808	6	18%	690	710
Automobiles and Components	3	9%	4,374	3	12%	5,001	5,233
Energy	2	7%	3,942	2	9%	10,014	7,542
Pharma, Biotech & Life Sciences	2	11%	109	2	9%	160	155
Other as per ECB Climate Stress Test	21	28%	1,755	8	23%	636	1,841
Weighted average			**1,718**			**2,451**	**2,513**
Total (%)		**100%**			**100%**		
Total	**43**	**3,357**		**31**	**2,112**		

* As noted in the “Climate Data Limitations and Challenges” section below, emissions data from companies and third-party data providers is subject to data lag. This can lead to a requirement to revise where actual emissions data becomes available. The 2022 restated values in the above table reflect the use of updated Scope 3 emissions data based on actual emissions where now available.

Note:

Exposure considers corporate exposures to non-SME (“non-small and medium enterprises”), non-financial obligors. Emissions-intensive sectors according to Statistical Classification of Economic Activities in the European Community Codes (“NACE-Codes”), as defined in the ECB Climate Risk Stress Test methodology, have been mapped to GICS codes in the table. Within each sector, a materiality threshold of 1% of total non-SME corporate credit exposures by sector (i.e., by group of NACE codes) applies, the exposure below that threshold is not reported.

GHG lending intensity metric for counterparties is the counterparties' Scope 1, 2 & 3 GHG emissions in tonnes (tCO2e)/counterparties’ average revenues for the last 3 years (subject to revenue data availability). The sector intensity metric is the weighted average (based on exposure) of the GHG intensity of the counterparties in the sector.

The most recent GHG emissions data is for the year 2022. Morgan Stanley Group performs a DQ review of GHG vendor data, ensuring sufficient coverage and a best effort toward accuracy. For further detail on how the Morgan Stanley Group sources GHG data, refer to https://www.morganstanley.com/about-us/netzero/Morgan-Stanley-Net-Zero-Target-Methodology.pdf

Climate Data Limitations and Challenges

Climate data is subject to significant limitations and challenges. These challenges are described below in order to educate stakeholders about the complexity in providing the disclosures required by the ECB. Given the data limitations and challenges noted below, overall reliability, accuracy and comparability of the climate disclosures may be impacted.

- **Data lag**: Emissions data from companies and third-party data providers is often unavailable until 12-18+ months after the reporting year end, far exceeding common financial reporting timeframes. This lag is due to a range of factors including company GHG data reporting cycles; the time it takes for vendors to source, aggregate and analyse data; vendors populating missing or incomplete information; and vendor DQ checks. This results in the MSEHSE Group making internal decisions utilising data that is often not up to date and therefore not entirely reflective of current practices from clients.
- **Limited Company Reporting**: Another limitation is the lack of company reporting across GHG scopes, especially for scope 3 emissions. Scope 3 data is generally estimated by third-party providers because it is often underreported. Therefore, scope 3 emissions data is heavily dependent on estimation methodologies which can differ across data providers, and are subject to methodological updates, making year-over-year result comparisons more challenging. Furthermore, the GHG Protocol methodology[5] directs companies to decide which underlying scope 3 emissions sub-categories are most relevant to their respective operations. Companies within the same sub-sector may determine different underlying categories as relevant in their emissions disclosures. In some cases, companies may determine categories relevant, but may opt to not report.
- **Data Provider-Specific Methodology Decisions**: The MSEHSE Group's financed emissions calculations depend on GHG data from two primary sources —company-reported emissions data and third-party data provider estimations. For company-reported emissions data, companies report different GHG emission figures across different disclosure channels. For example, a company might report different emissions figures in its Carbon Disclosure Project ("CDP") report, its annual report, and/or its sustainability report. Third-party data providers do not uniformly select one disclosure source over another source, resulting in data discrepancies across these data providers. In addition, third-party data providers can retroactively implement changes in their own estimation methodology year on year, which could lead to revision of prior years' data. On the other hand, some third-party data providers may choose not to revise or update their prior years' emissions data sets when companies revise their own data. These third-party data providers may also choose to estimate emissions data even where reported data is available if the company underwent a significant corporate action such as an initial public offering or a corporate merger, or if they believe the reported data was under-reported or incomplete. In other cases, third-party data providers may implement methodological changes to improve accuracy but may limit such changes to certain years or certain reporting boundaries. Any of these instances potentially create anomalous results when comparing these estimates to prior year reported emissions, complicating trend analysis.

5. https://ghgprotocol.org/

15.3 Solutions and Services

As part of its focus on Sustainable Solutions and Services, the Morgan Stanley Group is responding to client demand with financial solutions and services designed to help deliver both competitive financial returns as well as environmental or social benefit. For more information, refer to https://www.morganstanley.com/about-us/sustainable-solutions-services.

Sustainable Finance Target

The Morgan Stanley Group is committed to mobilising $1Tn in sustainable finance by 2030, which includes $750Bn to support low-carbon and green solutions. Low-carbon solutions will help commercialise and deploy new and existing technologies necessary for the global economy, and clients, to significantly decarbonise.

Progress toward this goal is guided by Morgan Stanley’s Sustainable Finance Framework and tracked at global Morgan Stanley level. The Sustainable Finance Framework is maintained by the Global Sustainability Office, which considers the United Nations ("UN") Sustainable Development Goals and industry frameworks and standards such as the International Capital Markets Association’s Green and Social Bond Principles when evaluating the Framework on an annual basis to help ensure alignment with evolving industry best practices. The Framework is further informed by input from contributing business units and relevant committees across the Morgan Stanley Group in order to remain aligned with the Morgan Stanley Group’s ESG priorities and changes in business activities and products. Eligible themes and products under the Framework as well as progress towards this goal are reported in the 2022 Morgan Stanley Group ESG Report.

15.4 Sustainability Governance and Risk Management

ESG Governance

The MSEHSE Group takes an integrated approach to ESG management with oversight from senior management and input from across core business and support functions. The MSEHSE Group’s efforts around sustainability are supported by a management-level EMEA ESG Committee which is in place to provide ongoing consideration, governance and oversight of the incorporation of ESG risks into strategy, business processes and risk management.

In particular, the EMEA ESG Committee assists in the development of a ESG strategy, oversees the embedding of ESG risks into the risk and control framework and oversees the tracking, analysis and implementation of key regulatory requirements related to ESG. The EMEA ESG Committee reports on at least an annual basis to the Morgan Stanley Group ESG Committee. The MSEHSE Group COO co-chairs the EMEA ESG Committee, and the MSEHSE Group CRO, Chief Finance Officer ("CFO"), Head of Compliance and Head of Legal are members of the Committee.

During 2023, the MSEHSE Group’s Management Boards and Supervisory Board had oversight of various climate related matters on a regular basis. In particular, the MSEHSE Group’s Management Boards received an update on the MSEHSE Group Climate Strategy which included a detailed analysis of climate scenarios and the resulting impact on the MSEHSE Group’s business activity and approved the annual review and update of the Carbon Repricing scenario. The MSEHSE Group’s Management Boards also received updates on the focus areas of the MSEHSE Group Risk Management Framework, including enhancing climate and environmental risk management capabilities, preparing for upcoming disclosure obligations and progress towards meeting climate supervisory deliverables. Furthermore, the MSEHSE Group’s Management Boards and Supervisory Board received an update on Morgan Stanley Group’s progress with integrating ESG related considerations both at a global and at an MSEHSE Group level. The update included EMEA ESG related business highlights, the approach to meeting ESG regulatory requirements impacting the MSEHSE Group and how climate and environmental risks are monitored and managed within the MSEHSE Group Risk Management Framework. The MSEHSE Group Supervisory Board Risk Committee also received updates on the framework to embed the KPI based on FELI into the loan approval process.

Under the MSEHSE Group’s remuneration policies, the MSEHSE Group’s Supervisory Board considers whether the amount of remuneration proposed to be distributed amongst the Management Board includes adjustments for relevant financial and non-financial risks, including climate and environmental risks.

16. Valuation Risk

Valuation risk represents the possibility that a valuation estimate of a position would differ from the price in an actual close-out transaction due to uncertainty around the actual price that could be obtained.

16.1 Fair Valuation

Valuation Control ("VC") within Finance is responsible for the MSEHSE Group's fair value valuation policies, processes, and procedures. VC implements valuation control processes designed to validate the fair value of the MSEHSE Group's financial instruments measured at fair value including those derived from pricing models. There are three primary control processes that mitigate the risk of valuation errors:

- **Model Certification Process:** All models are certified before use and at least annually thereafter. New models (and enhancements to existing models) are developed by Strategists within the business units, who affirm they are appropriate for intended use. Senior Traders in the business units sign off that they have been involved in the development of the model and understand the model's assumptions and limitations. VC must approve the model by performing an independent review to ensure the valuation methodology and valuation outputs produced by the model are consistent with accounting standards. MRM, as part of the area Firm Risk Management, must approve the application of all models, being responsible for the independent oversight of model risks;
- **Mark Review Process:** VC performs a mark review process which covers the financial instruments inventory held at fair value by the MSEHSE Group. VC ensures that the valuation generated by the business units is in compliance with accounting standards. This is performed by reviewing the appropriateness of the prices or pricing inputs applied to valuation models using approved valuation methodologies and independently sourced external pricing data. Variances are reviewed against VC's tolerance framework; variances above the tolerance thresholds are communicated to controllers for consideration as part of the general ledger close. Legal entity thresholds also exist and are reviewed annually in coordination with financial controllers;
- **Significant Transaction Analytical Review Process ("STAR"):** This process reconfirms that valuation methodologies are adequate and modelling uncertainty is appropriately addressed in all trades with significant gross day 1 profit and loss as defined by the STAR policy. There are three components to the STAR process: pre-execution review; post-execution review; and trade unwind review. Reviews are documented and must be presented to, and approved by, relevant STAR Committees.

16.2 Prudent Valuation

VC applies the prudent valuation regulatory standards as prescribed in CRR Article 105 Requirements for Prudent Valuation. VC has documented policies and procedures, and specific methodologies for each valuation exposure covered by the regulation. Prudent valuation consists of a series of AVAs required to mark the MSEHSE Group's fair valued inventory to a prudent valuation. These AVAs are deducted from CET1 capital.

The AVAs represent adjustments to the point within a range of plausible values at which the MSEHSE Group could exit a valuation exposure with 90% confidence or better. The AVAs reflect the valuation uncertainty associated with market price uncertainty, close-out costs, model risk, concentrated positions, unearned credit spreads, investing and funding costs, future administrative costs, early termination, and operational risk.

VC documents and affirms the Prudent Valuation AVAs as capital models which are independently certified on an annual basis by MRM in accordance with the Morgan Stanley Group's Global MRM Policy.

Table 31 shows prudent valuation adjustments for the MSEHSE Group as of 31 December 2023.

Table 31: Prudent Valuation Adjustments (PVA) (EU PV1) - MSEHSE Group

€MM		a	b	c	d	e	EU e1	EU e2	f	g	h
MSEHSE Group		Risk category					Category level AVA - Valuation uncertainty		Total category level post-diversification		
Category level AVA		Equity	Interest Rates	Foreign exchange	Credit	Commodities	Unearned credit spreads AVA	Investment and funding costs AVA		Of which: Total core approach in the trading book	Of which: Total core approach in the banking book
1	Market price uncertainty	1	21	-	2	-	11	10	23	21	2
3	Close-out cost	2	7	-	0	-	4	-	6	6	1
4	Concentrated positions	-	6	-	0	-	-	-	6	6	0
5	Early termination	-	-	-	-	-	-	-	-	-	-
6	Model risk	0	4	-	-	-	21	19	22	11	11
7	Operational risk	0	3	-	0	-	-	-	3	3	0
10	Future administrative costs	-	3	-	-	-	-	-	3	3	0
12	**Total Additional Valuation Adjustments (AVAs)**								**63**	**49**	**14**

17. Liquidity Risk

17.1 Liquidity Risk Management

Strategies and Processes in the Management of Liquidity Risk

Liquidity risk is an inherent part of MSEHSE Group's business activities. Liquidity risk is the risk that the MSEHSE Group's financial condition or overall soundness is adversely affected by an inability or perceived inability to meet its financial obligations in a timely manner. Liquidity risk encompasses the associated funding risk triggered by stress events which may cause unexpected changes in funding needs or an inability to raise new funding.

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

MSEHSE Group and MSESE Consol maintain sufficient Liquidity Resources to cover daily funding needs and to meet strategic liquidity targets sized by the Required Liquidity Framework and Liquidity Stress Tests. The total amount of Liquidity Resources is actively managed considering the following components: unsecured debt maturity profile, balance sheet size and composition; funding needs in a stressed environment, inclusive of contingent cash outflows; collateral requirements and regulatory requirements.

MSEHSE Group's liquidity and funding risk management policies and procedures are consistent with those of the Morgan Stanley Group. The MSEHSE Group Management Boards establish MSEHSE Group's and MSESE Consol's liquidity risk appetites and MSEHSE Group Management Board-owned limits. They oversee and are ultimately responsible for the oversight of MSEHSE Group's and MSESE Consol's liquidity risk.

In addition to the internal liquidity risk management framework, the MSEHSE Group and MSESE Consol are subject to requirements prescribed by regulatory authorities, including "*Mindestanforderungen an das Risikomanagement*" ("MaRisk"). Subsidiary waivers are in place for MSESE and MSBAG pursuant to Article 8 CRR and allow MSESE Consol to manage and meet regulatory liquidity requirements on a consolidated level. MSEHSE Group and MSESE Consol are subject to the following:

- Delegated Regulation (EU) 2015/61 (LCR), requiring to meet 100% of net cash outflows;
- Regulation (EU) No 575/2013 (NSFR), requiring to maintain ASF as 100% of RSF over the one-year horizon.

MSEHSE Group and MSESE Consol have daily monitoring and reporting processes in place to ensure compliance with their regulatory requirements.

The primary goal of the Liquidity Risk Management Framework is to ensure that the MSEHSE Group and MSESE Consol have access to sufficient liquid assets across a wide range of market conditions and time horizons. The framework is designed to allow the MSEHSE Group and MSESE Consol to fulfil financial obligations and support the execution of the MSEHSE Group's business strategies. The following principles guide the Liquidity Risk Management Framework:

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

Structure and Organisation of the Liquidity Risk Management Function

The MSEHSE Group Management Boards establish and maintain liquidity policies. Through various risk and control committees, the MSEHSE Group Management Boards review business performance relative to these policies, monitor the availability of alternative sources of financing, and oversee the liquidity, interest rate and currency sensitivity of asset and liability positions.

The Treasury Department is responsible for daily liquidity management activities in their capacity as the First Line of Defence, while Liquidity Risk Department ("LRD"), as the Second Line of Defence, is responsible for the independent oversight of liquidity risk. The LRD of the MSEHSE Group has put in place a Risk Management Framework to identify, measure, control and report liquidity risks arising from business activities.

The Centralised Liquidity Management Function and its Interaction with other Functional Areas

The MSEHSE Group's Liquidity Risk Management Framework is critical to helping ensure that the MSEHSE Group and MSESE Consol maintain sufficient liquidity reserves and durable funding sources to meet their daily obligations and to withstand unanticipated stress events.

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

Liquidity Risk Reporting and Measurement Systems

The Morgan Stanley Group has a Global Liquidity Data Warehouse that is used for internal and regulatory liquidity reporting, metrics, and stress testing of the MSEHSE Group and MSESE Consol. Reporting and analytical tools enable interrogation, presentation, and generation of reports for internal purposes as well as for regulatory reporting returns. A control framework has been established around each step of the liquidity reporting process and is designed to ensure that source data feeds from firm-wide risk systems, adjustment processing and report production are all subject to a coherent set of proof and control processes to ensure accuracy and completeness of data. Reporting results are validated locally by MSEHSE Group Treasury Department.

Liquidity Risk Mitigation

MSEHSE Group and MSESE Consol maintain a durable funding profile, commensurate with complexity and size of their business, with diversified sources and terms of funding. MSEHSE Group and MSESE Consol manage their funding in a manner that reduces the risk of disruption to its operations. MSEHSE Group and MSESE Consol pursue a strategy of diversification of secured and unsecured funding sources (by product, investor, and region) and attempt to ensure that the tenor of their liabilities equals or exceeds the expected holding period of the assets being financed.

MSEHSE Group and MSESE Consol fund themselves through diverse sources. These sources may include equity capital, long-term unsecured debt or external structured notes issuances, securities sold under agreements to repurchase, securities lending and lines of credit. In managing the MSEHSE Group and MSESE Consol's funding risk, the composition and size of the entire balance sheet, not just financial liabilities, are monitored and evaluated. The liquid nature of the marketable securities and short-term receivables arising principally from sales and trading activities in the Institutional Securities business provides the MSEHSE Group and MSESE Consol with flexibility in managing balance sheet composition and size.

Contingency Funding Plan

The MSEHSE Group's Contingency Funding Plan is integrated in the Recovery Plan and defines the roles and responsibilities of the primary functions that manage the MSEHSE Group's operating and strategic response to liquidity stress events. The MSEHSE Group's financial condition and overall soundness can be adversely affected by an inability, or perceived inability, to meet its financial obligations in a timely manner during a period of liquidity stress, therefore it is vital that the MSEHSE Group maintains a sound plan of action for managing a liquidity stress. The MSEHSE Group Recovery Plan is the MSEHSE Group's detailed action plan and outlines the process by which the MSEHSE Group:

- Determines whether there is a potential or actual liquidity stress event;
- Enacts a heightened decision-making and governance structure;
- Identifies available contingent funding sources;
- Identifies and acts in a deliberate and coordinated way to respond to liquidity shortfalls;
- Strategically communicates with internal and external stakeholders;
- Decides to return to standard operating liquidity management status.

Liquidity Stress Testing

MSEHSE Group and MSESE Consol use Liquidity Stress Tests to model external and intercompany liquidity flows across multiple scenarios over a range of time horizons. These scenarios contain various combinations of idiosyncratic and systemic stress events of different severity and duration. The methodology, implementation, production, and analysis of the Liquidity Stress Tests are important components of the Liquidity Risk Management Framework.

Adequacy of Liquidity Management Arrangements

MSEHSE Group's Management Boards approve, for the purpose of Article 451a(4) CRR, the below concise liquidity risk statement on the Adequacy of Liquidity Management Arrangements:

As stated in the Liquidity Adequacy Statement which is part of the annual ILAAP submission, the MSEHSE Group Management Boards are satisfied that there are appropriate processes and systems in place to monitor liquidity and funding adequacy, and that there are appropriate actions available to increase liquidity or adjust funding resources if adverse developments reduce available liquidity or funding.

Liquidity Risk Profile and Business Strategy

The MSEHSE Group Risk Appetite is the articulation of the aggregate level and type of risk that MSEHSE Group is willing to accept to execute its Business Strategy and protect its capital and liquidity resources. MSEHSE Group's Risk Appetite comprises both of qualitative and quantitative components and is set considering the MSEHSE Group's risk profile as defined in the MSEHSE Group Business Strategy. The MSEHSE Group RAS is well integrated with the MSEHSE Group's Business Strategy, ICAAP and ILAAP - all are based on a consistent financial forecast. The RAS also establishes clear links into capital and liquidity planning under both the Normative and Economic Perspectives. The Liquidity Risk Limit Framework ensures that MSEHSE Group business activities are carried out consistent with the RAS.

The MSEHSE Group Management Boards have concluded that the MSEHSE Group and MSESE Consol have adequate liquidity for the size, nature and complexity of their business model and strategy. Throughout 2023, MSEHSE Group and the respective subsidiaries and sub-groups exceeded all applicable internal and regulatory liquidity requirements, which include the Internal Liquidity Stress Test ("ILST"), the LCR and the NSFR. Furthermore, MS France has excess liquidity against both the regulatory liquidity requirement IFR and the internally developed liquidity requirements framework (Investment Firm Framework - "IFF") applicable.

At year-end 2023, HQLAs amounting to €11.8Bn for the MSEHSE Group and €11.7Bn for MSESE Consol are primarily held in central bank reserves (81%) and level one high quality securities (19%).

17.2 Liquidity Coverage Ratio

17.2.1. LCR Qualitative Disclosures

The MSEHSE Group and MSESE Consol's LCR Disclosures are effective as of 31 December 2023 and are based on the prevailing understanding of the rules set out in the European Commission Delegated Regulation 2015/61 ("DA") adopted in October 2014 and related legislation at that date. This disclosure meets the LIQA requirements outlined in EBA/GL/2017/01.

As of 31 December 2023, MSEHSE Group and MSESE Consol held excess HQLA over LCR required minimum of 100% as specified by the total net cash outflows amount.

Main Drivers of the LCR

The 12-month LCR average values have been used to analyse the main requirements drivers.

The most significant contributors to the MSEHSE Group and MSESE Consol's cash outflow amounts at year-end were outflows related to other contractual funding obligations, non-operational deposits, and outflows related to derivative exposure and other collateral requirements. These outflows reflect prescribed, industry-wide LCR rules related to liquidity risk in the MSEHSE Group and MSESE Consol's business lines, activities, and products, as measured for a projected 30-calendar day stress period.

MSEHSE Group and MSESE Consol's cash inflow amounts as of 31 December 2023 were primarily due to other cash inflows, mainly capturing unsettled outright sales/purchases.

Explanations of the Changes in the LCR in 2023

MSEHSE Group and MSESE Consol's LCR remained stable over the course of 2023, with minor variations in HQLA due to changes in non-operational deposits.

The liquidity buffer, expressed as HQLA, primarily consists of central bank reserves, followed by government bonds. MSEHSE Group and MSESE Consol maintained sufficient eligible HQLA to meet the regulatory LCR requirement, with compliance monitored daily.

Concentration of Funding Sources

MSEHSE Group and MSESE Consol 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 secured funding markets.

Derivative Exposures and Potential Collateral Calls

MSEHSE Group is a participant in the global derivatives markets. In some cases, derivative counterparties have contractual rights requiring the MSEHSE Group to post collateral if the respective credit rating is downgraded. All collateral amounts 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 when measuring collateral call risks.

The impact of potential collateral calls related to derivative exposures is inherently uncertain and depends on various interrelated factors, such as the magnitude of the downgrade, the rating relative to peers, the rating assigned by the relevant agency pre-downgrade, individual client behaviour and future mitigating actions that could be taken.

MSEHSE Group manages the risk of potential collateral calls on derivative positions by employing a variety of risk mitigation strategies, including modelling the impact of credit rating agency downgrades in the liquidity stress test program, monitoring historical changes in variation margin, diversifying risk exposures, hedging, managing counterparty and product risk limits and maintaining Liquidity Resources to enable the MSEHSE Group to meet unexpected collateral calls or other potentially adverse developments.

Currency Mismatch in the LCR

A portion of the MSEHSE Group and MSESE Consol's business is conducted in currencies other than Euro, and changes in foreign exchange rates relative to the Euro can affect the value of non-Euro net assets, revenues, and expenses. Potential exposures because 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-Euro 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.

17.2.2 LCR Quantitative Disclosures

The LCR quantitative disclosures, shown in Table 32, reflect 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 MSEHSE Group's and MSESE Consol's eligible HQLA and cash in/outflow amounts. The figures reported in the "Total Unweighted Value" columns reflect gross values prior to the application of the LCR weights.

