

Morgan Stanley

Morgan Stanley Europe SE

Annual Report 2022

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(1) Please note that the English version of the Annual Financial Statements and Management Report as at 31 December 2022 is a convenience translation. Deloitte GmbH Wirtschaftsprüfungsgesellschaft, Frankfurt am Main, issued the Independent Auditors' Report only for the German version of the Financial Statements and the Management Report as at 31 December 2022. Therefore, the German version prevails.

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MANAGEMENT REPORT

Overview of 2022

Business Model

Economic Report

Risk Report

Opportunities and Outlook

Overview of 2022

Net revenues of Morgan Stanley Europe SE, Frankfurt am Main (the “Company” or “MSESE”), part of the Morgan Stanley Europe Holding SE Group (the “Group” or the “MSEHSE Group”), increased from €529 million in 2021 to €651 million in 2022. The increase was predominantly driven by higher equity and fixed income client activity as well the revenues recognised from the Profit and Loss Transfer Agreement with Morgan Stanley Bank AG, Frankfurt am Main (“MSBAG”). Profit after tax (“PBT”) increased in 2022 to €42 million and total assets to €68,914 million as at 31 December 2022. Refer to the section “Net Assets, Financial Position and Results of Operation” for further details.

On 1 September 2022, the Company was formally authorised as a Capital Requirements Regulation (“CRR”) credit institution (Class 1 Investment Firm) by the European Central Bank (“ECB”). Refer to the section “Corporate Structure” for further details.

On 5 December 2022, the Federal Financial Supervisory Authority (“BaFin”) in consultation with the Deutsche Bundesbank has categorised Morgan Stanley Europe Holding SE, Frankfurt am Main (“MSEHSE”) as an Other Systematically Important Institution (“O-SII”).

On 5 December 2022, MSESE and MSBAG entered into a Profit and Loss Transfer Agreement and established an income tax group.

Business Model

Corporate Structure

MSEHSE is the parent company of MSESE and authorised by the ECB as a financial holding company in accordance with Section 2f (1) and (3) of the German Banking Act (*Kreditwesengesetz* or “KWG”). MSEHSE is a superordinated undertaking in accordance with Section 10a (2) of the KWG.

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

There are control agreements (*Beherrschungsverträge*) in place between MSEHSE and MSESE and between MSESE and MSBAG which include loss compensations in accordance with Section 302 of the German Stock Corporation Act (*Aktiengesetz* or “AktG”). Letters of Comfort are provided by MSEHSE to benefit MSESE and MSBAG as well as by MSESE to benefit MSBAG. MSESE and MSBAG entered into a Profit and Loss Transfer Agreement on 5 December 2022. With entry in the Commercial Register on 27 