Table 32: Quantitative Information of LCR (EU LIQ1) - MSEHSE Group and MSESE Consol

€MM		a	b	c	d	e	f	g	h
MSEHSE Group		**Total unweighted value (average)**				**Total weighted value (average)**			
EU 1a	**Quarter ending on**	**31 Dec 2023**	**30 Sep 2023**	**30 Jun 2023**	**31 Mar 2023**	**31 Dec 2023**	**30 Sep 2023**	**30 Jun 2023**	**31 Mar 2023**
EU 1b	**Number of data points used in the calculation of averages**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**
High-Quality Liquid Assets									
1	Total high-quality liquid assets (HQLA)					14,337	14,223	13,758	12,007
Cash-Outflows									
2	Retail deposits and deposits from small business customers, of which:	-	-	-	-	-	-	-	-
3	*Stable deposits*	-	-	-	-	-	-	-	-
4	*Less stable deposits*	-	-	-	-	-	-	-	-
5	Unsecured wholesale funding	7,119	7,046	6,884	5,500	7,119	7,046	6,884	5,500
6	*Operational deposits (all counterparties) and deposits in networks of cooperative banks*	-	-	-	-	-	-	-	-
7	*Non-operational deposits (all counterparties)*	7,119	7,046	6,884	5,500	7,119	7,046	6,884	5,500
8	*Unsecured debt*	-	-	-	-	-	-	-	-
9	Secured wholesale funding					2,424	2,285	2,093	2,011
10	Additional requirements	9,171	9,212	9,195	9,149	5,101	5,213	5,218	5,138
11	*Outflows related to derivative exposures and other collateral requirements*	3,777	3,892	3,931	3,910	3,679	3,815	3,881	3,870
12	*Outflows related to loss of funding on debt products*	-	-	-	-	-	-	-	-
13	*Credit and liquidity facilities*	5,394	5,320	5,264	5,239	1,422	1,398	1,337	1,268
14	Other contractual funding obligations	14,649	12,082	11,072	10,608	8,579	8,683	8,418	8,239
15	Other contingent funding obligations	-	-	-	-	-	-	-	-
16	**Total Cash Outflows**					**23,223**	**23,227**	**22,613**	**20,888**
Cash Inflows									
17	Secured lending (e.g. reverse repos)	25,018	19,477	18,369	17,127	2,879	2,859	2,776	2,632
18	Inflows from fully performing exposures	1,170	1,186	1,192	1,193	1,170	1,186	1,192	1,193
19	Other cash inflows	8,930	8,997	8,702	8,558	8,930	8,998	8,702	8,558
EU-19a	(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)					16	20	18	17
EU-19b	(Excess inflows from a related specialised credit institution)					-	-	-	-
20	**Total Cash Inflows**	**35,118**	**29,660**	**28,263**	**26,878**	**12,963**	**13,023**	**12,652**	**12,366**
EU-20a	*Fully exempt inflows*	-	-	-	-	-	-	-	-
EU-20b	*Inflows subject to 90% cap*	-	-	-	-	-	-	-	-
EU-20c	*Inflows subject to 75% cap*	29,577	24,338	23,789	23,684	12,963	13,023	12,652	12,366
TOTAL ADJUSTED VALUE									
EU-21	**Liquidity Buffer**					**14,337**	**14,223**	**13,758**	**12,007**
22	**Total Net Cash Outflows**					**10,260**	**10,203**	**9,961**	**8,648**
23	**Liquidity Coverage Ratio (%)**					**140.82%**	**140.06%**	**139.26%**	**141.88%**

€MM		a	b	c	d	e	f	g	h
MSESE Consol		Total unweighted value (average)				Total weighted value (average)			
EU 1a	**Quarter ending on**	31 Dec 2023	30 Sep 2023	30 Jun 2023	31 Mar 2023	31 Dec 2023	30 Sep 2023	30 Jun 2023	31 Mar 2023
EU 1b	**Number of data points used in the calculation of averages**	**12**	**12**	**12**	**12**	**12**	**12**	**12**	**12**
High-Quality Liquid Assets									
1	Total high-quality liquid assets (HQLA)					14,262	14,148	13,684	11,933
Cash-Outflows									
2	Retail deposits and deposits from small business customers, of which:	-	-	-	-	-	-	-	-
3	*Stable deposits*	-	-	-	-	-	-	-	-
4	*Less stable deposits*	-	-	-	-	-	-	-	-
5	Unsecured wholesale funding	7,112	7,039	6,877	5,493	7,112	7,039	6,877	5,493
6	*Operational deposits (all counterparties) and deposits in networks of cooperative banks*	-	-	-	-	-	-	-	-
7	*Non-operational deposits (all counterparties)*	7,112	7,039	6,877	5,493	7,112	7,039	6,877	5,493
8	*Unsecured debt*	-	-	-	-	-	-	-	-
9	Secured wholesale funding					2,424	2,285	2,093	2,011
10	Additional requirements	9,171	9,212	9,195	9,149	5,101	5,213	5,218	5,138
11	*Outflows related to derivative exposures and other collateral requirements*	3,777	3,892	3,931	3,910	3,679	3,815	3,881	3,870
12	*Outflows related to loss of funding on debt products*	-	-	-	-	-	-	-	-
13	*Credit and liquidity facilities*	5,394	5,320	5,264	5,239	1,422	1,398	1,337	1,268
14	Other contractual funding obligations	14,649	12,078	11,069	10,605	8,579	8,683	8,417	8,239
15	Other contingent funding obligations	-	-	-	-	-	-	-	-
16	**Total Cash Outflows**					**23,216**	**23,220**	**22,605**	**20,881**
Cash Inflows									
17	Secured lending (e.g. reverse repos)	25,018	19,477	18,369	17,127	2,879	2,859	2,776	2,632
18	Inflows from fully performing exposures	1,157	1,171	1,170	1,163	1,157	1,171	1,170	1,163
19	Other cash inflows	8,930	8,997	8,702	8,558	8,930	8,998	8,702	8,558
EU-19a	(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)					16	20	18	17
EU-19b	(Excess inflows from a related specialised credit institution)					-	-	-	-
20	**Total Cash Inflows**	**35,105**	**29,645**	**28,241**	**26,848**	**12,950**	**13,008**	**12,630**	**12,336**
EU-20a	*Fully exempt inflows*	-	-	-	-	-	-	-	-
EU-20b	*Inflows subject to 90% cap*	-	-	-	-	-	-	-	-
EU-20c	*Inflows subject to 75% cap*	29,563	24,323	23,767	23,654	12,950	13,008	12,630	12,336
TOTAL ADJUSTED VALUE									
EU-21	**Liquidity Buffer**					**14,262**	**14,148**	**13,684**	**11,933**
22	**Total Net Cash Outflows**					**10,267**	**10,211**	**9,975**	**8,664**
23	**Liquidity Coverage Ratio (%)**					**140.00%**	**139.21%**	**138.24%**	**140.60%**

As of 31 December 2023 there are no other known material items beyond the balances disclosed in EU LIQ1 which may impact the liquidity profile.

17.3 Net Stable Funding Ratio

The NSFR, as defined in the CRR, is a funding/liquidity ratio to ensure that the institutions have a stable funding structure to cover existing assets and off-balance sheet commitments. Compliance with the ratio requires that sufficient available weighted liabilities and own funds (ASF) are available to cover the funding requirement from weighted assets and off-balance sheet exposures (RSF).

MSEHSE Group and MSESE Consol are required to comply on a daily basis with the NSFR and held, respectively, a significant excess of €6.3 billion and €6.2 billion stable funding as of 31 December 2023.

MSEHSE Group and MSESE Consol maintained excess ASF, in comparison to RSF assets and off-balance sheet commitments, throughout 2023.

Composition of ASF and RSF

The management of the NSFR has been embedded into MSEHSE Group and MSESE Consol internal processes to ensure that there are sufficient durable liabilities (ASF) to cover the RSF on an ongoing basis.

The Treasury and Bank Resource Management (“BRM”) Departments as well as applicable business units (collectively the Centralised Liquidity Management Function) have primary responsibility for evaluating, monitoring and controlling the liquidity and funding resources. The primary sources of funding arise from capital, unsecured funding and SFTs.

The primary drivers of MSEHSE Group and MSESE Consol’s NSFR RSF are derivatives exposures and margin posted, followed by SFTs, weighted based on the liquidity value of the associated collateral and contributing to both ASF (if used to fund assets) and RSF (if used to source assets).

NSFR Trending

The NSFR ratio increased during the course of 2023, primarily due to the decline in RSF stemming from derivatives and secured funding.

The NSFR quantitative disclosures, shown in Table 33 reflects the spot values over the last 4 quarters.

The figures reported in the “Unweighted Value by residual maturity” columns reflect gross values prior to the application of the NSFR weights. The figures reported in the “Weighted Value” column reflect the prescribed, industry-wide NSFR rules to determine the ASF and RSF weighted values.

Table 33: Net Stable Funding Ratio (EU LIQ2) - MSEHSE Group and MSESE Consol

		a	b	c	d	e	a	b	c	d	e
		Unweighted value by residual maturity					Unweighted value by residual maturity				
€MM		No maturity	< 6 months	6 months to < 1yr	≥ 1yr	Weighted value	No maturity	< 6 months	6 months to < 1yr	≥ 1yr	Weighted value
MSEHSE Group		31 Dec 2023					30 Sep 2023				
Available stable funding (ASF) items											
1	Capital items and instruments	7,493	-	-	999	8,491	7,361	-	-	1,001	8,362
2	*Own funds*	7,493	-	-	999	8,491	7,361	-	-	1,001	8,362
3	*Other capital instruments*		-	-	-	-		-	-	-	-
4	Retail deposits		-	-	-	-		-	-	-	-
5	*Stable deposits*		-	-	-	-		-	-	-	-
6	*Less stable deposits*		-	-	-	-		-	-	-	-
7	Wholesale funding:		25,962	970	2,694	3,179		27,743	1,437	4,284	5,002
8	*Operational deposits*		-	-	-	-		-	-	-	-
9	*Other wholesale funding*		25,962	970	2,694	3,179		27,743	1,437	4,284	5,002
10	Interdependent liabilities		532	-	-	-		502	-	-	-
11	Other liabilities:	-	15,547	-	-	-	-	6,327	-	-	-
12	*NSFR derivative liabilities*	-					-				
13	*All other liabilities and capital instruments not included in the above categories*		15,547	-	-	-		6,327	-	-	-
14	**Total available stable funding (ASF)**					**11,670**					**13,364**
Required stable funding (RSF) items											
15	Total high-quality liquid assets (HQLA)					0					11
EU-15a	Assets encumbered for a residual maturity of one year or more in a cover pool		-	-	-	-		-	-	-	-
16	Deposits held at other financial institutions for operational purposes		-	-	-	-		-	-	-	-
17	Performing loans and securities:		27,960	971	656	1,344		19,498	1,339	2,630	3,736
18	*Performing securities financing transactions with financial customers collateralised by Level 1 HQLA subject to 0% haircut*		24,005	-	5	26		13,060	-	9	40
19	*Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions*		3,903	971	183	894		6,286	1,337	1,834	2,937
20	*Performing loans to non- financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of which:*		52	-	167	168		152	-	185	233
21	*With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		52	-	-	26		152	-	-	76
22	*Performing residential mortgages, of which:*		-	-	-	-		-	-	-	-
23	*With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		-	-	-	-		-	-	-	-
24	*Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products*		-	-	301	256		-	2	602	526
25	Interdependent assets		532	-	-	-		502	-	-	-
26	Other assets:		14,199	-	2,641	3,746		19,020	-	2,556	4,164
27	*Physical traded commodities*				-	-				-	-
28	*Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs*		400	-	2,234	2,240		302	-	2,207	2,133
29	*NSFR derivative assets*		433			433		848			848
30	*NSFR derivative liabilities before deduction of variation margin posted*		12,205			610		15,943			797
31	*All other assets not included in the above categories*		1,161	-	407	463		1927	-	348	386
32	Off-balance sheet items		4,057	-	1,370	271		3,052	330	1,942	266
33	**Total RSF**					**5,361**					**8,177**
34	**Net Stable Funding Ratio (%)**					**217.70%**					**163.43%**

Table 33 (continued) : Net Stable Funding Ratio (EU LIQ2)

		a	b	c	d	e	a	b	c	d	e
		Unweighted value by residual maturity					Unweighted value by residual maturity				
	€MM	No maturity	< 6 months	6 months to < 1yr	≥ 1yr	Weighted value	No maturity	< 6 months	6 months to < 1yr	≥ 1yr	Weighted value
	MSEHSE Group	30 Jun 2023					31 Mar 2023				
	Available stable funding (ASF) items										
1	Capital items and instruments	7,343	-	-	1,000	8,343	6,336	-	-	1,001	7,336
2	*Own funds*	7,343	-	-	1,000	8,343	6,336	-	-	1,001	7,336
3	*Other capital instruments*		-	-	-	-		-	-	-	-
4	Retail deposits		-	-	-	-		-	-	-	-
5	*Stable deposits*		-	-	-	-		-	-	-	-
6	*Less stable deposits*		-	-	-	-		-	-	-	-
7	Wholesale funding:		23,715	1,593	4,284	5,081		27,035	3,260	5,166	6,796
8	*Operational deposits*		-	-	-	-		-	-	-	-
9	*Other wholesale funding*		23,715	1,593	4,284	5,081		27,035	3,260	5,166	6,796
10	Interdependent liabilities		531	-	-	-		592	-	-	-
11	Other liabilities:	-	7,175	-	-	-	-	6,518	-	-	-
12	*NSFR derivative liabilities*	-					-				
13	*All other liabilities and capital instruments not included in the above categories*		7,175	-	-	-		6,518	-	-	-
14	**Total available stable funding (ASF)**					**13,424**					**14,132**
	Required stable funding (RSF) items										
15	Total high-quality liquid assets (HQLA)					7					96
EU-15a	Assets encumbered for a residual maturity of one year or more in a cover pool		-	-	-	-		-	-	-	-
16	Deposits held at other financial institutions for operational purposes		-	-	-	-		-	-	-	-
17	Performing loans and securities:		16,518	2,236	2,423	3,961		18,269	3,686	2,798	4,987
18	*Performing securities financing transactions with financial customers collateralised by Level 1 HQLA subject to 0% haircut*		8,893	62	10	45		12,346	25	132	168
19	*Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions*		7,579	2,173	1,756	3,331		5,809	3,659	1,746	3,943
20	*Performing loans to non- financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of which:*		46	-	66	79		97	-	140	168
21	*With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		46	-	-	23		97	-	-	49
22	*Performing residential mortgages, of which:*		-	-	-	-		-	-	-	-
23	*With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		-	-	-	-		-	-	-	-
24	*Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products*		0	1	591	506		17	2	779	709
25	Interdependent assets		531	-	-	-		592	-	-	-
26	Other assets:	-	15,168	-	3,114	4,329	-	21,245	-	2,240	3,718
27	*Physical traded commodities*				-	-				-	-
28	*Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs*		351	-	2,717	2,608		638	-	1,877	2,137
29	*NSFR derivative assets*		710			710		266			266
30	*NSFR derivative liabilities before deduction of variation margin posted*		12,111			606		18,705			935
31	*All other assets not included in the above categories*		1,997	-	397	406		1,635	-	364	380
32	Off-balance sheet items		3,017	335	2,208	278		2,777	36	2,250	253
33	**Total RSF**					**8,575**					**9,055**
34	**Net Stable Funding Ratio (%)**					**156.55%**					**156.08%**

€MM		a	b	c	d	e
		Unweighted value by residual maturity				
		No maturity	< 6 months	6 months to < 1yr	≥ 1yr	Weighted value
MSESE Consol				31 Dec 2023		
Available stable funding (ASF) items						
1	Capital items and instruments	7,135	-	-	999	8,134
2	*Own funds*	7,135	-	-	999	8,134
3	*Other capital instruments*		-	-	-	-
4	Retail deposits		-	-	-	-
5	*Stable deposits*		-	-	-	-
6	*Less stable deposits*		-	-	-	-
7	Wholesale funding:		26,103	970	2,840	3,325
8	*Operational deposits*		-	-	-	-
9	*Other wholesale funding*		26,103	970	2,840	3,325
10	Interdependent liabilities		532	-	-	-
11	Other liabilities:	-	15,437	-	-	-
12	*NSFR derivative liabilities*	-				
13	*All other liabilities and capital instruments not included in the above categories*		15,437	-	-	-
14	**Total available stable funding (ASF)**					**11,459**
Required stable funding (RSF) items						
15	Total high-quality liquid assets (HQLA)					-
EU-15a	Assets encumbered for a residual maturity of one year or more in a cover pool		-	-	-	-
16	Deposits held at other financial institutions for operational purposes		-	-	-	-
17	Performing loans and securities:		27,934	971	656	1,341
18	*Performing securities financing transactions with financial customers collateralised by Level 1 HQLA subject to 0% haircut*		24,007	-	5	26
19	*Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions*		3,875	971	183	891
20	*Performing loans to non- financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of which:*		52	-	167	168
21	*With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		52	-	-	26
22	*Performing residential mortgages, of which:*		-	-	-	-
23	*With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		-	-	-	-
24	*Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products*		-	-	301	256
25	Interdependent assets		532	-	-	-
26	Other assets:		14,192	-	2,567	3,667
27	*Physical traded commodities*				-	-
28	*Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs*		400	-	2,234	2,239
29	*NSFR derivative assets*		433			433
30	*NSFR derivative liabilities before deduction of variation margin posted*		12,205			610
31	*All other assets not included in the above categories*		1,154	-	333	385
32	Off-balance sheet items		4,057	-	1,370	272
33	**Total RSF**					**5,280**
34	**Net Stable Funding Ratio (%)**					**217.04%**

17.4 Asset Encumbrance

The encumbrance of assets is a fundamental part of Morgan Stanley's business within the MSEHSE Group.The following section describes how the MSEHSE Group's encumbered and unencumbered assets, along with the matching liabilities, are utilised. An asset is considered encumbered if it has been pledged or if it is subject to any form of arrangement to secure, collateralise or enhance the credit quality of any transaction from which it cannot be freely withdrawn. The key sources of encumbrance include secured funding repo, securities lending, as well as derivatives trading. A portion of the encumbered assets are inter-affiliate transactions with other Morgan Stanley Group entities. There are no significant instances of encumbrance between entities part of the MSEHSE Group. The MSEHSE Group primarily uses Industry standard collateral agreements, mostly CSA, Global Master Repurchase Agreements ("GMRAs") and Global Master Securities Lending Agreements ("GMSLAs").

The majority of the on-balance-sheet assets are not subject to any form of encumbrance, given they are mostly cash or receivable assets. The MSEHSE Group also receives securities from the market, which are off-balance-sheet, reported as collateral received in Table 35 (EU AE2) below. These may be pledged to the market and encumbered or held as part of the MSEHSE Group's unencumbered pool of assets. For on-balance sheet assets, the level of encumbrance over 2023 has decreased by (2.9)% since 2022. Collateral received has increased year on year with the encumbrance increasing 1.0% since 2022. In compliance with regulatory guidelines, amounts are presented as a median of the twelve month ends over 2023.

As disclosed in tables 34 and 35 encumbered assets primarily comprise those on- and off-balance sheet assets that are pledged as collateral against secured funding, collateral swaps, and other collateralised obligations. According to the EBA ITS on regulatory asset encumbrance reporting default funds and initial margins are considered as encumbered.

As of 31 December 2023 there are no significant balances against encumbered assets, collaterals, off-balance sheet positions or sources of encumbrance denoted in other currencies than the reporting currency.

Table 34 reflects the MSEHSE Group unencumbered and encumbered on-balance sheet assets. The values represent the median for the year *(the rows in the tables below are not additive, with the median calculated individually across all cells).*

Table 34: Encumbered and unencumbered assets (EU AE1) - MSEHSE Group

€MM		Carrying amount of encumbered assets		Fair value of encumbered assets		Carrying amount of unencumbered assets		Fair value of unencumbered assets	
			of which notionally eligible EHQLA and HQLA		of which notionally eligible EHQLA and HQLA		of which EHQLA and HQLA		of which EHQLA and HQLA
MSEHSE Group		**010**	**030**	**040**	**050**	**060**	**080**	**090**	**100**
010	**Assets of the disclosing institution**	**21,633**	**3,895**			**104,645**	**0**		
030	Equity instruments	1	0	1	0	9	-	9	-
040	Debt securities	4,378	3,895	4,378	3,895	228	0	228	0
050	of which: covered bonds	489	36	489	36	129	-	129	-
060	of which: securitisations	-	-	-	-	-	-	-	-
070	of which: issued by general governments	3,848	3,848	3,848	3,848	100	0	100	0
080	of which: issued by financial corporations	503	47	503	47	117	-	117	-
090	of which: issued by non-financial corporations	0	-	0	-	0	-	0	-
120	Other assets[1]	17,008	-			103,413	-		

1. The majority of unencumbered Other Assets relate to derivative instruments.

Table 35 below breaks down the off-balance sheet assets between those that have been encumbered and the amount available for encumbrance. As per table 35 the values represent the median for the year.

Table 35: Collateral received and own debt securities issued (EU AE2) - MSEHSE Group

€MM		Fair value of encumbered collateral received or own debt securities issued	of which notionally eligible EHQLA and HQLA	Unencumbered: Fair value of collateral received or own debt securities issued available for encumbrance	Unencumbered: of which EHQLA and HQLA
MSEHSE Group		**010**	**030**	**040**	**060**
130	**Collateral received by the disclosing institution**	**35,579**	**25,434**	**1,823**	**1,658**
140	Loans on demand	-	-	-	-
150	Equity instruments	6,459	1,939	68	-
160	Debt securities	28,078	23,519	1,751	1,658
170	of which: covered bonds	400	42	0	-
180	of which: securitisations	758	-	17	-
190	of which: issued by general governments	25,297	23,337	1,684	1,658
200	of which: issued by financial corporations	1,392	48	38	-
210	of which: issued by non-financial corporations	759	164	5	-
220	Loans and advances other than loans on demand	-	-	-	-
230	Other collateral received	1,192	-	-	-
240	**Own debt securities issued other than own covered bonds or securitisations**	**-**	**-**	**-**	**-**
241	**Own covered bonds and securitisations issued and not yet pledged**			**-**	**-**
250	**TOTAL COLLATERAL RECEIVED AND OWN DEBT SECURITIES ISSUED**	**57,108**	**29,239**		

Table 36 below shows the extent to which liabilities have been matched to encumbered assets.

Table 36: Sources of encumbrance (EU AE3) - MSEHSE Group

€MM		Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and securitisations encumbered
MSEHSE Group		**010**	**030**
010	Carrying amount of selected financial liabilities	35,964	35,770

The sources of the encumbered assets are matched with the uses of the assets to calculate the matching liabilities.

18. Remuneration

18.1. Overview

This chapter of Regulatory Disclosure Report represents the annual Remuneration Disclosure of MSEHSE Group, as required under the CRR and Remuneration Regulation for Institutions (in German: InstitutsVergV).

It sets out the principles relating to remuneration requirements (Article 450 of the CRR and Section 16 of InstitutsVergV) within the MSEHSE Group[6]. Some of the policies, practices and procedures outlined in this chapter apply globally to the Morgan Stanley Group. The chapter has been prepared in line with the CRD, the CRR, the InstitutsVergV, the KWG and any associated regulations and guidance (together the "German Remuneration Rules"). References made to persons in the masculine for reasons of readability apply equally in the feminine and diverse.

18.2.MSEHSE Group Remuneration Objectives and Strategy

The MSEHSE Group is committed to a responsible and appropriate remuneration structure that is designed to align the performance and conduct of employees to its business and risk strategy. The MSEHSE Group business strategy is focused on delivering a sustainable business model in line with Morgan Stanley Group’s global business strategy and local regulatory requirements. The MSEHSE Group’s remuneration arrangements are therefore also aligned to the wider Morgan Stanley Group strategy and the interests of shareholders.

The remuneration structure is also designed to be competitive, complying with applicable regulations, and reflecting current best practices in corporate governance and risk management.

The MSEHSE Group is committed to fostering and maintaining a culture based on Morgan Stanley Group’s core values: Do the Right Thing, Put Clients First, Lead with Exceptional Ideas, Commit to Diversity and Inclusion and Give Back. Alignment with these values is considered as a key part of the performance measurement process, which in turn is a key component of the remuneration structures.

The global Compensation, Management Development and Succession Committee (“CMDS Committee”) of the Morgan Stanley Board of Directors continually evaluates Morgan Stanley Group’s remuneration programs with a view toward balancing the following key principles, all of which support Morgan Stanley Group’s culture and values and shareholders’ interests.

- **Deliver Pay for Sustainable Performance**
    - Variable annual remuneration and, for certain senior executives, performance-vested long-term incentives tied to future performance against strategic objectives
    - Consideration of returns for shareholders and appropriate rewards to motivate employees
- **Align Remuneration with Shareholders’ Interests**
    - Significant portion of variable remuneration is deferred, subject to cancellation and clawback, and tied to Morgan Stanley Group’s stock with retention requirements
    - Ongoing shareholder engagement to understand shareholder views
- **Mitigate Excessive Risk-taking**
    - Remuneration arrangements do not incentivise unnecessary or excessive risk-taking that could have a material adverse effect on the Morgan Stanley Group
    - Robust governance around review and approval of remuneration programs, including from a risk perspective
- **Attract and Retain Top Talent**
    - Competitive pay levels to attract and retain the most qualified employees in a highly competitive global talent environment
    - Variable remuneration awards include vesting and cancellation provisions that retain employees and protect Morgan Stanley Group’s interests

6. The MSEHSE Group, as referred to in chapter 18, includes MSEHSE, MSESE including branches, and MSBAG. MS France remuneration is reported separately in accordance withe the Pillar 3 Disclosure and is subject to the remuneration requirements pursuant to the Investment Firm Directive & Investment Firm Regulation.

18.3. Remuneration Governance

The MSEHSE Group Management Boards, the MSEHSE Group Remuneration Committees, the MSEHSE Group Supervisory Boards

MSEHSE Group has a two-tier board structure in place, which reflects the separation between the responsibilities of the Supervisory Board, which monitors and advises the Management Board, and the Management Board itself, which manages the direct business.

The MSEHSE Group Management Boards review and approve recommendations on the design and implementation of the remuneration policies and practices applicable to employees of the MSEHSE Group.

The members of the MSEHSE Group Management Boards are the MSEHSE Group Chief Executive Officer ("MSEHSE CEO"), the MSEHSE Group Chief Operations Officer ("MSEHSE COO"), the MSEHSE Group Chief Finance Officer ("MSEHSE CFO"), the MSEHSE Group CRO and Management Board members representing key business units.

The MSEHSE Group Management Boards review the appropriateness of the remuneration system for all employees, and its implementation, especially in the case of material strategic and organisational changes. Consistency of the remuneration strategy with the MSEHSE Group business strategy is considered in co-ordination with MSEHSE RemCo.

The MSEHSE RemCo has been appointed by the MSEHSE Group Supervisory Boards to assist in the oversight of remuneration related matters. In particular the MSEHSE RemCo oversees the design and implementation of the remuneration systems applicable to the MSEHSE Group Management Boards and monitors compliance by the MSEHSE Group with applicable German Remuneration Rules. As a part of its remit, the MSEHSE RemCo reviews and provides updates or makes recommendations to the MSEHSE Group Supervisory Boards on:

- the MSEHSE Group Management Board Remuneration Policy, which forms an annex to the MSI Group Remuneration Policy and sets out specific regulatory requirements applicable to the MSEHSE Group. The MSEHSE Group Management Board Remuneration Policy Annex is applicable to Management Board members of the MSEHSE Group, including: MSESE and its branches, MSBAG and MSF;
- the appropriateness of MSEHSE Group remuneration practices against the applicable local regulations;
- the variable remuneration (variable remuneration pool) for relevant MSEHSE Group entities in light of performance against key financial and risk management strategic priorites, and;
- the remuneration outcomes for MSEHSE Group Management Board members and the heads of Control Functions against their performance goals.

On 31 December 2023, the MSEHSE RemCo was comprised of three members of the MSEHSE Group Supervisory Boards, being Clare Woodman, Frank Mattern and David Cannon and met 6 times in 2023.

The MSEHSE Group Supervisory Boards are responsible for the appropriate design of the remuneration system for the members of the MSEHSE Group Management Boards and, on this basis, approves the total remuneration for each MSEHSE Group Management Board member and head of Control Functions. It also provides formal approval of the MSEHSE Group Management Board Remuneration Policy, as well as reviewing the impact of the overall variable remuneration pool for MSEHSE Group on capital, liquidity and other relevant metrics. The MSEHSE Group Supervisory Boards met 6 times for remuneration related topics in 2023.

The MSEHSE Group has appointed a Remuneration Officer as well as a Deputy Remuneration Officer as required under the InstitutsVergV. The MSEHSE Group Remuneration Officer's responsibilities include monitoring the appropriateness of the remuneration systems for staff members who are not members of the MSEHSE Group Management Boards on an ongoing basis. To this end, the Remuneration Officer reviews the development and ongoing application of the MSEHSE Group's remuneration policies and practices, performs independent monitoring obligations and advises the MSEHSE Supervisory Boards and its RemCo.

As a subsidiary, the MSEHSE Group has an additional overlay of regional and global compensation governance from the MSI Group and Morgan Stanley Group. Summaries of the composition and mandates of the relevant committees are provided below.

The EROC and the MSI RemCo

The EMEA Remuneration Oversight Committee ("EROC) and the MSI RemCo provides formal oversight of EMEA remuneration matters to ensure that remuneration practices in EMEA are compliant with relevant EU and UK legislation. The EROC is comprised of the EMEA Chief Executive Officer (Chair), the EMEA Head of Human Resources (Deputy Chair), the EMEA Chief Finance Officer ("EMEA CFO"), the EMEA General Counsel ("EMEA GC"), the EMEA Head of Compliance and the EMEA Chief Risk Officer ("EMEA CRO"). The MSEHSE Group Remuneration Officer is an attendee of the EROC as a representative for the MSEHSE Group. The EROC met seven times during 2023.

The MSI RemCo was appointed by the MSI Board of Directors to oversee the design and implementation of the remuneration policies and practices applicable to the MSI Group. On 31 December 2023, the MSI RemCo was comprised of five non-executive directors: Jonathan Bloomer (Chair), Terri Duhon, Jane Pearce, Melanie Richards and Paul Taylor, and met five times during 2023.

The CMDS Committee

The CMDS Committee regularly reviews (i) Morgan Stanley Group's performance with respect to execution of strategic objectives and evaluates executive performance in light of such performance; (ii) executive compensation strategy, including the competitive environment and the design and structure of Morgan Stanley Group's compensation programs to ensure that they are consistent with and support Morgan Stanley Group's compensation objectives; and (iii) market trends and legislative and regulatory developments affecting compensation in the U.S. and globally. In this respect, the Chair of the MSI RemCo meets with the CMDS Committee Chair at least annually to discuss local regulatory priorities and the global compensation processes.

On 31 December 2023, the CMDS Committee was comprised of four directors, including the independent Lead Director of the Board, all of whom are independent under the New York Stock Exchange listing standards and the independence requirements of Morgan Stanley Group. The members were Dennis M. Nally (Chair), Thomas H. Glocer, Stephen J. Luczo and Rayford Wilkins Jr. In 2023, the CMDS Committee held nine meetings. The CMDS Committee operates under a written charter adopted by the Board, which is available on Morgan Stanley's website at https://www.morganstanley.com/about-us-governance/comchart.

Role of Relevant External Consultants and Other Stakeholders

The MSEHSE RemCo, the MSI RemCo and the CMDS Committee have the power to appoint independent remuneration consultants, legal counsel, financial or other advisors as they may deem necessary to assist them in the performance of their duties and responsibilities. In 2023, external counsels were engaged by the MSEHSE Group to provide advice to support the enhancement of the remuneration system and the § 12 Report.

Together with the Global Chief Risk Officer ("Global CRO"), the CMDS Committee oversees the Morgan Stanley Group's incentive remuneration arrangements to help ensure that such arrangements do not encourage excessive risk-taking and are consistent with applicable related regulatory rules and guidance. The Global CRO attends CMDS Committee meetings at least annually, and on an as needed basis, to discuss the risk attributes of Morgan Stanley Group's variable remuneration arrangements. The Global CRO reported to the CMDS Committee his conclusion that Morgan Stanley Group's current remuneration programs for 2023 do not incentivise employees to take unnecessary or excessive risk and that such programs do not create risks that are reasonably likely to have a material adverse effect on Morgan Stanley Group.

The day-to-day compliance with the MSEHSE Group's obligations under the German Remuneration Rules is delegated to the MSEHSE Group Human Resources function. In this respect, it regularly reviews the MSEHSE Group's regulatory obligations with respect to the EMEA jurisdictions in which it operates and ensures that appropriate variations in policy relating to remuneration structures approved by the CMDS Committee are fully compliant with applicable local laws and regulations in the jurisdictions covered by MSEHSE Group Human Resources. As appropriate, the MSEHSE Group's Control Functions are involved in the designing and monitoring of the remuneration systems and structures.

18.4. Identification of Risk Takers

The MSEHSE Group has established a formal identification framework to identify employees whose professional activities have a material impact on MSEHSE Group's risk profile. The MSEHSE Group Risk Taker ("MRT") identification framework complies with the qualitative and quantitative criteria set out in Articles 5 and 6 of Commission Delegated Regulation (EU) No 2021/923. In line with the German Remuneration Rules, the identification framework is reviewed on an annual basis by the MSEHSE Group Human Resources function in consultation with the Control Functions and the Remuneration Officer. The outcome of this review is subject to approval of the MSEHSE Group Management Boards, and the MSEHSE Group Supervisory Boards on recommendation of the MSEHSE RemCo. In addition, the framework is audited on an annual basis by Morgan Stanley Group's external auditors.

In accordance with the Commission Delegated Regulation (EU) No 2021/923, MRTs are subject to the German Remuneration Rules.

18.5. Link between Pay and Performance

In conjunction with Morgan Stanley Group's Global Compensation Policy and the MSI Group Remuneration Policy, the MSEHSE Group Annexes to the MSI Group Remuneration Policy also set forth certain standards regarding the remuneration parameters applied within the MSEHSE Group.

Incentivising Right Behaviours

The following key features of the MSEHSE Group remuneration arrangements ensure that the MSEHSE Group does not incentivise employees to take unnecessary or excessive risk, and provide a link between an employee's remuneration and the long-term interests of MSEHSE Group:

- a balance of fixed and variable remuneration;
- a balance between short-term and long-term incentives;
- mandatory deferrals into equity-based incentive programs, (or cash-based deferrals if needed for local regulatory or business reasons);
- risk-mitigating features of awards such as cancellation/malus and clawback provisions; and
- governance procedures followed in making remuneration decisions.

Delivering all or a portion of deferred variable remuneration in the form of equity links variable remuneration to Morgan Stanley Group's performance through its stock price. Risk outcomes that result in a negative impact to Morgan Stanley Group reduce the value of the equity award, and employees are subject to this decline in value through the deferral period.

Morgan Stanley Group constantly reviews its policies and practices, including those applicable to specific legal entities, such as the MSEHSE Group, and is working towards further enhancing the linkage between positive risk behaviours and remuneration outcomes.

Consideration of Capital and Liquidity Resources in the Variable Remuneration Pool Determination

Morgan Stanley Group has a 'pay for performance' philosophy, which is reflected throughout the four key objectives of its remuneration programs (see 18.2) and applies across all lines of business.

The final year-end variable remuneration pool determination is subject to a multi-dimensional process that considers MSEHSE Group, business unit and individual performance, taking into account financial as well as non-financial performance metrics. This process includes a review of the adherence to risk limits, conduct and inclusion controls, market and competitive factors, regulatory outcomes, and business or location specific factors.

The pool for the general MSEHSE employee population is reviewed by the MSEHSE Group Management Boards against financial and risk KPIs to ensure sufficient risk bearing capacity, as well as adequate liquidity and capital resources, and to recommend any necessary adjustments as required to maintain a sound capital base. Under the recommendation of the MSEHSE RemCos, the MSEHSE Group Supervisory Boards perform the same review for the final variable remuneration pool in respect of the entire MSEHSE Group, including the members of the MSEHSE Group Management Boards. This review will take into consideration:

1. the MSEHSE Group's internal capital adequacy, multi-year capital planning and profit situation, and
2. whether the respective legal entities and the overall MSEHSE Group are capable of permanently maintaining or restoring:

   a) adequate capital and liquidity resources; and

   b) the combined buffer requirements as defined in section 10i of the German Banking Act.

18.6. Individual Performance Measurement

All MSEHSE Group employees have an Employee Performance Dashboard, which is an aggregation of various performance inputs, including non-financial and conduct related information, as applicable, in three areas:

- Performance & Contributions – includes employee performance evaluation forms (i.e., employee goals, feedback, self-evaluation)
- Culture & Leadership – includes self-disclosed employee contributions to culture on the employee self-evaluation
- Compliance, Conduct and Risk Management – includes information resulting from disciplinary incidents and input from Control Functions

In addition to the full performance evaluation and 360 review process, performance evaluation managers are required to rate employees' conduct and adherence to the letter and spirit of MSEHSE Group's compliance and risk management controls and standards and other policies including the Code of Conduct.

18.7. Individual Remuneration Determination Process

The MSEHSE Group applies the Morgan Stanley Global Incentive Compensation Discretion Policy which lays out standards for managers on the use of discretion when making annual remuneration decisions and considerations for assessing risk management and outcomes. The policy specifically provides that all managers must consider whether their team members managed risk appropriately, and effectively managed and supervised the risk control practices of the employees reporting into them during the performance year. Managers are trained on these requirements annually and are required to certify compliance with the applicable requirements.

In determining the amount of discretionary variable remuneration to award an eligible employee, only those factors that are legitimate, business-related and consistent with MSEHSE Group's legal and regulatory obligations and policies and practices are considered. With this discretion, comes the responsibility to make pay decisions consistent with Morgan Stanley Group's equal pay philosophy, which means that compensation managers are accountable for making deliberate, thoughtful, and defensible remuneration decisions considering only legitimate, business-related factors. These factors include but are not limited to:

- The employee's absolute and relative performance in an individual and, if relevant, supervisory capacity;
- The employee's conduct and adherence to Morgan Stanley Group's core values, including "Commit to Diversity and Inclusion", ensuring a focus on diversity and inclusion when making remuneration decisions;
- Performance feedback elicited through the performance evaluation processes, including information provided by Control Function personnel;
- Any disciplinary outcomes administered to the employee during the performance year;
- Any circumstances during the performance year that may result in the cancellation and/or clawback of the employee's previously awarded variable remuneration; and
- Market and competitive conditions.

The allocation of variable remuneration to employees of MSEHSE Group is a discretionary process, in each instance determined in conjunction with input from an MSEHSE Group manager and informed by the performance evaluation process outlined above. MSEHSE Group's 'pay for performance' philosophy means that where a variable remuneration award is not appropriate, none is paid; every year a portion of the eligible employee population receive no variable remuneration. The governance around the performance evaluation and remuneration decision-making process ensures decisions are a product of a number of inputs including performance, risk, and conduct.

Remuneration decisions for members of the MSEHSE Group Management Boards are reviewed and challenged as appropriate by the MSEHSE Group RemCo prior to approval by the MSEHSE Group Supervisory Boards. The assessment of the remuneration decision takes into consideration the individual management board member performance dashboard, including a multi-year view of performance ratings, as well as other location and market specific factors.

Control Functions

In order to ensure the independence of Control Function employees, individual remuneration decisions for employees working in those functions are determined by Control Function management and are not influenced by employees working in revenue-producing roles. In addition, benchmarking data is utilised to consider whether pay levels for key Control Function employees are commensurate with the market, and that the MSEHSE Group can attract and retain experienced personnel.

Remuneration decisions for Heads of Control Functions are reviewed by MSEHSE Group RemCos and approved by the MSEHSE Supervisory Boards.

Pay Equity

Morgan Stanley Group's remuneration program, and its related policies and practices, reflect and promote the objective that all employees, including women and ethnically diverse employees, are rewarded equitably. A system of checks and balances is in place within Morgan Stanley Group's processes that support fair and equitable pay. This includes an annual global pay equity review and an analysis of employee compensation conducted in consultation with external experts. Morgan Stanley Group's 2023 global review of pay equity did not identify areas of concerns within the MSEHSE Group.

18.8. Remuneration Structure

Morgan Stanley Group's remuneration philosophy is based on the concept of annualised total reward (or total remuneration) and accordingly remuneration for the majority of employees is comprised of two key elements:

- Fixed remuneration consisting of base salary and, for certain employees, a Role Based Allowance ("RBA") which is determined based on an individual's role and responsibilities and is paid monthly in cash via the payroll; and
- Variable remuneration that is based on a number of factors, including, but not limited to, MSEHSE Group, business unit, and individual performance.

The structure of the variable remuneration for MRTs complies with the German Remuneration Rules and is differentiated according to the MRT category and the amount of variable remuneration awarded. The variable remuneration comprises upfront cash, upfront stock and deferred equity, and if needed for local legal or business reasons, deferred cash-based awards.

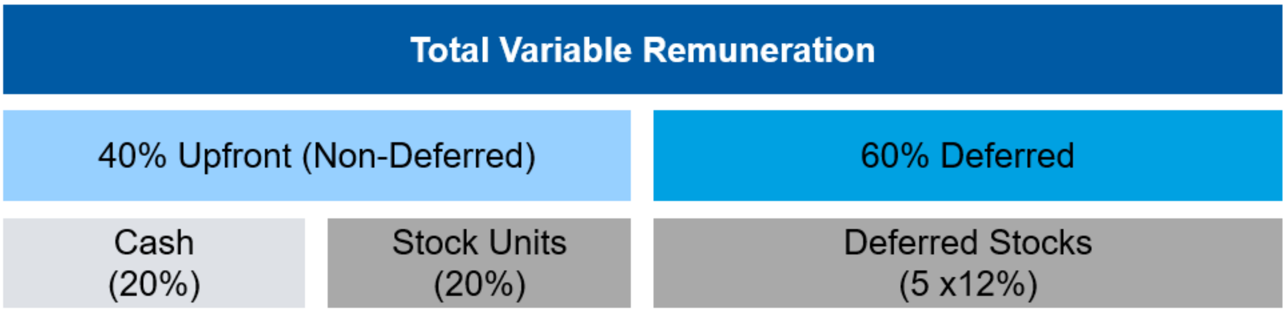
Non-deferred variable remuneration is awarded 50% in upfront cash and 50% in the form of an equity award. Deferred variable remuneration is generally awarded in equity. Subject to national law, variable remuneration is subject to cancellation and clawback.

In accordance with InstitutsVergV, the MSEHSE Group applied the exemption limit for the pay out of the complete variable remuneration. If a Risk Taker is granted variable remuneration of €50,000 or higher, or where the variable remuneration is below €50,000 but represents more than one third of the total annual remuneration, a part of the variable remuneration will be deferred.

Members of the MSEHSE Group Management Boards and Senior Management

For members of the MSEHSE Group Management Boards and Senior Management, as defined in the MRT Identification Framework, the variable remuneration comprises the following components:

Figure 5: Variable Remuneration composition for members of the Management Boards and Senior Management



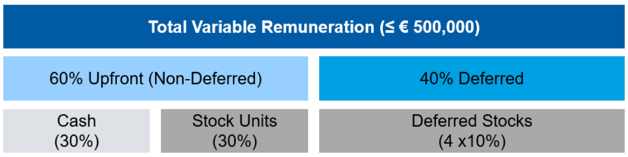
- 20% of the variable remuneration will be awarded in cash (“Cash”),
- 20% of the variable remuneration will be granted in stocks (“Stock Units”) that vests in 6 months and is available to sell 12 months post-grant,
- 60% of the variable remuneration will be awarded as restricted stock units and deferred over a period of five years (“Deferred Stocks”) with pro-rata vesting.

Within the deferral period of five years, the deferred stocks will be split into five equal annual installments. The deferred stocks are subject to an additional retention period of one year and are therefore subject to a 12-month post-vest sales restriction.

All other MRTs

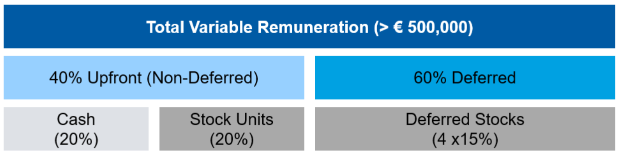
For all other MRTs, the variable remuneration comprises the following components, according to whether the awarded variable remuneration is up to or greater than €500,000:

Figure 6: Structure for MRT variable remuneration up to a maximum of € 500,000



- 30% of the variable remuneration will be awarded in cash (“Cash”),
- 30% of the variable remuneration will be granted in stocks (“Stock Units”) that vests in 6 months and is available to sell 12 months post-grant,
- 40% of the variable remuneration will be awarded as restricted stock units deferred over a period of four years (“Deferred Stocks”) with pro-rata vesting.

Figure 7: Structure for MRT variable remuneration higher than € 500,000



- 20% of the variable remuneration will be awarded in cash (“Cash”),
- 20% of the variable remuneration will be granted in stocks (“Stock Units”) that vests in 6 months and is available to sell 12 months post-grant,
- 60% of the variable remuneration will be awarded as restricted stock units deferred over a period of four years (“Deferred Stocks”) with pro-rata vesting.

Within the deferral period of four years, the deferred stocks will be split into four equal annual installments. The deferred stocks are subject to an additional retention period of one year and are therefore subject to a 12-month post-vest sales restriction.

MSEHSE Group expects deferred remuneration awards to constitute a significant component of employees’ variable remuneration and to be designed to protect Morgan Stanley Group’s long-term interests and align with shareholders’ interests. Some employees, including members of the MSEHSE Group Management Boards, receive a greater portion of their remuneration in share-based instruments.

Guaranteed variable remuneration is only paid in exceptional circumstances in the context of hiring new staff and is limited to the first 12 months of service. The awarding of guaranteed variable remuneration is subject to an approval process, which includes receiving approval from the appropriate senior manager, respective MSEHSE Group Management Board member, the EMEA Head of Compensation, the EMEA Head of Human Resources, and in certain circumstances the Global Chief Human Resources Officer ("CHRO").

Additional variable remuneration granted for the purposes of retaining employees in the MSEHSE Group (retention bonuses) were not made in 2023.

Termination payments made to employees upon leaving the MSEHSE Group are considered in accordance with the MSEHSE Group's severance framework and are intended to avoid rewarding negative performance contributions or misconduct, in line with the requirements of the German Remuneration Rules and the EBA Guidelines on Sound Remuneration Policies.

Ratios between Fixed and Variable Remuneration

MSEHSE Group's policy on the ratio between fixed and variable remuneration is to allow for flexibility, whilst recognising the need to ensure that remuneration is appropriately balanced between fixed and variable elements. A ratio of 1:2 of fixed remuneration to variable remuneration applicable to all staff of MSEHSE Group and its branches was approved by MSESE shareholders on 12 December 2018, in addition to the MSBAG ratio of 1:2 fixed remuneration to variable remuneration, which was approved by MSBAG shareholders on 18 December 2013. The ratio approved is the maximum allowed under CRD and section 25a (5) of the German Banking Act. Additionally, a ratio of 1:0.5 of fixed remuneration to variable remuneration applies to MSEHSE Group Control Function staff.

Deferred Remuneration

Employees who reach a certain remuneration eligibility threshold receive a portion of their variable remuneration in the form of deferred variable remuneration awards.

Each year, the CMDS Committee reviews the global variable remuneration pool as well as the design and structure of the global annual remuneration program, including eligibility, the form of deferred awards, deferral formulae, vesting and timing of payments and cancellation and clawback provisions.

The form of deferred variable remuneration awards (i.e., equity, cash, or a combination thereof) is determined based on a variety of factors, including the number of shares available for grant under Morgan Stanley Group's equity plans and for MRTs, ensuring compliance with applicable Remuneration Rules including the German Remuneration Rules.

There is a formal governance process to consider and determine ex-ante and ex-post adjustments to variable remuneration. Morgan Stanley Group believes that its remuneration decisions for 2023 demonstrate its focus on long-term profitability and commitment to sustainable shareholder value with appropriate rewards to retain and motivate top talent throughout economic cycles.

18.9. Risk Adjustment

MSEHSE Group continually monitors the effectiveness of its remuneration structure and utilises a process of considering risk-adjusted performance, compliance with risk limits and the market and competitive environment when sizing and allocating annual variable remuneration pools.

Throughout the year, employee conduct matters that are escalated through Morgan Stanley Group's Global Conduct Risk Program are reviewed to determine whether they present situations that could require clawback or cancellation of previously awarded remuneration, as well as downward adjustments to current-year remuneration. All variable remuneration for MRTs has provisions that allow for clawback of any awards or remuneration paid or delivered. Cancellations and clawbacks of previously awarded remuneration are reviewed with the Employee Discipline Oversight Committee (a committee of senior management currently composed of Morgan Stanley Group's CFO, Chief Legal Officer, CRO, Chief Human Resources Officer ("CHRO"), Chief Audit Officer, and the Head of Non-Financial Risk) and reported to the CMDS Committee quarterly. This process is enhanced by a formalised EMEA malus review process overseen by the EROC. This process involves EROC assessing situations which may warrant adjustment to current-year variable remuneration and/or to apply cancellation and/or clawback to previously awarded remuneration, with reference to specific criteria that are contained in governing incentive remuneration award documents and applicable policies. Where appropriate, the relevant MSEHSE Group Boards and Committees receive updates on the malus review process.

In addition to the above governance processes, conduct driven adjustments to current-year variable remuneration proposed by managers as part of the remuneration decision-making process are reviewed by a MSEHSE Group panel composed of senior representatives from the Risk, Legal, Compliance and Human Resources functions. This ensures that both the business and the relevant independent functions are included in the review, and that remuneration adjustments made are consistent across the MSEHSE Group. Remuneration adjustments are also reviewed globally to ensure consistent application.

In addition to the above, MSEHSE Group is subject to a Cancellation and Clawback Policy which is applicable to all MRTs within the EMEA region. Circumstances which trigger the application of this policy for the MSEHSE Group employees include but are not limited to:

- There is reasonable evidence of serious misconduct. Serious misconduct means a situation in which Morgan Stanley Group and/or the relevant regulated entity and/or business unit have sufficient consideration to justify summary termination of employment
- Morgan Stanley Group and/or the relevant regulated entity and/or business unit in which the MRT is employed (or in relation to which they carry out some or all their duties) suffers a material failure of risk management;
- Morgan Stanley Group or the relevant regulated entity or business unit suffers a material downturn in its financial performance;
- The MRT directly and/or materially, through their conduct, contributed to a regulatory sanction (or sanctions) being imposed;
- There is a serious breach of relevant external or internal rules relating to suitability and conduct with respect to MSEHSE Group's Code of Conduct.

Cancellation may occur where there is a misconduct or material error of the MRT which may include:

- Where there has been a severe breach of duty by the MRT and/or serious deficiencies in performance of the MRT;
- Negative performance contributions in which the MRT does not achieve objectives set during the performance management process; and
- Negative performance contribution has resulted in a written warning or occurrence of a reason justifying a termination of employment relationship in accordance with Section 626 of the Civil Code.

18.10. Prohibition of personal hedging strategies

Personal hedging and pledging strategies which may undermine the risk alignment effects of variable remuneration are not permissible.

Staff members receive training and make an annual attestation to desist from such activities. Morgan Stanley monitors compliance by requiring employees to report their private custodial accounts, and additionally applies trading restrictions and approval processes before allowing any transactions involving Morgan Stanley stock.

18.11. Aggregate Quantitative Information on Remuneration

The following table set out aggregate quantitative information on remuneration, broken down by business area in accordance with § 16 InstitutsVergV and Article 450 paragraph 1 g CRR. MSEHSE Group (excluding MS France Group which is reported under separate IFR disclosure) paid a total remuneration of € 253.6 MM for the year 2023.[7]

Table 37: Remuneration awarded for the financial year (EU All employees)

(All values in €MM)	MB Supervisory Function	MB Management Function	Institutional Securities Group	Operations & Technology	Control Functions	Corporate Functions
Number of employees	7	8	489	187	90	134
Total fixed remuneration	0.45	7.14	119.84	17.77	10.85	15.53
Total variable remuneration	-	5.34	69.58	2.86	1.70	2.56
Number of beneficiaries of variable remuneration	-	8	415	175	79	123

The following tables set out aggregate quantitative information on remuneration, broken down by senior management and members of staff whose actions have a material impact on the risk profile of the MSEHSE Group in accordance with Article 450 paragraph 1 h CRR. In addition to the requirements of Article 450 CRR, Article 17 of the Implementing Regulation (EU) 2021/637 defines the regulatory requirements for disclosure in accordance with Annex XXXIII. The corresponding templates are shown below:

Table 38: Remuneration awarded for the financial year (EU REM1)

	(All values in €MM)	Row reference	a MB Supervisory Function	b MB Management Function	c Other Senior Management	d Other Identified Staff
Fixed remuneration	Number of identified staff[1]	1	7	8	31	76
	Total fixed remuneration	2	0.45	7.14	19.82	31.58
	Of which: cash-based	3	0.45	7.14	19.82	31.58
	(Not applicable in the EU)	4				
	Of which: shares or equivalent ownership interests	EU-4a	-	-	-	-
	Of which: share-linked instruments or equivalent non-cash instruments	5	-	-	-	-
	Of which: other instruments	EU-5x	-	-	-	-
	(Not applicable in the EU)	6				
	Of which: other forms	7	-	-	-	-
	(Not applicable in the EU)	8				
Variable remuneration	Number of identified staff[1]	9	-	8	23	68
	Total variable remuneration	10	-	5.34	15.81	23.65
	Of which: cash-based	11	-	1.07	3.26	6.00
	Of which: deferred	12	-	-	-	-
	Of which: shares or equivalent ownership interests	EU-13a	-	4.27	12.54	17.64
	Of which: deferred	EU-14a	-	3.20	9.41	11.93
	Of which: share-linked instruments or equivalent non-cash instruments	EU-13b	-	-	-	
	Of which: deferred	EU-14b	-	-	-	-
	Of which: other instruments	EU-14x	-	-	-	-
	Of which: deferred	EU-14y	-	-	-	-
	Of which: other forms	15	-	-	-	-
	Of which: deferred	16	-	-	-	-
Total remuneration (2 + 10)		17	**0.45**	**12.48**	**35.63**	**55.22**

1. Number of identified staff beneficiaries by full-time employment according to EBA guidelines

7. Aggregate compensation data is also reported in the MSEHSE Group's Financial Statements under IFRS. However, inherent differences in their respective reporting requirements and methodologies preclude a direct comparison, including variations in the treatment of deferred awards, amortization, severance, benefits and taxes.

Table 39: Special payments to staff whose professional activities have a material impact on institutions' risk profile (identified staff) (EU REM2)

(All values in €MM)	Row reference	a MB Supervisory Function	b MB Management Function	c Other Senior Management	d Other Identified Staff
Guaranteed variable remuneration awards					
Guaranteed variable remuneration awards - Number of identified staff[1]	1	-	-	-	1
Guaranteed variable remuneration awards - Total amount	2	-	-	-	0.001
Of which guaranteed variable remuneration awards paid during the financial year, that are not taken into account in the variable remuneration cap	3	-	-	-	-
Severance payments awarded in previous periods, that have been paid out during the financial year					
Severance payments awarded in previous periods, that have been paid out during the financial year - Number of identified staff[1]	4	-	-	-	-
Severance payments awarded in previous periods, that have been paid out during the financial year - Total amount	5	-	-	-	-
Severance payments awarded during the financial year					
Severance payments awarded during the financial year - Number of identified staff[1]	6	-	-	5	4
Severance payments awarded during the financial year - Total amount	7	-	-	6.39	4.95
Of which paid during the financial year	8	-	-	-	-
Of which deferred	9	-	-	-	-
Of which severance payments paid during the financial year, that are not taken into account in the variable remuneration cap	10	-	-	-	-
Of which highest payment that has been awarded to a single person	11	-	-	2.35	1.57

1.Number of identified staff beneficiaries by full-time employment according to EBA guidelines

Table 40: Deferred remuneration (EU REM3)

		a	b	c	d	e	f	EU - g	EU - h
Deferred and retained remuneration (All values in €MM)	**Row reference**	**Total amount of deferred remuneration awarded for previous performance periods**	**Of which due to vest in the financial year**	**Of which vesting in subsequent financial years**	**Amount of performance adjustment made in the financial year to deferred remuneration that was due to vest in the financial year**	**Amount of performance adjustment made in the financial year to deferred remuneration that was due to vest in future performance years**	**Total amount of adjustment during the financial year due to ex post implicit adjustments (i.e.changes of value of deferred remuneration due to the changes of prices of instruments)**	**Total amount of deferred remuneration awarded before the financial year actually paid out in the financial year**	**Total of amount of deferred remuneration awarded for previous performance period that has vested but is subject to retention periods**
MB Supervisory function[1]	1	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Cash-based	2	-	-	-	-	-	-	-	-
Shares or equivalent ownership interests	3	-	-	-	-	-	-	-	-
Share-linked instruments or equivalent non-cash instruments	4	-	-	-	-	-	-	-	-
Other instruments	5	-	-	-	-	-	-	-	-
Other forms	6	-	-	-	-	-	-	-	-
MB Management function	7	**11.68**	**3.74**	**7.95**	**-**	**-**	**(0.30)**	**3.82**	**2.78**
Cash-based	8	0.29	0.23	0.06	-	-	-	0.39	-
Shares or equivalent ownership interests	9	11.39	3.50	7.89	-	-	(0.30)	3.43	2.78
Share-linked instruments or equivalent non-cash instruments	10	-	-	-	-	-	-	-	-
Other instruments	11	-	-	-	-	-	-	-	-
Other forms	12	-	-	-	-	-	-	-	-
Other senior management	13	**50.72**	**24.53**	**26.19**	**-**	**-**	**(1.00)**	**16.01**	**9.59**
Cash-based	14	7.93	7.92	0.01	-	-	-	2.16	-
Shares or equivalent ownership interests	15	42.79	16.61	26.18	-	-	(1.00)	13.85	9.59
Share-linked instruments or equivalent non-cash instruments	16	-	-	-	-	-	-	-	-
Other instruments	17	-	-	-	-	-	-	-	-
Other forms	18	-	-	-	-	-	-	-	-
Other identified staff	19	**45.26**	**14.54**	**30.72**	**-**	**-**	**(1.17)**	**14.65**	**10.38**
Cash-based	20	0.13	-	0.13	-	-	-	0.91	-
Shares or equivalent ownership interests	21	45.13	14.54	30.59	-	-	(1.17)	13.74	10.38
Share-linked instruments or equivalent non-cash instruments	22	-	-	-	-	-	-	-	-
Other instruments	23	-	-	-	-	-	-	-	-
Other forms	24	-	-	-	-	-	-	-	-
Total amount	25	**107.67**	**42.81**	**64.86**	**-**	**-**	**(2.47)**	**34.48**	**22.74**

1.MB Supervisory function is not entitled to variable remuneration and does not have values to be reported under EU REM3

Table 41: Remuneration of 1 million EUR or more per year (EU REM4)

(All values in EUR)	Row reference	Identified staff that are high earners as set out in Article 450(i) CRR
1 000 000 to below 1 500 000	1	15
1 500 000 to below 2 000 000	2	8
2 000 000 to below 2 500 000	3	3
2 500 000 and above	4	5

Table 42: Information of staff whose professional activities have a material impact on institutions' risk profile (identified staff) (EU REM5)

		a	b	c	d	e	f	g	h	i	j
		Management body remuneration			Business areas						
(All values in €MM)	Row reference	MB Supervisory function	MB Management function	Total MB	Investment Banking	Retail Banking	Asset Management	Corporate Functions	Independent Control Functions	All Other	Total
Total number of identified staff[1]	1										**122**
Of which: members of the MB	2	7	8	15							
Of which: other senior management	3				25	-	-	3	3	-	
Of which: other identified staff	4				61	-	-	4	11	-	
Total remuneration of identified staff	5	**0.45**	**12.48**	**12.94**	**84.78**	**-**	**-**	**1.95**	**4.12**	**-**	
Of which: variable remuneration	6	-	5.34	5.34	38.09	-	-	0.52	0.84	-	
Of which: fixed remuneration	7	0.45	7.14	7.60	46.68	-	-	1.43	3.29	-	

1.Number of identified staff beneficiaries by full-time employment according to EBA guidelines

19. Appendix I: Board of Directors Knowledge, Skills and Expertise

Appointments to the MSEHSE Group Management Boards and Supervisory Boards

The MSEHSE Group Nomination Committees regularly consider succession planning and discuss proposed appointments to the MSEHSE Group Management and Supervisory Boards. All candidates (who may be internal or external) are considered against the requirements for the role for which they are being considered and for executive and key function holder roles the requirements and responsibilities of the role are set out in a job description. As a large and diverse organisation, the MSEHSE Group Nomination Committees will consider whether a vacancy could be filled by an individual working with Morgan Stanley. To support this process, the Nomination Committees and Supervisory Board consider and review reports on individuals identified as potential candidates for succession purposes, irrespective of whether there is a specific vacancy. In cases where there are no suitable internal candidates identified an executive search firm may be engaged to identify other potential candidates.

When identifying and recommending candidates to join the MSEHSE Group Managements Boards or Supervisory Boards, the MSEHSE Group Nomination Committees will consider a broad range of qualities and characteristics, giving due regard to ensuring a diverse range capabilities, backgrounds, skills, experience, opinions and views are present on the respective Management Board or Supervisory Board and its Committees. It will also consider regulatory requirements and relevant policies of the MSEHSE Group. New Supervisory Board and Management Board members go through tailored induction programmes and all Supervisory Board and Management Board members are provided with ongoing training as necessary.

Diversity and the Composition of the MSEHSE Group Management Boards and Supervisory Boards

The MSEHSE Group Supervisory Boards and Management Boards recognise the importance and benefits of diversity both within business operations and at a board level. All appointments to the Management Boards or the Supervisory Boards and its Committees are made on merit, in the context of the skills and experience that the MSEHSE Group Management Boards and/or Supervisory Boards, requires to be effective, with due regard given to the benefits of diversity. When assessing the composition of the MSEHSE Group Managements Boards or Supervisory Boards and recommending new directors; the MSEHSE Group Nomination and Governance Committee considers the benefits of diversity, including gender and ethnic diversity.

The MSEHSE Group Supervisory Boards aspire to continue to meet or exceed diversity targets, including a minimum (i) 33% female representation, and (ii) one Supervisory Board member from an ethnic diverse background. As of 31 December 2023, the MSEHSE Group Supervisory Boards had exceeded their gender target with 43% female representation and met their ethnicity target. Selection of diverse candidates to join the MSEHSE Group Supervisory Boards will be, in part, dependent on the pool of candidates with the necessary background, skills and experience.

MSEHSE Group Management Board Members

Oliver Behrens

Oliver Behrens is Chair (CEO) of the MSBAG Management Board (since 2015) and also the MSEHSE and MSESE Management Boards (both since 2017). He was appointed as an executive director on the Board of Directors of Morgan Stanley International. Oliver has over 39 years banking experience. Prior to joining Morgan Stanley Oliver spent nine years at DekaBank where he was responsible for the Asset Management business and later the Institutional Sales and Trading business. Since January 2007, Oliver Behrens was a member of the Managment Board of DekaBank, amongst others as Chair. He began his career at Deutsche Bank AG where he spent 24 years mainly in the Asset Management business.

Oliver holds a degree in economics from Hagen and Tuebingen.

David Best

David Best is the Chief Operating Officer and a member of the Management Boards of MSEHSE, MSESE and MSBAG since April 2022. Furthermore, he is a member of the Board of Directors and Chair of the Risk Committee of MS France and a member of the Board of Directors of MSFH I. He is also a member of the Board of Directors of Morgan Stanley Investment Management Limited and of Morgan Stanley Menkul Degerler A.S (Chair). David joined Morgan Stanley in 1997 in London, serving across a number of roles in Finance supporting the Institutional Securities Group. In 2014, he became the Deputy Chief Operating Officer for EMEA delivering the Morgan Stanley’s strategy in the region.

David is an Alumnus of the Victoria University of Manchester, a qualified Chartered Accountant and a Freeman of the City of London.

Martin Borghetto

Martin Borghetto is a member of the Management Board of MSESE since January 2020. He is the Head of MSESE's Institutional Equity Division and is a member of the EMEA Equities Operating Committee. Martin started his career at Morgan Stanley in Equity Research London in 1995. He initially worked in the Pan-European Insurance team and, from 1997 onwards, as a Research Analyst in the European Transport team. In 2005 he joined IED Sales & Trading at MSBAG in Frankfurt am Main. Over the years, he held several different senior positions within Morgan Stanley. Martin was Team Leader of the Pan-European Transport Team, Member of the Pan-Euro Sales Team, Head of Distribution Institutional Equity Division Germany/Austria. He is currently Head of Continental Europe Equities in Frankfurt.

Martin studied in Reutlingen, Milan and London and holds a B.A. Hons of European Business Administration and Diplom-Betriebswirt (FH).

Emmanuel Goldstein

Emmanuel Goldstein is member of the Management Boards of MSEHSE and MSESE since October 2023. He is also Chief Executive Officer ("CEO") and member of the Boards of Directors of MS France and its French holding companies as well as Chair of the IBD Transportation and Infrastructure Group for EMEA. Emmanuel joined Morgan Stanley in 2001. Before joining Morgan Stanley, he was Judge and Government Commissioner at the Administrative Tribunal of Paris.

Emmanuel holds a Master's Degree in public law from Université Panthéon-Assas, graduated from Institut d'Etudes politiques de Paris and from the Ecole Nationale d'Administration. Furthermore, he obtained an MBA from INSEAD and has been a lecturer and director at the Institut d'Études Politiques de Paris (Sciences Po).

Oliver Kehren

Oliver Kehren is a member of the Management Board of MSBAG since November 2020. He is the Head of the Lending and Loan Trading business of MSBAG. He is also member of the Global FID Credit Committee for primary lending opportunities in Special Situations. Oliver started at Morgan Stanley as Head of Distressed Credit Analytics for Austria, Germany, and Switzerland in 2004. Over the years, he has held several different positions in London, including Head of EMEA Credit Analytics. Oliver started his career at ABB as Trainee in the Finance Division in 1995, followed by positions in Asset Management and Equity Capital Markets at J.P. Morgan and as Senior Project Manager Export-and Project Finance at KFW.

Oliver studied in Passau, Manila and Sweden and holds a Master's Degree (Diploma-Kaufmann) in business administration.

Philipp Lingnau

Philipp Lingnau is a member of the Management Board of MSESE since August 2017 and is the Head of MSESE's Fixed Income Division and Bank Resource Management. He also heads the Continental Fixed Income Sales. Previously Philipp headed the European Financial Institutions Group in the Global Capital Markets Division. Prior to this Philipp co-headed the European Corporate Debt & derivatives group. Philipp relocated to Frankfurt am Main in 2008 after working for 10 years in London. Philipp Lingnau joined Morgan Stanley in 2000. He started his professional career at J.P. Morgan in 1997 in Fixed Income Sales and Structured Derivatives.

Philipp graduated from University of St. Gallen, Switzerland, with a Master's Degree (lic.oec.) in Business Economics in 1997.

André Munkelt

André Munkelt is the CRO and a member of the Management Boards of MSEHSE, MSESE and MSBAG since March 2019. Prior to his appointment as CRO, André held the role of EMEA Head of Counterparty Credit Risk and Deputy EMEA Head of Credit Risk Management in London. He is a member of the EMEA Risk Operating Committee and a Trustee of the Morgan Stanley International Foundation. André joined Morgan Stanley in London in 2006 in Credit Risk Management responsible for the credit analysis and management of credit risk to Financial Institutions. Before taking up his role at Morgan Stanley, André worked in the Financial Services division of PricewaterhouseCoopers AG WPG in Germany.

He graduated from the University for Cooperative Education Dresden with a Bachelor’s degree in Business Administration (Diplom-Betriebswirt (BA)) with a specialisation in Banking and Finance. Since 2008, André is also a Chartered Financial Analyst (CFA).

Dr. Jana Währisch

Dr. Jana Währisch is Head of Finance, the CFO and a member of the Management Boards of MSEHSE, MSESE and MSBAG since February 2019. Prior to joining Morgan Stanley in 2018, Jana was a Partner at Ernst & Young in the financial services advisory practice. She also held roles senior at the International Accounting Standards Board and Goldman Sachs in London.

Jana holds a Master of Business Administration from Goethe-University Frankfurt am Main and a PhD from Ruhr University Bochum.

MSEHSE Group Supervisory Board Members

Frank Mattern

Frank was appointed to the MSEHSE Group Supervisory Boards in August 2019 and as Chair in January 2023. Frank is the Chair of the MSEHSE RemCo and a member of the Risk, Audit and Nomination Committees.

Frank is an independent Advisor and was previously a Senior Partner at McKinsey & Company, serving global financial institutions and capital market infrastructure providers, corporations and the public sector for 30 years. He led the Business Technology Office and held a number of roles, including as Managing Partner of the German office and was a member of the Global Operating Committee, the global Board of Directors and was Chair of the McKinsey Global Institute.

Frank holds a number of supervisory board memberships and is a member of the Board of Directors of Morgan Stanley International.

He studied Business Administration and Economics at Westfälische Wilhelm Universität Münster, Germany and the London School of Economics. He holds an MBA from the Wharton School, University of Pennsylvania.

Clare Woodman

Clare Woodman is a member of the MSEHSE Group Supervisory Boards since August 2019 and their Deputy Chair since January 2023. She is the Chair of the MSEHSE Group Nomination Committees and a member of the MSEHSE RemCo. Furthermore, Clare is Head of EMEA and CEO of Morgan Stanley & Co. International plc and an executive director on the board of Morgan Stanley International. She is also responsible for Morgan Stanley's Operation Division globally and a member of the firm's Global Operating and Management Committees. Previously Clare served as Global Chief Operating Officer for Morgan Stanley's Institutional Securities Group. She joined Morgan Stanley from Clifford Chance.

Clare holds a number of senior positions across industry organisations: she is a member of the UK Investment Council, Chair of the US-UK Business Council and Chair of the FCA Markets Practitioner Panel.

Clare is a Trustee of the Morgan Stanley International Foundation and is an active sponsor of the firm’s Women's Business Alliance and a Trustee of the FT Financial Literacy and Inclusion Campaign.

Clare is a qualified lawyer licensed to practice in the UK. Clare studied at the London Business School where she obtained her MBA and was awarded a CBE for Services to Finance.

Maria Luís Albuquerque

Maria Luís Albuquerque is a member of the Supervisory Boards of MSEHSE, MSESE and MSBAG since September 2022. She is a member of the Audit, Risk and Nomination Committees.

She is a member of the Advisory Board of INDEG-ISCTE Executive Education, and a member of the Strategic Advisory Board for the Faculty of Economics and Business Sciences of Universidade Lusíada Lisbon.

In her political career, Maria Luís was Minister of Finance and Deputy Minister of Finance in Portugal, a Member of the Portuguese Parliament, a full member of the European Affairs Committee, a member of the European Commission High-Level Forum on Capital Markets Union and an elected member of the Municipal Council of Almada. Prior to that, Maria Luís held senior roles as Head of Issuing and Markets at the Portuguese Debt Management Office, as Finance Director at Rede Ferroviária Nacional (REFER) as well as in the Ministry of Economics and the Ministry of Finance in

Portugal. She was also a lecturer at Universidade Lusíada Lisbon, teaching macroeconomics and financial markets mathematics.

Maria Luís graduated in Economics (5 years) from Universidade Lusíada Lisbon and holds a Master's Degree in Monetary and Financial Economics from ISEG – Lisbon School of Economics and Management.

Raja Akram

Raja Akram is a member of the Supervisory Boards of MSEHSE, MSESE and MSBAG since January 2021 and is the Chair of the MSEHSE Group Audit Committees.

Raja is the Deputy CFO for Morgan Stanley with responsibility for several Finance functions of Morgan Stanley, including Global Corporate Controllers, Regional CFOs, Infrastructure Finance and Valuation Review. He is a member of Morgan Stanley's Management Committee and Risk Committee.

Prior to joining Morgan Stanley, Raja was the Controller and Chief Accounting Officer at Citigroup. Throughout his 14 years at Citigroup, Raja held several leadership roles. Prior to joining Citigroup, Raja worked in the credit policy group at Fitch Ratings in New York as a Senior Director and Head of Accounting Policy and Research. He started his career at KPMG LLP, where he also worked as Senior Manager.

Raja holds a Bachelor of Business Administration and a Master's degree from Texas A&M University. He is a Certified Public Accountant (CPA) in Texas and a Visiting Professor of the Texas A&M University.

David Cannon

David Cannon was appointed a member of each of the MSEHSE Group Supervisory Boards in August 2019. He is Chair of the MSEHSE Group Risk Committees and a member of the Audit, Remuneration and Nomination Committees.

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

From 2015 to 2019, David was a member of the Conduct Committee of the Financial Reporting Council and Chair of its Audit Quality Review Committee. He has an M.A. in PPE from the University of Oxford and is a qualified Chartered Accountant.

Lee Guy

Lee Guy resigned as a member of the MSEHSE Group Supervisory Boards with effect from 13 February 2024. Lee was a member of the MSEHSE Group Supervisory Boards from August 2019. He was also a member of the MSEHSE Group Risk Committees until February 2024.

Lee was a Managing Director in Firm Management and prior to moving to this role in June 2020, Lee was EMEA CRO and a member of the EMEA Operating Committee, Deputy Chair of the EMEA Risk Committee and a member of the Board of Directors of Morgan Stanley International. Before joining Morgan Stanley, Lee worked at Barclays Capital initially as Head of Market Risk and ultimately as Co-CRO, based in New York. Lee began his career at Kleinwort Benson in 1986. Lee holds a BSc Honours in Mathematics from Warwick University and is a Chartered Financial Analyst.

Kim Lazaroo

Kim Lazaroo is a member of the Supervisory Boards of MSEHSE, MSESE and MSBAG since 2022 and is the EMEA Chief Administration Officer. Prior to this she held a number of roles including EMEA CFO, EMEA Head of Corporate Controllers and Global Head of Legal Entity Controllers. Kim joined Morgan Stanley in October 2015 from Goldman Sachs Group where she was Global Legal Entity Controller (2011 to 2015) and prior to this Kim held Financial and Legal Entity Controller roles. Kim joined Goldman Sachs in 1994 from Coopers & Lybrand where she worked for three years.

Kim has a Bachelor of Commerce in Accounting (BCA) from the University of New South Wales.

Figure 8: MSEHSE Group Board Members: Number of Directorships
Management Boards

	Number of directorships held as at 31 December 2023	Directorships adjusted for SYSC4.3A.7(2)
Oliver Behrens	6	1
David Best	11	2
Martin Borghetto	1	1
Emmanuel Goldstein	7	1
Oliver Kehren	2	1
Philipp Lingnau	1	1
André Munkelt	3	1
Dr. Jana Währisch	4	1

Supervisory Boards

	Number of directorships held as at 31 December 2023	Directorships adjusted for SYSC4.3A.7(2)
Frank Mattern	7	4
Clare Woodman	5	1
Raja Akram	3	1
Maria Luís Albuquerque	4	2
David Cannon	7	1
Lee Guy	3	1
Kim Lazaroo	8	1

20. Appendix II: Capital Instruments & Eligible Liabilities

Table 43: Capital instruments and eligible liabilities (EU CCA) - MSEHSE Group and MSESE Consol

	MSEHSE Group[1]	a	b		c	d
	Description	COMMON EQUITY TIER 1	ADDITIONAL TIER 1		SUBORDINATED DEBT	SENIOR SUBORDINATED DEBT
1	Issuer	Morgan Stanley Europe Holding SE				
2	Unique Identifier	N/A				
2a	Public or private placement	Private				
3	Governing law(s) of the instrument	German Stock Corporation Act	German Law			
3a	Contractual recognition of write down and conversion powers of resolution authorities	No	Yes			
	Regulatory treatment					
4	Current treatment taking into account, where applicable, transitional CRR rules	Common Equity Tier 1	Additional Tier 1		Tier 2	Eligible Liability
5	Post-transitional CRR rules	Common Equity Tier 1	Additional Tier 1		Tier 2	Eligible Liability
6	Eligible at solo/(sub-)consolidated/ solo&(sub-)consolidated	Solo & (sub-) consolidated				
7	Instrument type (types to be specified by each jurisdiction)	Ordinary Shares	Undated Subordinated AT1 Notes		Schuldschein Loan	Subordinated non-T2 Loan
8	Amount recognised in regulatory capital or eligible liabilities (Currency in million, as of most recent reporting date)	€4,650MM	€400MM	€600MM	€1,000MM	€2,500MM
9	Nominal amount of instrument	€1 per ordinary share	€400MM	€600MM	€1,000MM	€2,500MM
EU-9a	Issue Price	N/A	€400MM	€600MM	€1,000MM	€2,500MM
EU-9b	Redemption Price	N/A	€400MM	€600MM	€1,000MM	€2,500MM
10	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
11	Original date of issuance	26/09/17	12/04/22	29/10/20	27/10/20	17/12/21
12	Perpetual or dated	Perpetual			Dated	
13	Original maturity date	No maturity	No maturity	No maturity	27/10/31	395 days from issuance
14	Issuer call subject to prior supervisory approval	N/A	Yes	Yes	Yes	N/A
15	Option call date, contingent call dates and redemption amount	N/A	30/11/27	30/11/25	27/10/25	N/A
16	Subsequent call dates, if applicable	N/A	Daily thereafter	Daily thereafter	Each Interest Payment Date	N/A
	Coupons / dividends					
17	Fixed or floating dividend / coupon	Floating	Fixed		Floating	
18	Coupon rate and any related index	N/A	5.0%	4.7%	3M EURIBOR + 1.6%	Proxy[2]
19	Existence of a dividend stopper	No	No	No	No	No
EU-20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Fully Discretionary			Mandatory	
EU-20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Fully Discretionary			Mandatory	
21	Existence of step up or other incentive to redeem	No				
22	Noncumulative or cumulative	Noncumulative			Cumulative	
23	Convertible or non-convertible	Nonconvertible			Nonconvertible	
24	If convertible, conversion trigger(s)	N/A				
25	If convertible, fully or partially	N/A				
26	If convertible, conversion rate	N/A				
27	If convertible, mandatory or optional conversion	N/A				
28	If convertible, specify instrument type convertible into	N/A				
29	If convertible, specify issuer of instrument it converts into	N/A				
30	Write-down features	No	Yes		No	
31	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.		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	
32	If write-down, full or partial	N/A	Full or Partial		N/A	
33	If write-down, permanent or temporary	N/A	Temporary		N/A	

	MSEHSE Group[1] Description	a COMMON EQUITY TIER 1	b ADDITIONAL TIER 1		c SUBORDINATED DEBT	d SENIOR SUBORDINATED DEBT
34	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.		N/A	
34a	Type of subordination (only for eligible liabilities)		N/A			Contractual
EU-34b	Ranking of the instrument in normal insolvency proceedings	Rank 1	Rank 2	Rank 2	Rank 3	Rank 4
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Perpetual Unsecured Fixed Rate Securities	Long-term subordinated loan facility		Senior Subordinated Facility	Other Liabilities
36	Non-compliant transitioned features			No		
37	If yes, specify non-compliant features			N/A		
37a	Link to the full term and conditions of the instrument (signposting)			Link to full terms and conditions of Capital Instruments		
	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.

The full terms and conditions in connection with all CET1 capital instruments, Additional T1 capital and supplementary capital can be accessed at https://www.morganstanley.com/about-us-ir/pillar-uk/2022terms.

	MSESE Consol **Description**	**a** **COMMON EQUITY TIER 1**	**b** **ADDITIONAL TIER 1**		**c** **SUBORDINATED DEBT**	**d** **SENIOR SUBORDINATED DEBT**
1	Issuer	Morgan Stanley Europe Holding SE				
2	Unique Identifier	N/A				
2a	Public or private placement	Private				
3	Governing law(s) of the instrument	German Stock Corporation Act	German Law			
3a	Contractual recognition of write down and conversion powers of resolution authorities	No	Yes			
	Regulatory treatment					
4	Current treatment taking into account, where applicable, transitional CRR rules	Common Equity Tier 1	Additional Tier 1		Tier 2	Eligible Liability
5	Post-transitional CRR rules	Common Equity Tier 1	Additional Tier 1		Tier 2	Eligible Liability
6	Eligible at solo/(sub-)consolidated/ solo&(sub-)consolidated	Solo & (sub-) consolidated				
7	Instrument type (types to be specified by each jurisdiction)	Ordinary Shares	Undated Subordinated AT1 Notes		Schuldschein Loan	Subordinated non-T2 Loan
8	Amount recognised in regulatory capital or eligible liabilities (Currency in million, as of most recent reporting date)	€3,901MM	€400MM	€600MM	€1,000MM	€2,500MM
9	Nominal amount of instrument	€1 per ordinary share	€400MM	€600MM	€1,000MM	€2,500MM
EU-9a	Issue Price	N/A	€400MM	€600MM	€1,000MM	€2,500MM
EU-9b	Redemption Price	N/A	€400MM	€600MM	€1,000MM	€2,500MM
10	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
11	Original date of issuance	26/09/17	12/04/22	29/10/20	27/10/20	13/12/23
12	Perpetual or dated	Perpetual			Dated	
13	Original maturity date	No maturity	No maturity	No maturity	27/10/31	395 days from issuance
14	Issuer call subject to prior supervisory approval	N/A	Yes	Yes	Yes	N/A
15	Option call date, contingent call dates and redemption amount	N/A	30/11/27	30/11/25	27/10/25	N/A
16	Subsequent call dates, if applicable	N/A	Daily thereafter	Daily thereafter	Each Interest Payment Date	N/A
	Coupons / dividends					
17	Fixed or floating dividend / coupon	Floating	Fixed		Floating	
18	Coupon rate and any related index	N/A	5.0%	4.7%	3M EURIBOR + 1.6%	Proxy[2]
19	Existence of a dividend stopper	No	No	No	No	No
EU-20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Fully Discretionary			Mandatory	
EU-20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Fully Discretionary			Mandatory	
21	Existence of step up or other incentive to redeem	No				
22	Noncumulative or cumulative	Noncumulative			Cumulative	
23	Convertible or non-convertible	Nonconvertible			Nonconvertible	
24	If convertible, conversion trigger(s)	N/A				
25	If convertible, fully or partially	N/A				
26	If convertible, conversion rate	N/A				
27	If convertible, mandatory or optional conversion	N/A				
28	If convertible, specify instrument type convertible into	N/A				
29	If convertible, specify issuer of instrument it converts into	N/A				
30	Write-down features	No	Yes		No	
31	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.		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	
32	If write-down, full or partial	N/A	Full or Partial		N/A	
33	If write-down, permanent or temporary	N/A	Temporary		N/A	
34	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.		N/A	
34a	Type of subordination (only for eligible liabilities)	N/A				Contractual

	MSESE Consol Description	a COMMON EQUITY TIER 1	b ADDITIONAL TIER 1		c SUBORDINATED DEBT	d SENIOR SUBORDINATED DEBT
EU-34b	Ranking of the instrument in normal insolvency proceedings	Rank 1	Rank 2	Rank 2	Rank 3	Rank 4
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Perpetual Unsecured Fixed Rate Securities	Long-term subordinated loan facility		Senior Subordinated Facility	Other Liabilities
36	Non-compliant transitioned features	No				
37	If yes, specify non-compliant features	N/A				
37a	Link to the full term and conditions of the instrument (signposting)	Link to full terms and conditions of Capital Instruments				
	TLAC Eligibility	Yes	Yes	No	No	Yes

21. Appendix III: Own Funds Disclosure Template

Table 44 shows the composition of regulatory own funds for the MSEHSE Group and MSESE Consol as of 31 December 2023.

Table 44: Composition of regulatory own funds (EU CC1) - MSEHSE Group and MSESE Consol

€MM		a	b
MSEHSE Group		**Amounts**	**Reference to EU CC2**
Common Equity Tier 1 (CET1) capital: instruments and reserves			
1	Capital instruments and the related share premium accounts	4,650	A
	of which: Instrument type 1	4,650	
	of which: Instrument type 2	-	
	of which: Instrument type 3	-	
2	Retained earnings	370	B
3	Accumulated other comprehensive income (and other reserves)	1,473	C
EU-3a	Funds for general banking risk	-	
4	Amount of qualifying items referred to in Article 484 (3) CRR and the related share premium accounts subject to phase out from CET1	-	
5	Minority interests (amount allowed in consolidated CET1)	-	
EU-5a	Independently reviewed interim profits net of any foreseeable charge or dividend	-	
6	**Common Equity Tier 1 (CET1) capital before regulatory adjustments**	**6,493**	
Common Equity Tier 1 (CET1) capital: regulatory adjustments			
7	Additional value adjustments (negative amount)	(63)	
8	Intangible assets (net of related tax liability) (negative amount)	-	
10	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)	(8)	D
11	Fair value reserves related to gains or losses on cash flow hedges of financial instruments that are not valued at fair value	(57)	
12	Negative amounts resulting from the calculation of expected loss amounts	(10)	
13	Any increase in equity that results from securitised assets (negative amount)	-	
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	1	
15	Defined-benefit pension fund assets (negative amount)	-	
16	Direct, indirect and synthetic holdings by an institution of own CET1 instruments (negative amount)	-	
17	Direct, indirect and synthetic holdings of the CET 1 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)	-	
18	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)	-	
19	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)	-	
EU-20a	Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative	-	
EU-20b	of which: qualifying holdings outside the financial sector (negative amount)	-	
EU-20c	of which: securitisation positions (negative amount)	-	
EU-20d	of which: free deliveries (negative amount)	-	
21	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)	-	
22	Amount exceeding the 17,65% threshold (negative amount)	-	
23	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	-	
25	of which: deferred tax assets arising from temporary differences	-	
EU-25a	Losses for the current financial year (negative amount)	-	
EU-25b	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)	-	
27	Qualifying AT1 deductions that exceed the AT1 items of the institution (negative amount)	-	
27a	Other regulatory adjustments	0	
28	**Total regulatory adjustments to Common Equity Tier 1 (CET1)**	**(138)**	
29	**Common Equity Tier 1 (CET1) capital**	**6,355**	
Additional Tier 1 (AT1) capital: instruments			
30	Capital instruments and the related share premium accounts	1,000	
31	of which: classified as equity under applicable accounting standards	1,000	E
32	of which: classified as liabilities under applicable accounting standards	-	
33	Amount of qualifying items referred to in Article 484 (4) CRR and the related share premium accounts subject to phase out from AT1	-	
EU-33a	Amount of qualifying items referred to in Article 494a(1) CRR subject to phase out from AT1	-	
EU-33b	Amount of qualifying items referred to in Article 494b(1) CRR subject to phase out from AT1	-	
34	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	-	

35	of which: instruments issued by subsidiaries subject to phase out	-	
36	**Additional Tier 1 (AT1) capital before regulatory adjustments**	**1,000**	
Additional Tier 1 (AT1) capital: regulatory adjustments			
37	Direct, indirect and synthetic holdings by an institution of own AT1 instruments (negative amount)	-	
38	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)	-	
39	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)	-	
40	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)	-	
42	Qualifying T2 deductions that exceed the T2 items of the institution (negative amount)	-	
42a	Other regulatory adjustments to AT1 capital	-	
43	**Total regulatory adjustments to Additional Tier 1 (AT1) capital**	-	
44	**Additional Tier 1 (AT1) capital**	**1,000**	
45	**Tier 1 capital (T1 = CET1 + AT1)**	**7,355**	
Tier 2 (T2) capital: instruments			
46	Capital instruments and the related share premium accounts	1,000	F
47	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	-	
EU-47a	Amount of qualifying items referred to in Article 494a(2) CRR subject to phase out from T2	-	
EU-47b	Amount of qualifying items referred to in Article 494b(2) CRR subject to phase out from T2	-	
48	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	-	
49	of which: instruments issued by subsidiaries subject to phase out	-	
50	Credit risk adjustments	-	
51	**Tier 2 (T2) capital before regulatory adjustments**	**1,000**	
Tier 2 (T2) capital: regulatory adjustments			
52	Direct, indirect and synthetic holdings by an institution of own T2 instruments and subordinated loans (negative amount)	-	
53	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)	-	
54	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)	-	
55	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)	-	
EU-56a	Qualifying eligible liabilities deductions that exceed the eligible liabilities items of the institution (negative amount)	-	
EU-56b	Other regulatory adjustments to T2 capital	-	
57	**Total regulatory adjustments to Tier 2 (T2) capital**	**-**	
58	**Tier 2 (T2) capital**	**1,000**	
59	**Total capital (TC = T1 + T2)**	**8,355**	
60	**Total Risk exposure amount**	**27,283**	
Capital ratios and requirements including buffers			
61	Common Equity Tier 1 capital	23.29%	
62	Tier 1 capital	26.96%	
63	Total capital	30.62%	
64	Institution CET1 overall capital requirements	9.51%	
65	of which: capital conservation buffer requirement	2.50%	
66	of which: countercyclical capital buffer requirement	0.71%	
67	of which: systemic risk buffer requirement	-	
EU-67a	of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer requirement	0.25%	
EU-67b	of which: additional own funds requirements to address the risks other than the risk of excessive leverage	1.55%	
68	**Common Equity Tier 1 capital (as a percentage of risk exposure amount) available after meeting the minimum capital requirements**	**17.24%**	
Amounts below the thresholds for deduction (before risk weighting)			
72	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)	2	
73	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)	-	
75	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)	23	G

Applicable caps on the inclusion of provisions in Tier 2			
76	Credit risk adjustments included in T2 in respect of exposures subject to standardised approach (prior to the application of the cap)	-	
77	Cap on inclusion of credit risk adjustments in T2 under standardised approach	-	
78	Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach (prior to the application of the cap)	-	
79	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)			
80	Current cap on CET1 instruments subject to phase out arrangements	-	
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	-	
82	Current cap on AT1 instruments subject to phase out arrangements	-	
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	-	
84	Current cap on T2 instruments subject to phase out arrangements	-	
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	-	

€MM		a	b
MSESE Consol		Amounts	Reference to EU CC2
Common Equity Tier 1 (CET1) capital: instruments and reserves			
1	Capital instruments and the related share premium accounts	3,901	A
	of which: Instrument type 1	3,901	
	of which: Instrument type 2	-	
	of which: Instrument type 3	-	
2	Retained earnings	370	B
3	Accumulated other comprehensive income (and other reserves)	1,864	C
EU-3a	Funds for general banking risk	-	
4	Amount of qualifying items referred to in Article 484 (3) CRR and the related share premium accounts subject to phase out from CET1	-	
5	Minority interests (amount allowed in consolidated CET1)	-	
EU-5a	Independently reviewed interim profits net of any foreseeable charge or dividend	-	
6	**Common Equity Tier 1 (CET1) capital before regulatory adjustments**	**6,135**	
Common Equity Tier 1 (CET1) capital: regulatory adjustments			
7	Additional value adjustments (negative amount)	(63)	
8	Intangible assets (net of related tax liability) (negative amount)	-	
10	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)	(8)	D
11	Fair value reserves related to gains or losses on cash flow hedges of financial instruments that are not valued at fair value	(57)	
12	Negative amounts resulting from the calculation of expected loss amounts	(9)	
13	Any increase in equity that results from securitised assets (negative amount)	-	
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	1	
15	Defined-benefit pension fund assets (negative amount)	-	
16	Direct, indirect and synthetic holdings by an institution of own CET1 instruments (negative amount)	-	
17	Direct, indirect and synthetic holdings of the CET 1 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)	-	
18	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)	-	
19	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)	-	
EU-20a	Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative	-	
EU-20b	of which: qualifying holdings outside the financial sector (negative amount)	-	
EU-20c	of which: securitisation positions (negative amount)	-	
EU-20d	of which: free deliveries (negative amount)	-	
21	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)	-	
22	Amount exceeding the 17,65% threshold (negative amount)	-	
23	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	-	
25	of which: deferred tax assets arising from temporary differences	-	
EU-25a	Losses for the current financial year (negative amount)	-	
EU-25b	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)	-	
27	Qualifying AT1 deductions that exceed the AT1 items of the institution (negative amount)	-	
27a	Other regulatory adjustments	(1)	
28	**Total regulatory adjustments to Common Equity Tier 1 (CET1)**	**(137)**	
29	**Common Equity Tier 1 (CET1) capital**	**5,998**	

Additional Tier 1 (AT1) capital: instruments			
30	Capital instruments and the related share premium accounts	1,000	
31	of which: classified as equity under applicable accounting standards	1,000	E
32	of which: classified as liabilities under applicable accounting standards	-	
33	Amount of qualifying items referred to in Article 484 (4) CRR and the related share premium accounts subject to phase out from AT1	-	
EU-33a	Amount of qualifying items referred to in Article 494a(1) CRR subject to phase out from AT1	-	
EU-33b	Amount of qualifying items referred to in Article 494b(1) CRR subject to phase out from AT1	-	
34	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	-	
35	of which: instruments issued by subsidiaries subject to phase out	-	
36	**Additional Tier 1 (AT1) capital before regulatory adjustments**	**1,000**	
Additional Tier 1 (AT1) capital: regulatory adjustments			
37	Direct, indirect and synthetic holdings by an institution of own AT1 instruments (negative amount)	-	
38	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)	-	
39	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)	-	
40	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)	-	
42	Qualifying T2 deductions that exceed the T2 items of the institution (negative amount)	-	
42a	Other regulatory adjustments to AT1 capital	-	
43	**Total regulatory adjustments to Additional Tier 1 (AT1) capital**	-	
44	**Additional Tier 1 (AT1) capital**	**1,000**	
45	**Tier 1 capital (T1 = CET1 + AT1)**	**6,998**	
Tier 2 (T2) capital: instruments			
46	Capital instruments and the related share premium accounts	1,000	F
47	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	-	
EU-47a	Amount of qualifying items referred to in Article 494a(2) CRR subject to phase out from T2	-	
EU-47b	Amount of qualifying items referred to in Article 494b(2) CRR subject to phase out from T2	-	
48	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	-	
49	of which: instruments issued by subsidiaries subject to phase out	-	
50	Credit risk adjustments	-	
51	**Tier 2 (T2) capital before regulatory adjustments**	**1,000**	
Tier 2 (T2) capital: regulatory adjustments			
52	Direct, indirect and synthetic holdings by an institution of own T2 instruments and subordinated loans (negative amount)	-	
53	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)	-	
54	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)	-	
55	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)	-	
EU-56a	Qualifying eligible liabilities deductions that exceed the eligible liabilities items of the institution (negative amount)	-	
EU-56b	Other regulatory adjustments to T2 capital	-	
57	**Total regulatory adjustments to Tier 2 (T2) capital**	**-**	
58	**Tier 2 (T2) capital**	**1,000**	
59	**Total capital (TC = T1 + T2)**	**7,998**	
60	**Total Risk exposure amount**	**27,066**	
Capital ratios and requirements including buffers			
61	Common Equity Tier 1 capital	22.16%	
62	Tier 1 capital	25.86%	
63	Total capital	29.55%	
64	Institution CET1 overall capital requirements	9.26%	
65	of which: capital conservation buffer requirement	2.5%	
66	of which: countercyclical capital buffer requirement	0.71%	
67	of which: systemic risk buffer requirement	-	
EU-67a	of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer requirement	-	
EU-67b	of which: additional own funds requirements to address the risks other than the risk of excessive leverage	1.55%	

68	**Common Equity Tier 1 capital (as a percentage of risk exposure amount) available after meeting the minimum capital requirements**	**16.11%**	
Amounts below the thresholds for deduction (before risk weighting)			
72	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)	2	
73	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)	-	
75	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)	18	G
Applicable caps on the inclusion of provisions in Tier 2			
76	Credit risk adjustments included in T2 in respect of exposures subject to standardised approach (prior to the application of the cap)	-	
77	Cap on inclusion of credit risk adjustments in T2 under standardised approach	-	
78	Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach (prior to the application of the cap)	-	
79	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)			
80	Current cap on CET1 instruments subject to phase out arrangements	-	
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	-	
82	Current cap on AT1 instruments subject to phase out arrangements	-	
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	-	
84	Current cap on T2 instruments subject to phase out arrangements	-	
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	-	

MSEHSE Group and MSESE Consol are required to maintain a minimum ratio of own funds to RWAs in accordance with the CRR. As of 31 December 2023, the MSEHSE Group and MSESE Consol are both in compliance with the capital requirements.

Table 45 shows the reconciliation of regulatory own funds in Table 44 to balance sheet in the audited financial statements.

Table 45: Reconciliation of regulatory own funds to balance sheet in the audited financial statements (EU CC2) - MSEHSE Group and MSESE Consol

€MM	a	b	c
	Balance sheet as in published financial statements	Under regulatory scope of consolidation	
MSEHSE Group	As at 31 December 2023	As at 31 December 2023	Reference to EU CC1
Assets - Breakdown by asset class according to the balance sheet in the published financial statements			
Cash and short-term deposits	9,982	9,982	
Trading financial assets	49,842	49,842	
Secured financing	29,575	29,575	
Loans and advances	120	120	
Trade and other receivables	16,927	16,927	
Current tax assets	104	104	
Deferred tax assets	30	30	
of which: Deferred tax assets that rely on future profitability and do not arise from temporary differences	8	8	D
of which: Deferred tax assets that rely on future profitability and arise from temporary differences	23	23	G
Property plant and equipment	125	125	
Other assets	5	5	
Total Assets	**106,711**	**106,711**	
Liabilities - Breakdown by liability classes according to the balance sheet in the published financial statements			
Bank loans and overdrafts	3,892	3,892	
Trading financial liabilities	52,457	52,457	
Secured borrowing	22,797	22,797	
Trade and other payables	16,222	16,222	
Debt and other borrowings	3,776	3,776	
of which: Subordinated debt	1,000	1,000	F
of which: Senior subordinated debt	2,500	2,500	
of which: Other debts and borrowings	276	276	
Provisions	13	13	
Current tax liabilities	38	38	
Deferred tax liabilities	1	1	
Post-employment benefit obligations	23	23	
Total Liabilities	**99,218**	**99,218**	
Shareholders' Equity			
Share Capital	4,650	4,650	
Additional Tier 1 Capital	1,000	1,000	E
Currency Translation Reserve	(1)	(1)	C
of which: Previous years currency translation reserve	(1)	(1)	
of which: Currency translation reserve not recognised in Own funds	-	-	
Capital contribution reserve	1,471	1,471	
of which: amount eligible for CET1	1,471	1,471	C
of which: other reserves	-	-	
Pension reserve	2	2	C
Debt valuation reserve	-	-	C
Retained earnings	371	371	
of which: Previous years retained earnings	371	371	B
of which: Profit or loss attributable to owners of the parent	—	—	
Equity attributable to the owners of the Company	7,493	7,493	
Total Shareholders' Equity	**7,493**	**7,493**	

€MM	a	b	c
	Balance sheet as in financial statements[1]	Under regulatory scope of consolidation	
MSESE Consol	As at 31 December 2023	As at 31 December 2023	Reference to EU CC1
Assets - Breakdown by asset class according to the balance sheet in the financial statements			
Cash and short-term deposits	9,897	9,897	
Trading financial assets	49,842	49,842	
Secured financing	29,575	29,575	
Loans and advances	120	120	
Trade and other receivables	16,905	16,905	
Current tax assets	98	98	
Deferred tax assets	26	26	
of which: Deferred tax assets that rely on future profitability and do not arise from temporary differences	8	8	D
of which: Deferred tax assets that rely on future profitability and arise from temporary differences	18	18	G
Property plant and equipment	60	60	
Other assets	5	5	
Total Assets	**106,529**	**106,529**	
Liabilities - Breakdown by liability classes according to the balance sheet in the financial statements			
Bank loans and overdrafts	3,893	3,893	
Trading financial liabilities	52,457	52,457	
Secured borrowing	22,797	22,797	
Trade and other payables	16,142	16,142	
Debt and other borrowings	4,059	4,059	
of which: Subordinated debt	1,000	1,000	F
of which: Senior subordinated debt	2,500	2,500	
of which: Other debts and borrowings	559	559	
Provisions	9	9	
Current tax liabilities	15	15	
Deferred tax liabilities	-	-	
Post-employment benefit obligations	22	22	
Total Liabilities	**99,393**	**99,393**	
Shareholders' Equity			
Share Capital	3,901	3,901	
Additional Tier 1 Capital	1,000	1,000	E
Currency Translation Reserve	(1)	(1)	C
of which: Previous years currency translation reserve	(1)	(1)	
of which: Currency translation reserve not recognised in Own funds	-	-	
Capital contribution reserve	1,863	1,863	
of which: amount eligible for CET1	1,863	1,863	C
of which: other reserves	-	-	
Pension reserve	2	2	C
Debt valuation reserve	-	-	C
Retained earnings	370	370	
of which: Previous years retained earnings	370	370	B
of which: Profit or loss attributable to owners of the parent	—	—	
Equity attributable to the owners of the Company	7,135	7,135	
Total Shareholders' Equity	**7,135**	**7,135**	

1. MSESE Consol does not publish financial statements and the reported balances are reconciled to consolidated non-statutory financial information.

The above table highlights the difference in the basis of consolidation for accounting and prudential reporting purposes as it compares the carrying values as reported under IFRS with the carrying values under the scope of regulatory consolidation.

22. Appendix IV: Countercyclical Capital Buffer

Table 46 shows the geographical distribution of credit exposures relevant for the calculation of the countercyclical capital buffer ("CCyB") as of 31 December 2023 for the MSEHSE Group and MSESE Consol.

Table 46: Geographical distribution of credit exposures for the CCyB (EU CCyB1) - MSEHSE Group and MSESE Consol

		a	b	c	d	e	f	g	h	i	j	k	l	m
		General credit exposures		Relevant credit exposures – Market risk				Own fund requirements						
		Exposure value under the SA	Exposure value under the IRB	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 fund requirements weights (%)	CCyB (%)
MSEHSE Group		€MM	€MM	€MM	€MM	€MM	€MM	€MM	€MM	€MM	€MM	€MM	%	%
10	Not Applicable/ All Geographical Areas	2,790	4,113	-	1,857	-	8,760	283	127	-	410	5,125	34.77%	
	Australia	-	131	-	25	-	156	2	6	-	8	105	0.71%	1.00%
	Bulgaria	-	-	-	-	-	-	-	-	-	-	-	0.00%	2.00%
	Croatia	-	-	-	-	-	-	-	-	-	-	-	-	1.00%
	Cyprus	-	2	-	-	-	2	-	-	-	-	4	0.02%	0.50%
	Czech Republic	3	-	-	-	-	3	-	-	-	-	1	0.01%	2.00%
	Denmark	1,322	604	-	1	-	1,926	80	-	-	80	1,007	6.83%	2.50%
	Estonia	-	-	-	-	-	-	-	-	-	-	-	-	1.50%
	France	2,759	2,616	-	349	-	5,723	178	8	-	186	2,331	15.81%	0.50%
	Germany	1,448	1,743	-	80	-	3,270	139	20	-	159	1,992	13.51%	0.75%
	Hong Kong	25	60	-	-	-	86	3	-	-	3	37	0.25%	1.00%
	Iceland	-	-	-	-	-	-	-	-	-	-	-	-	2.00%
	Ireland	33	49	-	-	-	82	5	-	-	5	61	0.41%	1.00%
	Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	1.00%
	Luxembourg	152	928	-	-	-	1,080	86	-	-	86	1,072	7.27%	0.50%
	Netherlands	264	1,471	-	14	-	1,749	116	4	-	120	1,493	10.13%	1.00%
	Norway	36	156	-	5	-	197	4	1	-	5	67	0.46%	2.50%
	Romania	-	-	-	-	-	-	-	-	-	-	-	-	1.00%
	Slovakia	-	6	-	-	-	6	-	-	-	-	6	0.04%	1.50%
	Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	0.50%
	Sweden	86	317	-	4	-	406	28	-	-	28	352	2.39%	2.00%
	United Kingdom	916	4,626	-	12	-	5,554	87	-	-	87	1,087	7.37%	2.00%
20	**Total**	**9,834**	**16,822**	**-**	**2,347**	**-**	**29,000**	**1,011**	**166**	**-**	**1,177**	**14,740**	**100.00%**	
MSESE Consol														
10	Not Applicable/ All Geographical Areas	2,788	4,113	-	1,855	-	8,759	283	129	-	412	5,127	34.91%	-
	Australia	-	131	-	25	-	156	2	6	-	8	105	0.71%	1.00%
	Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	2.00%
	Croatia	-	-	-	-	-	-	-	-	-	-	-	-	1.00%
	Cyprus	-	2	-	-	-	2	-	-	-	-	4	0.03%	0.50%
	Czech Republic	3	-	-	-	-	3	-	-	-	-	1	0.01%	2.00%
	Denmark	1,322	604	-	1	-	1,926	80	-	-	80	1,007	6.86%	2.50%
	Estonia	-	-	-	-	-	-	-	-	-	-	-	-	1.50%
	France	2,709	2,616	-	349	-	5,673	174	8	-	182	2,282	15.55%	0.50%
	Germany	1,425	1,930	-	80	-	3,434	140	20	-	160	2,005	13.66%	0.75%
	Hong Kong	25	60	-	-	-	86	3	-	-	3	37	0.26%	1.00%
	Iceland	-	-	-	-	-	-	-	-	-	-	-	-	2.00%
	Ireland	23	49	-	-	-	71	5	-	-	5	58	0.40%	1.00%
	Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	1.00%
	Luxembourg	152	928	-	-	-	1,080	86	-	-	86	1,072	7.30%	0.50%
	Netherlands	264	1,471	-	14	-	1,749	116	4	-	120	1,493	10.18%	1.00%
	Norway	36	156	-	5	-	197	4	1	-	5	67	0.46%	2.50%
	Romania	-	-	-	-	-	-	-	-	-	-	-	-	1.00%
	Slovakia	-	6	-	-	-	6	-	-	-	-	6	0.04%	1.50%
	Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	0.50%
	Sweden	86	317	-	4	-	406	28	-	-	28	352	2.40%	2.00%
	United Kingdom	912	4,576	-	12	-	5,500	85	-	-	85	1,061	7.23%	2.00%
20	**Total**	**9,745**	**16,959**	**-**	**2,345**	**-**	**29,048**	**1,006**	**168**	**-**	**1,174**	**14,677**	**100.00%**	

The MSEHSE Group's CCyB increased in 2023 due to announced increases in CCyB rates most notably in Germany, Netherlands and France. These changes are incorporated as part of the MSEHSE Group's capital planning and target setting processes. Forecast capital resources are sufficient to meet these increased requirements.

Table 47 shows the amount of institution specific CCyB as of 31 December 2023 for the MSEHSE Group and MSESE Consol.

Table 47: Amount of institution-specific countercyclical capital buffer (EU CCyB2) - MSEHSE Group and MSESE Consol

		a	a
€MM		MSEHSE Group	MSESE Consol
1	**Total risk exposure amount**	**27,283**	**27,066**
2	Institution specific countercyclical capital buffer rate	0.71%	0.71%
3	Institution specific countercyclical capital buffer requirement	194	192

The CCyB rates increased during 2023 most notably in Germany, the Netherlands and France.

23. Appendix V: Additional Credit and Counterparty Credit Risk Tables

Table 48 shows a breakdown of net loans and advances and debt securities by residual maturity as of 31 December 2023 for the MSEHSE Group and MSESE Consol.

Table 48: Maturity of exposures (EU CR1-A) - MSEHSE Group and MSESE Consol

€MM	a	b	c	d	e	f
	Net exposure value					
MSEHSE Group	**On demand**	**<= 1 year**	**> 1 year <= 5 years**	**> 5 years**	**No stated maturity**	**Total**
1 Loans and advances	-	3	712	-	200	915
2 Debt securities	-	-	-	-	-	-
3 Total	**-**	**3**	**712**	**-**	**200**	**915**
MSESE Consol						
1 Loans and advances	-	3	753	-	199	955
2 Debt securities	-	-	-	-	-	-
3 Total	**-**	**3**	**753**	**-**	**199**	**955**

The key contributor under the maturity bucket of > 1 year and <= 5 years is mainly being derived from Corporate Loans.

Table 49 shows changes in the stock of non-performing loans and advances as of 31 December 2023 for the MSEHSE Group and MSESE Consol.

Table 49: Changes in the stock of non-performing loans and advances (EU CR2) - MSEHSE Group and MSESE Consol

€MM		a
MSEHSE Group		**Gross carrying amount**
010	**Initial stock of non-performing loans and advances**	**18**
020	Inflows to non-performing portfolios	13
030	Outflows from non-performing portfolios	(24)
040	Outflows due to write-offs	-
050	Outflow due to other situations	(24)
060	**Final stock of non-performing loans and advances**	**7**
MSESE Consol		
010	**Initial stock of non-performing loans and advances**	**18**
020	Inflows to non-performing portfolios	13
030	Outflows from non-performing portfolios	(24)
040	Outflows due to write-offs	-
050	Outflow due to other situations	(24)
060	**Final stock of non-performing loans and advances**	**7**

The decrease in non-performing loans and advances is mainly due to trade and other receivables.

The amounts of non-performing exposures are compliant with Financial Reporting ("FinRep") requirements which also refer to Article 178 CRR of default definition.

The FinRep reporting approach is based on a simplified approach considering the respective aging bucket and is not based at an individual counterparty level. Consequently, the values reported in loans and advances “Inflow from non-performing portfolios” and “Outflows from non-performing portfolios” since the last reporting period may include gross movement for a counterparty during the relevant reporting period.

Table 50 shows an overview of performing and non-performing exposures and the related provisions as of 31 December 2023 for the MSEHSE Group and MSESE Consol.

Table 50: Performing and Non-performing exposures and related provisions (EU CR1) - MSEHSE Group and MSESE Consol

€MM		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
		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					
MSEHSE 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
005	**Cash balances at central banks and other demand deposits**	**9,979**	**9,979**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
010	**Loans and advances**	**46,577**	**5,195**	**11,769**	**7**	**1**	**6**	**(1)**	**(1)**	**-**	**(2)**	**-**	**(2)**	**-**	**29,504**	**-**
020	Central banks	889	-	68	-	-	-	-	-	-	-	-	-	-	820	-
030	General governments	380	-	380	-	-	-	-	-	-	-	-	-	-	-	-
040	Credit institutions	17,675	-	4,477	3	-	3	-	-	-	(1)	-	(1)	-	13,175	-
050	Other financial corporations	27,298	5,136	6,590	4	1	3	-	-	-	(1)	-	(1)	-	15,509	-
060	Non-financial corporations	335	59	254	-	-	-	(1)	(1)	-	-	-	-	-	-	-
070	Of which SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
080	Households	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
090	**Debt securities**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
100	Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110	General governments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120	Credit institutions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
130	Other financial corporations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
140	Non-financial corporations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
150	**Off-balance-sheet exposures**	**9,275**	**9,075**	**200**	**-**	**-**	**-**	**(5)**	**(4)**	**(1)**	**-**	**-**	**-**		**13**	**-**
160	Central banks	-	-	-	-	-	-	-	-	-	-	-	-		-	-
170	General governments	-	-	-	-	-	-	-	-	-	-	-	-		-	-
180	Credit institutions	81	81	-	-	-	-	-	-	-	-	-	-		-	-
190	Other financial corporations	5,684	5,517	167	-	-	-	(1)	-	(1)	-	-	-		13	-
200	Non-financial corporations	3,510	3,477	33	-	-	-	(4)	(4)	-	-	-	-		-	-
210	Households	-	-	-	-	-	-	-	-	-	-	-	-		-	-
220	**Total**	**65,831**	**24,249**	**11,969**	**7**	**1**	**6**	**(6)**	**(5)**	**(1)**	**(2)**	**-**	**(2)**	**-**	**29,517**	**-**
MSESE Consol																
005	**Cash balances at central banks and other demand deposits**	**9,895**	**9,895**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
010	**Loans and advances**	**46,559**	**5,178**	**11,769**	**7**	**1**	**6**	**(1)**	**(1)**	**-**	**(2)**	**-**	**(2)**	**-**	**29,504**	**-**
020	Central banks	889	-	68	-	-	-	-	-	-	-	-	-	-	820	-
030	General governments	380	-	380	-	-	-	-	-	-	-	-	-	-	-	-
040	Credit institutions	17,675	-	4,477	3	-	3	-	-	-	(1)	-	(1)	-	13,175	-
050	Other financial corporations	27,280	5,119	6,590	4	1	3	-	-	-	(1)	-	(1)	-	15,509	-
060	Non-financial corporations	335	59	254	-	-	-	(1)	(1)	-	-	-	-	-	-	-
070	Of which SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
080	Households	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
090	**Debt securities**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
100	Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110	General governments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120	Credit institutions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
130	Other financial corporations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
140	Non-financial corporations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
150	**Off-balance-sheet exposures**	**9,274**	**9,074**	**200**	**-**	**-**	**-**	**(5)**	**(4)**	**(1)**	**-**	**-**	**-**		**13**	**-**
160	Central banks	-	-	-	-	-	-	-	-	-	-	-	-		-	-
170	General governments	-	-	-	-	-	-	-	-	-	-	-	-		-	-
180	Credit institutions	80	80	-	-	-	-	-	-	-	-	-	-		-	-
190	Other financial corporations	5,684	5,517	167	-	-	-	(1)	-	(1)	-	-	-		13	-
200	Non-financial corporations	3,510	3,477	33	-	-	-	(4)	(4)	-	-	-	-		-	-
210	Households	-	-	-	-	-	-	-	-	-	-	-	-		-	-
220	**Total**	**65,728**	**24,147**	**11,969**	**7**	**1**	**6**	**(6)**	**(5)**	**(1)**	**(2)**	**-**	**(2)**	**-**	**29,517**	**-**

The decrease in stage 3 non-performing loans and advances is primarily due to trades and other receivables.

Table 51 shows the quality of non-performing exposures by geography as of 31 December 2023 for the MSEHSE Group and MSESE Consol.

Table 51: Quality of non-performing exposures by geography (EU CQ4) - MSEHSE Group and MSESE Consol

€MM		a	b	c	d	e	f	g
		Gross carrying/nominal amount						Accumulated negative changes in fair value due to credit risk on non-performing exposures
			Of which non-performing				Provisions on off-balance-sheet commitments and financial guarantees given	
MSEHSE Group				Of which defaulted	Of which subject to impairment	Accumulated impairment		
010	**On-balance-sheet exposures[1]**	**46,584**	**7**	**7**	**16,971**	**(3)**		**-**
020	France	18,047	1	1	1,470	(1)		-
030	United Kingdom	9,167	2	2	4,177	-		-
040	Germany	5,235	2	2	3,633	(1)		-
050	United States of America	3,847	1	1	1,860	-		-
060	Netherlands	2,793	1	1	2,793	-		-
070	Other countries	7,495	-	-	3,038	(1)		-
080	**Off-balance-sheet exposures[2]**	**9,275**	**-**	**-**			**(5)**	
090	United Kingdom	5,069	-	-			-	
100	France	2,524	-	-			(1)	
110	Italy	514	-	-			(1)	
120	Other countries	1,168	-	-			(3)	
130	**Total**	**55,859**	**7**	**7**	**16,971**	**(3)**	**(5)**	-
MSESE Consol								
010	**On-balance-sheet exposures[1]**	**46,566**	**7**	**7**	**16,954**	**(3)**		**-**
020	France	18,033	1	1	1,457	(1)		-
030	United Kingdom	9,163	2	2	4,173	-		-
040	Germany	5,235	2	2	3,633	(1)		-
050	United States of America	3,847	1	1	1,860	-		-
060	Netherlands	2,793	1	1	2,793	-		-
070	Other countries	7,495	-	-	3,038	(1)		-
080	**Off-balance-sheet exposures[2]**	**9,274**	**-**	**-**			**(5)**	
090	United Kingdom	5,069	-	-			-	
100	France	2,523	-	-			(1)	
110	Italy	514	-	-			(1)	
120	Other countries	1,168	-	-			(3)	
130	**Total**	**55,840**	**7**	**7**	**16,954**	**(3)**	**(5)**	-

1.Countries exceeding 5% of total gross carrying amount (On-Balance Sheet) for MSEHSE Group and MSESE Consol are reported individually.
2.Countries exceeding 5% of total gross carrying amount (Off-Balance Sheet) for MSEHSE Group and MSESE Consol are reported individually.

Over the year, the decrease in exposures to the USA and France is primarily within SFTs.

The following list provides the composition of “other countries” as shown in table 51:

	On-balance sheet	Off-balance sheet
MSEHSE Group	Australia, Austria, Belgium, Canada, Cayman Islands, Curacao, Cyprus, Czechia, Denmark, Egypt, Estonia, Finland, Greece, Hong Kong, Hungary, Iceland, India, Ireland, Israel, Italy, Japan, Jersey, Korea (Republic of), Latvia, Liechtenstein, Lithuania, Luxembourg, New Zealand, Norway, Poland, Portugal, Romania, Saudi Arabia, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Taiwan, United Arab Emirates	Austria, Denmark, Germany, Jersey, Luxembourg, Netherlands, Norway, Spain, Sweden
MSESE Consol	Australia, Austria, Belgium, Canada, Cayman Islands, Cyprus, Czechia, Denmark, Egypt, Estonia, Finland, Greece, Hong Kong, Hungary, Iceland, India, Ireland, Israel, Italy, Japan, Jersey, Korea (Republic of), Latvia, Liechtenstein, Lithuania, Luxembourg, New Zealand, Norway, Poland, Portugal, Romania, Saudi Arabia, Singapore, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Taiwan, United Arab Emirates	Austria, Denmark, Germany, Jersey, Luxembourg, Netherlands, Norway, Spain, Sweden

Table 52 shows the credit quality of loans and advances to non-financial corporations by industry as of 31 December 2023 for the MSEHSE Group and MSESE Consol.

Table 52: Credit quality of loans and advances to non-financial corporations by industry (EU CQ5) - MSEHSE Group and MSESE Consol

€MM		a	b	c	d	e	f
		Gross carrying amount					Accumulated negative changes in fair value due to credit risk on non-performing exposures
			Of which non-performing		Of which loans and advances subject to impairment		
MSEHSE Group				Of which defaulted		Accumulated impairment	
010	Agriculture, forestry and fishing	-	-	-	-	-	-
020	Mining and quarrying	16	-	-	16	-	-
030	Manufacturing	29	-	-	29	(1)	-
040	Electricity, gas, steam and air conditioning supply	179	-	-	179	-	-
050	Water supply	20	-	-	-	-	-
060	Construction	-	-	-	-	-	-
070	Wholesale and retail trade	2	-	-	2	-	-
080	Transport and storage	16	-	-	16	-	-
090	Accommodation and food service activities	-	-	-	-	-	-
100	Information and communication	61	-	-	61	-	-
110	Financial and insurance actvities	-	-	-	-	-	-
120	Real estate activities	-	-	-	-	-	-
130	Professional, scientific and technical activities	3	-	-	1	-	-
140	Administrative and support service activities	1	-	-	1	-	-
150	Public administration and defense, compulsory social security	-	-	-	-	-	-
160	Education	-	-	-	-	-	-
170	Human health services and social work activities	2	-	-	2	-	-
180	Arts, entertainment and recreation	-	-	-	-	-	-
190	Other services	6	-	-	6	-	-
200	**Total**	**335**	**-**	**-**	**313**	**(1)**	**-**
MSESE Consol							
010	Agriculture, forestry and fishing	-	-	-	-	-	-
020	Mining and quarrying	16	-	-	16	-	-
030	Manufacturing	29	-	-	29	(1)	-
040	Electricity, gas, steam and air conditioning supply	179	-	-	179	-	-
050	Water supply	20	-	-	-	-	-
060	Construction	-	-	-	-	-	-
070	Wholesale and retail trade	2	-	-	2	-	-
080	Transport and storage	16	-	-	16	-	-
090	Accommodation and food service activities	-	-	-	-	-	-
100	Information and communication	61	-	-	61	-	-
110	Financial and insurance actvities	-	-	-	-	-	-
120	Real estate activities	-	-	-	-	-	-
130	Professional, scientific and technical activities	3	-	-	1	-	-
140	Administrative and support service activities	1	-	-	1	-	-
150	Public administration and defense, compulsory social security	-	-	-	-	-	-
160	Education	-	-	-	-	-	-
170	Human health services and social work activities	2	-	-	2	-	-
180	Arts, entertainment and recreation	-	-	-	-	-	-
190	Other services	6	-	-	6	-	-
200	**Total**	**335**	**-**	**-**	**313**	**(1)**	**-**

The positions for loans and advances to non-financial corporations decreased primarily due to trade and other receivables within electricity, gas, steam and air conditioning supply, and transport and storage.

Table 53 shows the extent of the use of CRM techniques as of 31 December 2023 for the MSEHSE Group and MSESE Consol.

Table 53: CRM techniques overview: Disclosure of the use of credit risk mitigation techniques (EU CR3) - MSEHSE Group and MSESE Consol

€MM		a	b	c	d	e
MSEHSE Group		**Unsecured carrying amount**	**Secured carrying amount**	**Of which secured by collateral**	**Of which secured by financial guarantees**	**Of which secured by credit derivatives**
1	Loans and advances[1]	27,056	29,504	29,504	-	-
2	Debt securities	-	-	-	-	
3	**Total Exposures**	**27,056**	**29,504**	**29,504**	**-**	**-**
4	*Of which non-performing exposures*	5	-	-	-	-
EU-5	*Of which defaulted*	5	-			
MSESE Consol						
1	Loans and advances[1]	26,954	29,504	29,504	-	-
2	Debt securities	-	-	-	-	
3	**Total Exposures**	**26,954**	**29,504**	**29,504**	**-**	**-**
4	*Of which non-performing exposures*	5	-	-	-	-
EU-5	*Of which defaulted*	5	-			

1. Loans and advances includes reverse repurchase agreements.

During 2023 loans and advances decreased primarily due to lower cash balances with central banks and reduced trade and other receivables, partially offset by increased secured financing.

Table 54 shows the credit risk exposures by SA before and post CRM effects at 31 December 2023 for the MSEHSE Group and MSESE Consol.

Table 54: Standardised approach: Credit risk exposure and CRM effects (EU CR4) - MSEHSE Group and MSESE Consol

		a	b	c	d	e	f
€MM		Exposures before CCF[1] and before CRM		Exposures post CCF and post CRM		RWAs and RWAs density	
		On-balance-sheet exposures	Off-balance-sheet exposures	On-balance-sheet exposures	Off-balance-sheet exposures	RWAs	RWAs density (%)
MSEHSE Group		€MM	€MM	€MM	€MM	€MM	%
1	Central governments or central banks	10,064	-	10,064	-	76	1%
2	Regional government or local authorities	1	-	1	-	0	0%
3	Public sector entities	1	-	1	-	0	14%
4	Multilateral development banks	-	-	-	-	-	-
5	International organisations	1	-	1	-	-	-
6	Institutions	73	302	74	62	71	53%
7	Corporates	89	740	89	327	277	67%
8	Retail	-	-	-	-	-	-
9	Secured by mortgages on immovable property	-	-	-	-	-	-
10	Exposures in default	0	-	0	-	0	150%
11	Exposures associated with particularly high risk	-	-	-	-	-	-
12	Covered bonds	-	-	-	-	-	-
13	Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-
14	Collective investment undertakings	-	-	-	-	-	-
15	Equity	-	-	-	-	-	-
16	Other items	138	-	138	-	138	100%
17	**Total**	**10,367**	**1,042**	**10,368**	**389**	**562**	**5%**
MSESE Consol							
1	Central governments or central banks	9,979	-	9,979	-	64	1%
2	Regional government or local authorities	1	-	1	-	-	-
3	Public sector entities	1	-	1	-	0	14%
4	Multilateral development banks	-	-	-	-	-	-
5	International organisations	1	-	1	-	-	-
6	Institutions	61	300	61	60	67	55%
7	Corporates	72	740	72	327	272	68%
8	Retail	-	-	-	-	-	-
9	Secured by mortgages on immovable property	-	-	-	-	-	-
10	Exposures in default	0	-	0	-	0	150%
11	Exposures associated with particularly high risk	-	-	-	-	-	-
12	Covered bonds	-	-	-	-	-	-
13	Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-
14	Collective investment undertakings	-	-	-	-	-	-
15	Equity	-	-	-	-	-	-
16	Other items	70	-	70	-	70	100%
17	**Total**	**10,185**	**1,040**	**10,185**	**387**	**473**	**4%**

Over the year, the primary driver of increased RWAs relates to on-balance sheet exposures to central governments and central banks.

Table 55 shows the breakdown of exposures under SA by asset class and risk weight as of 31 December 2023 for the MSEHSE Group.

Table 55: Standardised approach (EU CR5) - MSEHSE Group

€MM		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q
		Risk weight																
MSEHSE Group		0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	250%	370%	1250%	Others	Total	Of which unrated
1	Central governments or central banks	9,998	-	-	-	8	-	35	-	-	-	-	23	-	-	-	**10,064**	10
2	Regional government or local authorities	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1**	-
3	Public sector entities	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	**1**	-
4	Multilateral development banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
5	International organisations	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1**	-
6	Institutions	-	60	-	-	42	-	5	-	-	22	4	-	-	3	-	**136**	32
7	Corporates	-	-	-	-	142	-	76	-	-	174	24	-	-	0	-	**416**	73
8	Retail exposures	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
9	Exposures secured by mortgages on immovable property	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
10	Exposures in default	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
11	Exposures associated with particularly high risk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
12	Covered bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
13	Exposures to institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
14	Units or shares in collective investment undertakings	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
15	Equity exposures	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
16	Other items	-	-	-	-	-	-	-	-	-	138	-	-	-	-	-	**138**	138
17	**Total**	**10,000**	**60**	-	-	**193**	-	**116**	-	-	**334**	**28**	**23**	**-**	**3**	**-**	**10,757**	**253**

The most significant exposures relate to cash deposits with the Deutsche Bundesbank. These exposures are risk weighted at 0% and included within the central governments or central banks exposure class.

Over the year, on-balance sheet cash exposures to central governments and central banks decreased.

Table 56 shows the exposures for the MSEHSE Group, calculated using SA for each exposure class and broken down by CQS as of 31 December 2023.

Table 56: Standardised approach EAD by credit quality step - MSEHSE Group

€MM

MSEHSE Group[1]		CQS1	CQS2	CQS3	CQS4	CQS5	CQS6	Other[2]	Unrated	Total
Central Governments or Central Banks	GROSS EAD	526	10	249	-	-	-	9,673	-	**10,458**
	EAD	471	10	129	-	-	-	9,666	-	**10,276**
Corporates	GROSS EAD	313	407	421	7	10	1	2,945	-	**4,104**
	EAD	197	277	191	7	10	1	956	-	**1,639**
High risk	GROSS EAD	-	-	-	-	-	-	-	-	**-**
	EAD	-	-	-	-	-	-	-	-	**-**
Institutions	GROSS EAD	2,196	1,350	2	1	4	-	1,665	-	**5,218**
	EAD	1,984	1,350	2	1	4	-	1,575	-	**4,916**
Multilateral developments banks	GROSS EAD	-	-	-	-	-	-	-	-	**-**
	EAD	-	-	-	-	-	-	-	-	**-**
Public sector entities	GROSS EAD	3,097	-	-	-	-	-	-	-	**3,097**
	EAD	379	-	-	-	-	-	-	-	**379**
Regional governments or Local Authorities	GROSS EAD	525	-	-	-	-	-	14	-	**539**
	EAD	205	-	-	-	-	-	12	-	**217**
International Organisations	GROSS EAD	1	-	-	-	-	-	-	-	**1**
	EAD	1	-	-	-	-	-	-	-	**1**
Securitisation	GROSS EAD	-	-	-	-	-	-	-	-	**-**
	EAD	-	-	-	-	-	-	-	-	**-**
Other Items	GROSS EAD	-	-	-	-	-	-	138	-	**138**
	EAD	-	-	-	-	-	-	138	-	**138**
Total	**GROSS EAD**	**6,658**	**1,767**	**672**	**8**	**14**	**1**	**14,435**	**-**	**23,555**
	EAD	**3,237**	**1,637**	**322**	**8**	**14**	**1**	**12,347**	**-**	**17,566**

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 governments and central banks to which a fixed risk weight is applied.

Table 57 shows the breakdown of exposures under the F-IRB approach by exposure class as of 31 December 2023 for the MSEHSE Group and MSESE Consol. Credit Derivatives are not used as a CRM technique for RWA benefits. There are no exposures calculated according to A-IRB.

Table 57: IRB approach: Effect on the RWAs of credit derivatives used as CRM techniques (EU CR7) - MSEHSE Group and MSESE Consol

		MSEHSE Group		MSESE Consol	
		a	b	a	b
€MM		Pre-credit derivatives RWEAs	Actual RWEAs	Pre-credit derivatives RWEAs	Actual RWEAs
1	**Exposures under F-IRB**	**2,249**	**2,249**	**2,262**	**2,262**
2	Central governments and central banks	-	-	-	-
3	Institutions	109	109	147	147
4	Corporates	2,140	2,140	2,115	2,115
4.1	*of which Corporates - SMEs*	-	-	-	-
4.2	*of which Corporates - Specialised lending*	-	-	-	-
5	**Exposures under A-IRB**	-	-	-	-
6	Central governments and central banks	-	-	-	-
7	Institutions	-	-	-	-
8	Corporates	-	-	-	-
8.1	*of which Corporates - SMEs*	-	-	-	-
8.2	*of which Corporates - Specialised lending*	-	-	-	-
9	Retail	-	-	-	-
9.1	*of which Retail – SMEs - Secured by immovable property collateral*	-	-	-	-
9.2	*of which Retail – non-SMEs - Secured by immovable property collateral*	-	-	-	-
9.3	*of which Retail – Qualifying revolving*	-	-	-	-
9.4	*of which Retail – SMEs - Other*	-	-	-	-
9.5	*of which Retail – Non-SMEs- Other*	-	-	-	-
10	**Total (including F-IRB exposures and A-IRB exposures)**	**2,249**	**2,249**	**2,262**	**2,262**

Over the year, MSEHSE Group's RWA increased primarily due to corporate loans.

Table 58 shows the parameters used for the calculation of capital requirements for IRB models as of 31 December 2023 for the MSEHSE Group.

Table 58: IRB approach: Credit risk exposures by exposure class and PD range (EU CR6) - MSEHSE Group

a	b	c	d	e	f	g	h	i	j	k	l	m
PD range	On-balance sheet exposures	Off-balance-sheet exposures pre-CCF	Exposure weighted average CCF	Exposure post CCF and post CRM	Exposure weighted average PD (%)	Number of obligors	Exposure weighted average LGD (%)	Exposure weighted average maturity (years)	Risk weighted exposure amount after supporting factors	Density of risk weighted exposure amount	Expected loss amount	Value adjust-ments and provisions
MSEHSE Group	€MM	€MM	%	€MM	%	#	%	Years	€MM	%	€MM	€MM
0.00 to <0.15	-	-	-	-	-	-	-	-	-	-	-	-
0.00 to <0.10	-	-	-	-	-	-	-	-	-	-	-	-
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	**-**	**-**		**-**		**-**		**-**	**-**		**-**	**-**
0.00 to <0.15	123	270	50%	258	0.06%	59	45.00%	3	71	27%	0	0
0.00 to <0.10	100	270	50%	235	0.05%	47	45.00%	3	65	28%	0	0
0.10 to <0.15	23	-	-	23	0.14%	12	45.00%	3	6	29%	0	0
0.15 to <0.25	6	52	20%	16	0.22%	7	45.00%	1	3	21%	0	0
0.25 to <0.50	1	-	-	1	0.35%	6	45.00%	3	0	34%	0	0
0.50 to <0.75	-	-	-	-	0.55%	1	45.00%	3	0	50%	-	-
0.75 to <2.50	24	8	50%	28	1.30%	7	45.00%	2	29	104%	0	0
0.75 to <1.75	24	8	50%	28	1.30%	7	45.00%	2	29	104%	0	0
1.75 to <2.5	-	-	-	-	-	-	-	-	-	-	-	-
2.50 to <10.00	-	-	-	-	-	-	-	-	-	-	-	-
2.5 to <5	-	-	-	-	-	-	-	-	-	-	-	-
5 to <10	-	-	-	-	-	-	-	-	-	-	-	-
10.00 to <100.00	4	-	-	4	11.13%	4	45.00%	3	6	147%	0	0
10 to <20	4	-	-	4	11.13%	4	45.00%	3	6	147%	0	0
20 to <30	-	-	-	-	-	-	-	-	-	-	-	-
30.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	-
100.00 (Default)	-	-	-	-	-	-	-	-	-	-	-	-
Institutions	**158**	**330**		**307**		**84**		**14**	**109**		**0**	**0**
0.00 to <0.15	206	3,395	48%	1,849	0.08%	171	44.86%	3	1,143	62%	1	0
0.00 to <0.10	183	2,503	48%	1,380	0.06%	135	44.81%	3	751	54%	1	0
0.10 to <0.15	23	892	50%	469	0.14%	36	45.00%	4	392	84%	0	0
0.15 to <0.25	37	738	50%	405	0.22%	77	45.00%	4	406	100%	0	0
0.25 to <0.50	66	127	50%	130	0.35%	30	45.00%	3	130	100%	0	-
0.50 to <0.75	87	40	50%	107	0.55%	20	45.00%	4	107	100%	0	-
0.75 to <2.50	3	426	50%	216	1.27%	78	45.00%	2	230	107%	1	0
0.75 to <1.75	3	322	50%	164	0.98%	70	45.00%	1	169	103%	1	0
1.75 to <2.5	-	104	50%	52	2.20%	8	45.00%	3	61	117%	0	0
2.50 to <10.00	15	112	50%	71	4.95%	29	45.00%	4	100	142%	2	(4)
2.5 to <5	15	112	50%	71	4.95%	29	45.00%	4	100	142%	2	(4)
5 to <10	-	-	-	-	-	-	-	-	-	-	-	-
10.00 to <100.00	0	41	50%	21	11.13%	21	44.70%	5	24	112%	1	-
10 to <20	0	41	50%	21	11.13%	19	44.70%	5	24	112%	1	-
20 to <30	0	0	-	-	25.02%	2	45.00%	3	-	150%	0	-
30.00 to <100.00	-	-	-	-	-	-	-	-	-	-	-	-
100.00 (Default)	-	-	-	-	-	-	-	-	-	-	-	-
Corporates	**414**	**4879**		**2,799**		**426**		**24**	**2,140**		**5**	**(4)**
Total (all exposure classes)	**572**	**5209**		**3,106**		**510**		**38**	**2,249**		**5**	**(4)**

The table represents exposure breakdown based on PD range and exposure class. The MSEHSE Group has Permanent Partial Use ("PPU") permissions to use the SA approach for certain exposure classes, including central governments and central banks.

Over the year, RWA significantly increased in corporates loans within the lower PD bands.

Table 59 provides disclosure of the extent of the use of CRM techniques for the MSEHSE Group and MSESE Consol as of 31 December 2023.

Table 59: IRB approach: Disclosure of the extent of the use of CRM techniques (EU CR7-A) - MSEHSE Group and MSESE Consol

		a	b	c	d	e	f	g	h	i	j	k	l	m	n
			Credit risk Mitigation techniques											Credit risk Mitigation methods in the calculation of RWEAs	
			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	RWEA without substitution effects (reduction effects only)	RWEA with substitution effects
	MSEHSE Group	€MM	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	€MM	€MM
1	Central governments and central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Institutions	307	0.07%	-	-	-	-	-	-	-	-	0.10%	-	113	109
3	Corporates	2,799	22.81%	-	-	-	-	-	-	-	-	2.15%	-	2,705	2,140
3.1	*Of which Corporates – SMEs*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.2	*Of which Corporates – Specialised lending*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.3	*Of which Corporates – Other*	2,799	22.81%	-	-	-	-	-	-	-	-	2.15%	-	2,705	2,140
4	**Total**	**3,106**	**19.16%**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**28.45%**	**-**	**2,818**	**2,249**
	MSESE Consol														
1	Central governments and central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Institutions	495	89.14%	-	-	-	-	-	-	-	-	0.18%	-	132	147
3	Corporates	2,749	49.72%	-	-	-	-	-	-	-	-	8.69%	-	2,166	2,115
3.1	*Of which Corporates – SMEs*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.2	*Of which Corporates – Specialised lending*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3.3	*Of which Corporates – Other*	2,749	49.72%	-	-	-	-	-	-	-	-	8.69%	-	2,166	2,115
4	**Total**	**3,244**	**36.67%**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**3.58%**	**-**	**2,298**	**2,262**

MSEHSE Group and MSESE Consol used sub-participations (reported as guarantees) as a technique to mitigate RWAs.

Over the year, MSEHSE Group's RWA increased primarily due to corporates loans.

Table 60 categorises CCR exposures under SA into exposure classes and risk weight ranges as of 31 December 2023 for the MSEHSE Group. RWAs derived from own funds requirements for CVA are excluded whereas exposures to qualifying CCPs are included.

Table 60: Standardised approach: CCR exposures by regulatory exposure class and risk weight (EU CCR3) - MSEHSE Group

€MM		a	b	c	d	e	f	g	h	i	j	k	l
		Risk weight											
MSEHSE Group		0%	2%	4%	10%	20%	50%	70%	75%	100%	150%	Others	Total exposure value
1	Central governments or central banks	47	-	-	-	2	94	-	-	69	-	-	212
2	Regional government or local authorities	207	-	-	-	9	-	-	-	-	-	-	216
3	Public sector entities	370	-	-	-	9	-	-	-	-	-	-	379
4	Multilateral development banks	-	-	-	-	-	-	-	-	-	-	-	-
5	International organisations	-	-	-	-	-	-	-	-	-	-	-	-
6	Institutions	-	3,337	1,334	-	93	18	-	-	0	-	-	4,782
7	Corporates	-	-	-	-	66	201	-	-	956	-	-	1,223
8	Retail	-	-	-	-	-	-	-	-	-	-	-	-
9	Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-	-
10	Other items	-	-	-	-	-	-	-	-	-	-	-	-
11	**Total exposure value**	**624**	**3,337**	**1,334**	**-**	**179**	**313**	**-**	**-**	**1,025**	**-**	**-**	**6,812**

Over the year, exposures to institutions, primarily risk-weighted with 2%, increased.

Table 61 presents all relevant parameters used for the calculation of CCR capital requirements of the IRB approach categorised into exposure classes and PD ranges as of 31 December 2023 for the MSEHSE Group.

Table 61: IRB approach: CCR exposures by portfolio and PD scale (EU CCR4) - MSEHSE Group

		a	b	c	d	e	f	g
		Exposure value	Exposure weighted average PD (%)	Number of obligors	Exposure weighted average LGD (%)	Exposure weighted average maturity (years)	RWEA	Density of risk weighted exposure amounts
	MSEHSE Group	€MM	%	#	%	Years	€MM	%
1	**Central governments and central banks**							
1	0.00 to <0.15	18	0.03%	1	45.00%	2	4	20.84%
2	0.15 to <0.25	-	-	-	-	-	-	-
3	0.25 to <0.50	-	-	-	-	-	-	-
4	0.50 to <0.75	-	-	-	-	-	-	-
5	0.75 to <2.50	-	-	-	-	-	-	-
6	2.50 to <10.00	-	-	-	-	-	-	-
7	10.00 to <100.00	-	-	-	-	-	-	-
8	100.00 (Default)	-	-	-	-	-	-	-
		18	**0.03%**	**1**	**45.00%**	**2**	**4**	**20.84%**
2	**Corporates**							
1	0.00 to <0.15	9,126	0.06%	1,428	45.01%	1	4,686	51.35%
2	0.15 to <0.25	785	0.22%	575	45.00%	2	760	96.80%
3	0.25 to <0.50	1,040	0.35%	143	45.00%	2	1,039	99.89%
4	0.50 to <0.75	264	0.55%	107	45.00%	2	264	100.08%
5	0.75 to <2.50	1,127	1.22%	504	45.00%	2	1,216	107.89%
6	2.50 to <10.00	37	4.95%	12	45.00%	2	40	108.67%
7	10.00 to <100.00	95	11.65%	98	45.00%	2	130	136.57%
8	100.00 (Default)	-	-	-	-	-	-	-
		12,474	**0.31%**	**2,867**	**45.00%**	**1**	**8,135**	**65.22%**
3	**Institutions**							
1	0.00 to <0.15	2,533	0.08%	75	45.24%	2	992	39.18%
2	0.15 to <0.25	730	0.22%	23	45.22%	1	293	40.07%
3	0.25 to <0.50	78	0.35%	24	50.80%	2	60	76.81%
4	0.50 to <0.75	77	0.55%	12	45.00%	2	46	60.35%
5	0.75 to <2.50	49	1.23%	17	45.00%	1	43	87.91%
6	2.50 to <10.00	2	4.95%	1	45.00%	2	3	189.83%
7	10.00 to <100.00	3	11.13%	13	45.00%	2	4	107.68%
8	100.00 (Default	-	-	-	-	-	-	-
		3,472	**0.15%**	**165**	**45.35%**	**2**	**1,441**	**41.51%**
	Total (all CCR relevant exposure classes)	**15,964**	**0.28%**	**3,033**	**45.08%**	**2**	**9,580**	**60.01%**

This table represents value based on IRB Exposure and RWA as per PD Banding. Entity further holds PPU permissions and hence there is no IRB exposure under Central Government.

Over the year, corporate RWAs decreased primarily on OTC derivatives due to higher credit rating and market movements.

Table 62 categorises performing and non-performing exposures into exposure classes and, if applicable, past due ranges.

Table 62: Credit Quality of Performing and Non-Performing exposures (EU CQ3) - MSEHSE Group and MSESE Consol

		a	b	c	d	e	f	g	h	i	j	k	l
€MM		Gross carrying amount/nominal amount											
		Performing exposures			Non-performing exposures								
MSEHSE Group			Not past due or past due ≤ 30 days	Past due > 30 days ≤ 90 days		Unlikely to pay that are not past due or are past due ≤ 90 days	Past due > 90 days ≤ 180 days	Past due > 180 days ≤ 1 year	Past due > 1 year ≤ 2 years	Past due > 2 years ≤ 5 years	Past due > 5 years ≤ 7 years	Past due > 7 years	Of which defaulted
005	**Cash balances at central banks and other demand deposits**	**9,979**	**9,979**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
010	**Loans and advances**	**46,577**	**46,557**	**20**	**7**	**-**	**2**	**2**	**1**	**2**	**-**	**-**	**7**
020	Central banks	889	889	-	-	-	-	-	-	-	-	-	-
030	General governments	380	380	-	-	-	-	-	-	-	-	-	-
040	Credit institutions	17,675	17,662	13	3	-	-	1	1	1	-	-	3
050	Other financial corporations	27,298	27,296	2	4	-	2	1	-	1	-	-	4
060	Non-financial corporations	335	330	5	-	-	-	-	-	-	-	-	-
070	Of which SMEs	-	-	-	-	-	-	-	-	-	-	-	-
080	Households	-	-	-	-	-	-	-	-	-	-	-	-
090	**Debt securities**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
100	Central banks	-	-	-	-	-	-	-	-	-	-	-	-
110	General governments	-	-	-	-	-	-	-	-	-	-	-	-
120	Credit institutions	-	-	-	-	-	-	-	-	-	-	-	-
130	Other financial corporations	-	-	-	-	-	-	-	-	-	-	-	-
140	Non-financial corporations	-	-	-	-	-	-	-	-	-	-	-	-
150	**Off-balance-sheet exposures**	**9,275**			**-**								**-**
160	Central banks	-			-								-
170	General governments	-			-								-
180	Credit institutions	81			-								-
190	Other financial corporations	5,684			-								-
200	Non-financial corporations	3,510			-								-
210	Households	-			-								-
220	**Total**	**65,831**	**56,536**	**20**	**7**	**-**	**2**	**2**	**1**	**2**	**-**	**-**	**7**
MSESE Consol													
005	**Cash balances at central banks and other demand deposits**	**9,895**	**9,895**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
010	**Loans and advances**	**46,559**	**46,539**	**20**	**7**	**-**	**2**	**2**	**1**	**2**	**-**	**-**	**7**
020	Central banks	889	889	-	-	-	-	-	-	-	-	-	-
030	General governments	380	380	-	-	-	-	-	-	-	-	-	-
040	Credit institutions	17,675	17,662	13	3	-	-	1	1	1	-	-	3
050	Other financial corporations	27,280	27,278	2	4	-	2	1	-	1	-	-	4
060	Non-financial corporations	335	330	5	-	-	-	-	-	-	-	-	-
070	Of which SMEs	-	-	-	-	-	-	-	-	-	-	-	-
080	Households	-	-	-	-	-	-	-	-	-	-	-	-
090	**Debt securities**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
100	Central banks	-	-	-	-	-	-	-	-	-	-	-	-
110	General governments	-	-	-	-	-	-	-	-	-	-	-	-
120	Credit institutions	-	-	-	-	-	-	-	-	-	-	-	-
130	Other financial corporations	-	-	-	-	-	-	-	-	-	-	-	-
140	Non-financial corporations	-	-	-	-	-	-	-	-	-	-	-	-
150	**Off-balance-sheet exposures**	**9,274**			**-**								**-**
160	Central banks	-			-								-
170	General governments	-			-								-
180	Credit institutions	80			-								-
190	Other financial corporations	5,684			-								-
200	Non-financial corporations	3,510			-								-
210	Households	-			-								-
220	**Total**	**65,728**	**56,434**	**20**	**7**	**-**	**2**	**2**	**1**	**2**	**-**	**-**	**7**

The above table shows the past due structure of performing and non-performing exposures, specifically loans and advances, cash balances with central banks and other demand deposits and off-balance sheet exposure.

Table 63 shows (i) exposure values as defined in Article 166 CRR and (ii) the total exposure value for exposures subject to the SA and to the IRB approach, defined by Article 429(4) CRR under the leverage approach. This is further categorised into those exposures subject to PPU, the IRB Approach and those subject to an IRB roll-out plan.

Table 63: Scope of the use of IRB and SA approaches (EU CR6-A) – MSEHSE Group

		a	b	c	d	e
	MSEHSE Group	Exposure value as defined in Article 166 CRR for exposures subject to IRB approach €MM	Total exposure value for exposures subject to the Standardised approach and to the IRB approach €MM	Percentage of total exposure value subject to the permanent partial use of the SA (%)	Percentage of total exposure value subject to IRB Approach (%)	Percentage of total exposure value subject to a roll-out plan (%)
1	Central governments or central banks	-	10,074	100%	-	-
1.1	*Of which Regional governments or local authorities*		1	100%	-	-
1.2	*Of which Public sector entities*		1	100%	-	-
2	Institutions	307	482	16%	84%	-
3	Corporates	2,799	4,458	5%	91%	4%
3.1	*Of which Corporates - Specialised lending, excluding slotting approach*		-	-	-	-
3.2	*Of which Corporates - Specialised lending under slotting approach*		-	-	-	-
4	Retail	-	-	-	-	-
4.1	*of which Retail – Secured by real estate SMEs*		-	-	-	-
4.2	*of which Retail – Secured by real estate non-SMEs*		-	-	-	-
4.3	*of which Retail – Qualifying revolving*		-	-	-	-
4.4	*of which Retail – Other SMEs*		-	-	-	-
4.5	*of which Retail – Other non-SMEs*		-	-	-	-
5	Equity	0	-	-	100%	-
6	Other non-credit obligation assets	-	130	100%	-	-
7	**Total**	**3,106**	**15,144**	**69%**	**29%**	**1%**

Over the year, corporate loans RWAs increased.

Table 64 represents the breakdown of exposure value based on Standardised and IRB approaches. Central government exposure was fully under standardised approach.

Table 64: IRB approach – Back-testing of PD per exposure class (fixed PD scale) (EU CR9) – MSEHSE Group

a	b	c	d	e	f	g	h
		Number of obligors at the end of previous year					
Exposure class	PD range		Of which number of obligors which defaulted in the year	Observed average default rate	Exposures weighted average PD	Average PD	Average historical annual default rate
				%	%	%	%
Central Government							
	0.00 to <0.15	-	-	-	-	-	-
	0.00 to <0.10	-	-	-	-	-	-
	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)	-	-	-	-	-	-
Institution							
	0.00 to <0.15	35	-	-	0.06%	0.08%	-
	0.00 to <0.10	26	-	-	0.05%	0.05%	-
	0.10 to <0.15	9	-	-	0.14%	0.14%	-
	0.15 to <0.25	5	-	-	0.22%	0.22%	-
	0.25 to <0.50	-	-	-	-	-	-
	0.50 to <0.75	-	-	-	-	-	-
	0.75 to <2.50	2	-	-	1.30%	0.88%	-
	0.75 to <1.75	2	-	-	1.30%	0.88%	-
	1.75 to <2.5	-	-	-	-	-	-
	2.50 to <10.00	-	-	-	-	-	-
	2.5 to <5	-	-	-	-	-	-
	5 to <10	-	-	-	-	-	-
	10.00 to <100.00	2	-	-	11.13%	11.13%	-
	10 to <20	2	-	-	11.13%	11.13%	-
	20 to <30	-	-	-	-	-	-
	30.00 to <100.00	-	-	-	-	-	-
	100.00 (Default)	-	-	-	-	-	-
Corporates							
	0.00 to <0.15	27	-	-	0.08%	0.09%	-
	0.00 to <0.10	17	-	-	0.06%	0.06%	-
	0.10 to <0.15	10	-	-	0.14%	0.14%	-
	0.15 to <0.25	8	-	-	0.22%	0.22%	-
	0.25 to <0.50	5	-	-	0.35%	0.35%	-
	0.50 to <0.75	2	-	-	0.55%	0.55%	-
	0.75 to <2.50	13	-	-	1.27%	1.66%	-
	0.75 to <1.75	8	-	-	0.98%	1.32%	-
	1.75 to <2.5	5	-	-	2.20%	2.20%	-
	2.50 to <10.00	32	-	-	4.95%	4.95%	-
	2.5 to <5	32	-	-	4.95%	4.95%	-
	5 to <10	-	-	-	-	-	-
	10.00 to <100.00	10	-	-	11.13%	12.52%	2.35%
	10 to <20	9	-	-	11.13%	11.13%	1.43%
	20 to <30	1	-	-	25.02%	25.02%	6.67%
	30.00 to <100.00	-	-	-	-	-	-
	100.00 (Default)	2	-	-	100.00%	100.00%	-

For the MSEHSE Group there are no exposures which are subject to A-IRB. Only F-IRB is applied to IRBA exposures classes, as revealed in CR9 and CR9.1. Most of the total number of obligors do not refer to short-term contracts at the disclosure date for F-IRB. Obligors with short-term contracts tend to relate to cash deposits with exposure class of Institutions.

Table 65: IRB approach – Back-testing of PD per exposure class (only for PD estimates according to point (f) of Article 180(1) CRR) (EU CR9.1) – MSEHSE Group

a	b	c	d	e	f	g	h
Exposure class	PD range	External rating equivalent	Number of obligors in the end of previous year	Of which number of obligors which defaulted in the year	Observed average default rate	Average PD	Average historical annual default rate
					%	%	%
Central Government							
	0.0072 to <0.0114	AAA	-	-	-	0.01%	-
	0.0114 to <0.0138	AA+	-	-	-	0.01%	-
	0.0138 to <0.0219	AA	-	-	-	0.01%	-
	0.0219 to <0.03	AA-	-	-	-	0.02%	-
	0.0347 to <0.055	A+	-	-	-	0.03%	-
	0.055 to <0.0873	A	-	-	-	0.06%	-
	0.0873 to <0.1384	A-	-	-	-	0.09%	-
	0.1384 to <0.2194	BBB+	-	-	-	0.14%	-
	0.2194 to <0.348	BBB	-	-	-	0.22%	-
	0.348 to <0.5518	BBB-	-	-	-	0.35%	-
	0.5518 to <0.875	BB+	-	-	-	0.55%	-
	0.875 to <1.3875	BB	-	-	-	0.88%	-
	1.3875 to <2.2002	BB-	-	-	-	1.39%	-
	2.2002 to <4.9479	B+	-	-	-	2.20%	-
	4.9479 to <11.1269	B	-	-	-	4.95%	-
	11.1269 to <25.0223	B-	-	-	-	11.13%	-
	25.0223 to <100 (Default)	CCC	-	-	-	25.02%	-
	100 (Default)	D	-	-	-	100.00%	-
Institution							
	0.03 to <0.0347[1]	AAA to AA-	5	-	-	0.03%	-
	0.0347 to <0.055	A+	6	-	-	0.03%	-
	0.055 to <0.0873	A	8	-	-	0.06%	-
	0.0873 to <0.1384	A-	7	-	-	0.09%	-
	0.1384 to <0.2194	BBB+	9	-	-	0.14%	-
	0.2194 to <0.348	BBB	5	-	-	0.22%	-
	0.348 to <0.5518	BBB-	-	-	-	0.35%	-
	0.5518 to <0.875	BB+	-	-	-	0.55%	-
	0.875 to <1.3875	BB	2	-	-	0.88%	-
	1.3875 to <2.2002	BB-	-	-	-	1.39%	-
	2.2002 to <4.9479	B+	-	-	-	2.20%	-
	4.9479 to <11.1269	B	-	-	-	4.95%	-
	11.1269 to <25.0223	B-	2	-	-	11.13%	-
	25.0223 to <100 (Default)	CCC	-	-	-	25.02%	-
	100 (Default)	D	-	-	-	100.00%	-
Corporates							
	0.03 to <0.0347[1]	AAA to AA-	4	-	-	0.03%	-
	0.0347 to <0.055	A+	3	-	-	0.03%	-
	0.055 to <0.0873	A	4	-	-	0.06%	-
	0.0873 to <0.1384	A-	6	-	-	0.09%	-
	0.1384 to <0.2194	BBB+	10	-	-	0.14%	-
	0.2194 to <0.348	BBB	8	-	-	0.22%	-
	0.348 to <0.5518	BBB-	5	-	-	0.35%	-
	0.5518 to <0.875	BB+	2	-	-	0.55%	-
	0.875 to <1.3875	BB	1	-	-	0.88%	-
	1.3875 to <2.2002	BB-	7	-	-	1.39%	-
	2.2002 to <4.9479	B+	5	-	-	2.20%	-
	4.9479 to <11.1269	B	32	-	-	4.95%	-
	11.1269 to <25.0223	B-	9	-	-	11.13 %	1.43%
	25.0223 to <100 (Default)	CCC	1	-	-	25.02%	6.67%
	100 (Default)	D	2	-	-	100.00%	-

1. PD Range 0.03 to < 0.0347 represent those exposures to a corporate or an institution where the PD shall be at least 0.03% in line with Article 160 CRR.

24. Appendix VI: List of References

CRR reference	Table header	Table Code	Applicable? Yes/No	Reason for non-applicability	Large Subsidiary Requirement Article 13 Yes / No
1. Overview and Key Metrics					
Article 447, points (a) to (g), and Article 438, point (b) of CRR	Key metrics	EU KM1	Yes		Yes
§ 26a (1) sentence 1 KWG	Principle of Proper Management	§ 26a (1) sentence 1 KWG	Yes		N/A
Article 441 of CRR	Disclosure of indicators of global systemic relevance	Disclosure of indicators of global systemic relevance	No	G-SII requirement	N/A
2. Regulatory Frameworks					
Article 436 point (h) of CRR	Other qualitative information on the scope of application	EU LIB	Yes		No
3. Risk Management					
Article 435 (1) points (a) to (f) of CRR	Institution risk management approach	EU OVA	Yes		No
Article 435 (2) points (a), (d), (e) of CRR	Disclosure on governance arrangements	EU OVB	Yes		No
4. Basis of Preparation and Linkage to Financial Accounts					
Article 436 point (b) and (d) of CRR	Explanations of differences between accounting and regulatory exposure amounts	EU LIA	Yes		No
Article 436 point (c) of CRR	Differences between the accounting scope and the scope of prudential consolidation and mapping of financial statement categories with regulatory risk categories	EU LI1	Yes		No
Article 436 point (d) of CRR	Main sources of differences between regulatory exposure amounts and carrying values in financial statements	EU LI2	Yes		No
Article 436 point (b) of CRR	Outline of the differences in the scopes of consolidation (entity by entity)	EU LI3	No	There are no consolidated SPV booked for financial year 2022	No
5. Capital Management					
Article 438 point (a), (c) of CRR	ICAAP information	EU OVC	Yes		No, MSESE Consol is not subject to iTLAC requirements.
Article 436 point (g) of CRR	Other qualitative information on the scope of application	EU LIB	Yes		No
Article 436 point (f) of CRR	Other qualitative information on the scope of application	EU LIB	Yes		No
Article 438 point (f) of CRR	Insurance participations	EU INS1	No	MSEHSE has no insurance entities	No
Article 438 point (g) of CRR	Financial conglomerates information on own funds and capital adequacy ratio	EU INS2	No	MSEHSE is not part of any financial conglomerate	No
6. Capital Resources					
Information to be found in Appendix III			Yes		Yes
7. Total Loss-Absorbing Capacity					
Article 447 point (h) of CRR and Article 45i (3) points (a) and (c) of Directive 2014/59/EU	Key metrics - MREL and, where applicable, G-SII requirement for own funds and eligible liabilities	EU KM2	No	G-SII requirement (for own funds and eligible liabilities)	No

Article 437a points (a), (c) and (d) Article 447 point (h) of CRR. Article 45i (3) points (a) and (c) and Article 45i (3) point (b) of Directive 2014/59/EU	TLAC composition	EU iTLAC	Yes		No, MSESE Consol is not subject to iTLAC requirements
Article 437a points (a), (c) and (d) of CRR and Article 45i (3) point (b) of Directive 2014/59/ EU	Composition - MREL and, where applicable, G-SII requirement for own funds and eligible liabilities	EU TLAC1	No	G-SII requirement (for own funds and eligible liabilities)	No
Article 437a points (a) and (b) of CRR and Article 45i (3) point (b) of Directive 2014/59/ EU	Creditor ranking - Entity that is not a resolution entity	EU TLAC2a	Yes		No, MSESE Consol is not subject to iTLAC requirements
Article 437a points (a) and (b) of CRR and Article 45i (3) point (b) of Directive 2014/59/ EU	Creditor ranking - Entity that is not a resolution entity	EU TLAC2b	No	MSEHSE is a material subsidiary of a non-EU G-SII	No
Article 437a points (a) and (b) of CRR and Article 45i (3) point (b) of Directive 2014/59/ EU	Creditor ranking - resolution entity	EU TLAC3	No	MSEHSE is not a resolution entity	No
8. Leverage					
Article 451(1) points (d) and (e) of CRR	Disclosure of LR qualitative information	EU LRA	Yes		Yes
Article 451(1) point (b) of CRR	Summary reconciliation of accounting assets and leverage ratio exposures	EU LR1	Yes		Yes
Article 451(1) points (a) to (c), 451(2), 451(3) of CRR	Leverage ratio common disclosure	EU LR2	Yes		Yes
Article 451(1) point (b) of CRR	Split of on-balance sheet exposures (excluding derivatives, SFTs and exempted exposures)	EU LR3	Yes		Yes
9. Capital Requirements and Risk Weighted Assets					
Article 438 point (d) of CRR	Overview of risk weighted exposure amounts	EU OV1	Yes		Yes
10. Credit Risk					
Article 435 (1) point (a), (b), (d), (f) of CRR	General qualitative information about credit risk	EU CRA	Yes		No
Article 442 points (a) and (b) of CRR	Additional disclosure related to the credit quality of assets	EU CRB	Yes		Yes
Article 453 points (a), (b), (c), (e) of CRR	Qualitative disclosure requirements related to CRM techniques	EU CRC	Yes		Yes
Article 444 points (a) to (d) of CRR	Qualitative disclosure requirements related to SA	EU CRD	Yes		No
Article 452 points (a), (c), (d), (e), (f) of CRR	Qualitative disclosure requirements related to IRB Approach	EU CRE	Yes		No
Article 439 points (a), and (b) of CRR	Qualitative disclosure related to CCR	EU CCRA	Yes		No
Article 438 point (h) of CRR	RWA flow statements of credit risk exposures under the IRB approach	EU CR8	Yes		Yes
Article 438 point (e) of CRR	Specialised lending and equity exposures under the simple risk weighted approach	EU CR10.1-4	No	MSEHSE does not have specialised lending	No, MSESE Consol does not have specialised lending
Article 155(2) and 438 point (e) of CRR	IRB (Specialised Lending and Equities) (EU CR10.5)	EU CR10.5	Yes		Yes
Article 439 points (a) and (d) of CRR	Qualitative disclosure related to CCR	EU CCRA	Yes		No
Article 431 (3) and (4) of CRR	Qualitative disclosure related to CCR	EU CCRA	Yes		No
Article 439 points (f), (g), (k) and (m) of CRR	Analysis of CCR exposure by approach	EU CCR1	Yes		No

Article 438 point (h) of CRR	RWA flow statements of CCR exposures under IMM	EU CCR7	Yes		Yes
Article 439 point (h) of CRR	Transactions subject to own funds requirements for CVA risk	EU CCR2	Yes		No
Article 439 point (e) of CRR	Composition of collateral for CRR exposures	EU CCR5	Yes		No
Article 439, point (i) of CRR	Exposures to CCPs	EU CCR8	Yes		No
Article 439 point (j) of CRR	Credit derivatives exposures (EU CCR6)	EU CCR6	Yes		No
11. Securitisation					
Article 449 point (a) to (i) of CRR	Qualitative disclosure requirements related to securitisation exposures	EU-SECA	Yes		No
Article 449 point (j) of CRR	Securitisation exposures in the non-trading book	EU-SEC1	No	MSEHSE has no securitisation exposures in the non-trading book	No
Article 449 point (j) of CRR	Securitisation exposures in the trading book	EU-SEC2	No	MSEHSE has no securitisation exposures in the trading book	No
Article 449 point (k) of CRR	Securitisation exposures in the non-trading book and associated regulatory capital requirements - institution acting as originator or as sponsor	EU-SEC3	No	MSEHSE has no securitisation exposures in the non-trading book acting as originator or sponsor	No
Article 449 point (k) of CRR	Securitisation exposures in the non-trading book and associated regulatory capital requirements - institution acting as investor	EU-SEC4	No	MSEHSE has no securitisation exposures in the non-trading book acting as investor	No
Article 449 point (l) of CRR	Exposures securitised by the institution - Exposures in default and specific credit risk adjustments	EU-SEC5	No	MSEHSE has no securitisation exposures in default or with specific credit risk adjustments	No
12. Market Risk					
Article 435 (1) points (a) to (d) of CRR	Qualitative disclosure requirements related to market risk	EU MRA	Yes		No
Article 455 (a) to (c), (f) of CRR	Qualitative disclosure requirements for institutions using the internal Market Risk Models	EU MRB	Yes		No
Article 445 of CRR	Market risk under the SA	EU MR1	Yes		No
Article 455 point (e) of CRR	Market risk under IMA	EU MR2-A	Yes		No
Article 438 point (h) of CRR	RWEA flow statements of market risk exposures under the IMA – MSEHSE Group	EU MR2-B	Yes		Yes
Article 455 point (d) of CRR	IMA values for trading portfolios - MSEHSE Group	EU MR3	Yes		No
Article 455 point (g) of CRR	Comparison of VaR Estimates with Gains/Losses – MSEHSE Group (EU MR4)	EU MR4	Yes		No
13. Interest Rate Risk in the Banking Book (IRRBB)					
Article 448 CCR	Table EU IRRBBA	EU IRRBBA	Yes		No
Article 448 (1) points (a) and (b) of CRR	EVE and NII stress P&L under interest rate stress scenarios	EU IRRBB1	Yes		No
14. Operational Risk					
Article 435 (1) points (a) to (d), Article 446 point (a) and (b), Article 454 of CRR	Qualitative information on operational risk	EU ORA	Yes		No

Article 446 and 454 of CRR	Operational risk own funds requirements and risk-weighted exposure amounts	EU OR1	Yes		No
15. Climate and Environmental Risk					
Article 449a of CRR	ESG risks	ESG disclosure requirements	No	Which have issued securities and are admitted to trading on a regulated market of any Member State – this did not apply to the MSEHSE Group in 2022	No
16. Valuation Risk					
Article 436 point (e) of CRR	Prudent Valuation Adjustments (PVA)	EU PV1	Yes		No
17. Liquidity Risk					
Article 451a(4) point (a) of CRR	Liquidity risk management	EU LIQA	Yes		Yes
Article 451a(2) point (a) of CRR	Qualitative Information of LCR	EU LIQB	Yes		Yes
Article 451a(2) point (a) of CRR	Quantitative Information of LCR	EU LIQ1	Yes		Yes
Article 451a(3) point (a) of CRR	NSFR	EU LIQ2	Yes		Yes
Article 443 of CRR	Accompanying narrative information	EU AE4	Yes		No
Article 443 of CRR	Encumbered and unencumbered assets	EU AE1	Yes		No
Article 443 of CRR	Collateral received and own debt securities issued	EU AE2	Yes		No
Article 443 of CRR	Sources of encumbrance	EU AE3	Yes		No
18. Remuneration					
Section 16 of InstitutsVergV	Quantitative disclosure requirements	Remuneration awarded for the financial year (EU All Employees)	Yes		No
Article 450 (1) points (a) to (f), (j) and (k), and 450 (2) of CRR	Qualitative disclosure requirements	EU REMA	Yes		Yes
Article 450 (1) points (h) (i) and (h) (ii) of CRR	Quantitative disclosure requirements	EU REM1	Yes		No
Article 450 (1) points (h) (v) to (h) (vii) of CRR		EU REM2	Yes		No
Article 450 (1) points (h) (iii) and (h) (iv) of CRR		EU REM3	Yes		No
Article 450 (1) point (i) of CRR		EU REM4	Yes		No
Article 450 (1) point (g) of CRR		EU REM5	Yes		No
19. Appendix I: Board of Directors Knowledge, Skills, and Expertise					
Article 435 (2) points (a)-(c) of CRR	Disclosure on governance arrangements	EU OVB	Yes		No
20. Appendix II: Capital Instruments & Eligible Liabilities					
Article 437 points (b) and (c) of CRR	Capital instruments and eligible liabilities	EU CCA	Yes		Yes

21. Appendix III: Own Funds Disclosure Template					
Article 437 points (a), (d), (e) and (f) of CRR	Composition of regulatory own funds	EU CC1	Yes		Yes
Article 437 points (a), (d), (e) and (f) of CRR	Reconciliation of regulatory own funds to balance sheet in the audited financial statements	EU CC2	Yes		Yes
22. Appendix IV: Countercyclical Capital Buffer					
Article 440 point (a) of CRR	Geographical distribution of credit exposures for the CCyB	EU CCYB1	Yes		Yes
Article 440 point (b) of CRR	Amount of institution-specific countercyclical capital buffer	EU CCYB2	Yes		Yes
23. Appendix V: Additional Credit and Counterparty Credit Risk Tables					
Article 453 points (d) of CRR	Qualitative disclosure requirements related to CRM techniques	EU CRC	Yes		Yes
Article 442 point (g) of CRR	Maturity of exposures	EU CR1-A	Yes		Yes
Article 442 point (f) of CRR	Changes in the stock of non-performing loans and advances	EU CR2	Yes		Yes
Article 442 points (c) and (e) of CRR	Performing and Non-performing exposures and related provisions	EU CR1	Yes		Yes
Article 442 points (c) and (e) of CRR	Quality of non-performing exposures by geography	EU CQ4	Yes		Yes
Article 442 points (c) and (e) of CRR	Credit quality of loans and advances to non-financial corporations by industry	EU CQ5	Yes		Yes
Article 453 point (f), of CRR	CRM techniques overview: Disclosure of the use of CRM techniques	EU CR3	Yes		Yes
Article 453 points (g) to (i) and Article 444 point (e) of CRR	Standardised approach: Credit risk exposure and CRM effects	EU CR4	Yes		Yes
Article 444 point (e) of CRR	Standardised approach	EU CR5	Yes		No
Article 453 point (j) of CRR	IRB approach: Effect on the RWAs of credit derivatives used as CRM techniques	EU CR7	Yes		Yes
Article 452 point (g) of CRR	IRB approach: Credit risk exposures by exposure class and PD range	EU CR6	Yes		No
Article 453 point (g) of CRR	IRB approach: Disclosure of the extent of the use of CRM techniques	EU CR7-A	Yes		Yes
Article 444 point (e) of CRR	Standardised approach: CCR exposures by regulatory exposure class and risk weight	EU CCR3	Yes		No
Article 452 point (g) of CRR	IRB approach: CCR exposures by portfolio and PD scale	EU CCR4	Yes		No
Article 442 point (c) of CRR	Credit quality of forborne exposures – MSEHSE Group	EU CQ1	No	MSEHSE has no forborne exposures	No, MSESE Consol has no forborne exposures
Article 442 point (c) of CRR	Quality of forbearance – MSEHSE Group	EU CQ2	No	Template applies when NPL ratio ≥ 5%	No, Template applies when NPL ratio ≥ 5%
Article 442 point (c) of CRR	Collateral valuation - loans and advances – MSEHSE Group	EU CQ6	No	Template applies when NPL ratio ≥ 5%	No, Template applies when NPL ratio ≥ 5%
Article 442 point (c) of CRR	Collateral obtained by taking possession and execution processes – MSEHSE Group	EU CQ7	No	MSEHSE has no Collateral obtained by taking possession and execution processes	No, MSESE Consol has no Collateral obtained by taking possession and execution processes
Article 442, point (c) of CRR	Collateral obtained by taking possession and execution processes – vintage breakdown – MSEHSE Group	EU CQ8	No	Template applies when NPL ratio ≥ 5%	No, Template applies when NPL ratio ≥ 5%
Article 442 points (c) and (f) of CRR	Changes in the stock of non-performing loans and advances and related net accumulated recoveries – MSEHSE Group	EU CR2a	No	Template applies when NPL ratio ≥ 5%	No, template applies when NPL ratio ≥ 5%

Article 442 point (d) of CRR	Credit Quality of Performing and Non-Performing exposures – MSEHSE Group	EU CQ3	Yes		Yes
Article 452 point (b) of CRR	Scope of the use of IRB and SA approaches – MSEHSE Group	EU CR6-A	Yes		No
Article 452 point (h) of CRR	IRB approach – Back-testing of PD per exposure class (fixed PD scale) – MSEHSE Group	EU CR9	Yes		No
only for PD estimates according to point (f) of Article 180(1) CRR	IRB approach – Back-testing of PD per exposure class – MSEHSE Group	EU CR9.1	Yes		No

25. Appendix VII: Abbreviations

Term	Defintion
ACPR	Autorité de Contrôle Prudentiel et de Résolution
AIRB	Advanced Internal Ratings Based
ALCO	Asset and Liability Committee
AMA	Advanced Measurement Approaches
ASA	Alternative Standardised Approach
ASF	Available Stable Funding
AT1	Additional Tier 1 Capital
AVA	Additional Valuation Adjustment
BaFin	Federal Financial Supervisory Authority
Basel Accords	Standards for international banking prudential regulation in a series of accords
BCBS	Basel Committee on Banking Supervision
BIA	Basic Indicator Approach
BS	Balance Sheet
CCF	Credit Conversion Factor
CCP	Central Counterparty
CCR	Counterparty Credit Risk
CCyB	Countercyclical Capital Buffer
CDP	Carbon Disclosure Project
CDS	Credit Default Swaps
CET1	Common Equity Tier 1 Capital
CFO	Chief Financial Officer
CFTC	Commodity Futures Trading Commission
CHRO	Chief Human Resources Officer
CLF	Credit Limits Framework
CMDS Committee	Compensation, Management Development and Succession Committee
COCO	Central Outsourcing Control Office
CQS	Credit Quality Step
CRD	Capital Requirements Directive
CRM	Credit Risk Mitigation
CRMD	Credit Risk Management Department
CRMe	Comprehensive Risk Measure
CRO	Chief Risk Officer
CRR	Capital Requirements Regulation
CSA	Credit Support Annex
CSAF	Climate Strategy Assessment Framework
CSLL	Climate Stress Loss Limit
CSRBB	Credit Spread Risk of non-trading Book
CVA	Credit Valuation Adjustment
DA	European Commission Delegated Regulation 2015/61
DQ	Data Quality
EAD	Exposure at Default
EBA	European Banking Authority
ECAI	External Credit Assessment Institutions
ECB	European Central Bank
ECL	Expected Credit Loss
EEA	European Economic Area
EEPE	Effective Expected Positive Exposure
EMEA	Europe, the Middle East, and Africa
EMEA CFO	EMEA Chief Finance Officer
EMEA CRO	EMEA Chief Risk Officer
EMEA GC	EMEA General Counsel
EOD	End-of-day
ERC	Executive Risk Committee
EROC	EMEA Remuneration Oversight Committee
ESG	Environmental, Social and Governance

EU	European Union
EUR	Euros
EVE	Economic Value of Equity
EWI	Early Warning Indicator
F-IRB	Foundation Internal Ratings Based
FCA	Financial Conduct Authority
FED	Federal Reserve System
FELI	Financed Emissions Lending Intensity
FinRep	Financial Reporting
Fitch	Fitch Ratings
FSRs	Forward Starting Repos
FVA	Funding Valuation Adjustments
FVPL	Fair Value Through Profit and Loss
G-SIIs	Global Systematically Important Institutions
GAAP	Generally Accepted Accounting Principles
GHG	Greenhouse Gas
Global CHRO	Global Chief Human Resources Officer
Global CRO	Global Chief Risk Officer
GMRA	Global Master Repurchase Agreement
GMSLAs	Global Master Securities Lending Agreements
HGB	German Commercial Code
HQLA	High Quality Liquid Assets
IAD	Internal Audit Department
ICAAP	Internal Capital Adequacy Assessment Process
IFF	Investment Firm Framework
IFR	Investment Firm Regulation
IFRS	International Financial Reporting Standards
ILAAP	Internal Liquidity Adequacy Assessment Process
ILST	Internal Liquidity Stress Test
IMA	Internal Model Approach
IMM	Internal Model Method
InstitutsVergV	Institutsvergütungsverordnung
IRB	Internal Ratings Based
IRC	Incremental Risk Charge
IRRBB	Interest Rate Risk in the Banking Book
ISSB	International Sustainability Standards Board
iTLAC	Internal Total Loss Absorbing Capacity
ITS	Implementing Technical Standards
JST	Joint Supervisory Team
KPIs	Key Performance Indicators
KWG	Kreditwesengesetz
LCR	Liquidity Coverage Ratio
LDP	Low Default Portfolio
LGD	Loss-Given Default
LRD	Liquidity Risk Department
LTA	Large Transaction Approval
MaRisk	Mindestanforderungen an das Risikomanagement
MM	Millions
MOC	Model Oversight Committee
Moody's	Moody’s Investor Service
MRD	Market Risk Department
MREL	Minimum Required Eligible Liabilities
MRM	Model Risk Management
MRT	MSEHSE Group Risk Taker
MSBAG	Morgan Stanley Bank AG
MSEHSE	Morgan Stanley Europe Holding SE
MSEHSE CEO	MSEHSE Group Chief Executive Officer

MSEHSE CFO	MSEHSE Group Chief Finance Officer
MSEHSE COO	MSEHSE Group Chief Operations Officer
MSEHSE Group	MSEHSE together with its subsidiaries
MSEHSE RemCo	MSEHSE Group Remuneration Committees
MSESE	Morgan Stanley Europe SE
MSESE Consol	Morgan Stanley Europe SE Sub Consolidation Group (including MSESE solo and MSBAG)
MSF	Morgan Stanley France S.A., Paris, France
MSFH I	Morgan Stanley France Holdings I S.A.S, Paris, France
MSFH II	Morgan Stanley France Holdings II S.A.S, Paris, France
MSI	Morgan Stanley International Limited
MSI Group	MSI together with its subsidiaries
MSLL	Macroeconomic Stress Loss Limit
NACE Codes	Statistical Classification of Economic Activities in the European Community Codes
NII	Net Interest Income
Non-SME	Non-Small and Medium Enterprises
NSFR	Net Stable Funding Ratio
NZBA	Net-Zero Banking Alliance
O-SII	Other Systematically Important Institution
OBS	Off- Balance Sheet
ORD	Operational Risk Department
OTC	Over-the-Counter
P2G	Pillar 2 Guidance
P2R	Pillar 2 Requirements
PB	Prime Brokerage
PCAF	Partnership for Carbon Accounting Financials
PD	Probability of Default
PFE	Potential Future Exposure
PPU	Permanent Partial Use
PRA	Prudential Regulation Authority
PVRM	Position Valuation and Risk Models
QCCPs	Qualifying Central Counterparties
QRM	Quantitative Risk Management
RAS	Risk Appetite Statements
RBA	Role Based Allowance
RC	Replacement cost
RCSAs	Risk Control Self-Assessment
RNIV	Risks Not in VaR
RSF	Required Stable Funding
RST	Reverse Stress Tests
RTS	Regulatory Technical Standards
RWAs	Risk Weighted Exposure Amounts
S&P	Standard and Poor’s rating agency
SA	Standardised Approach
SA-CCR	Standardised Approach for Counterparty Credit Risk
SASB	Sustainability Accounting Standards Board
SBSD	Securities-Based Swap Dealer
SEC	Securities and Exchange Commission
SEC-ERBA	Securitisation External Ratings Based Approach
SEC-IRBA	Securitisation IRB Approach
SEC-SA	Securitisation Standardised Approach
SFTs	Securities Financing Transactions
SICR	Significant Increase in Credit Risk
SPOE	Single Point of Entry
SREP	Supervisory Review and Evaluation Process
STAR	Significant Transaction Analytical Review Process

SVaR	Stressed Value at Risk
T1	Tier 1
T2	Tier2
TCFD	Task Force on Climate-Related Financial Disclosures
TLAC	Total Loss Absorbing Capacity
TOFR	Total Own Funds Requirements
TOR	Top Operational Risks
TREA	Total Risk Exposure Amount
TSCR	Total SREP Capital Requirement
UK	United Kingdom
UN	United Nations
USA	United States of America
VaR	Value at Risk
VC	Valuation Control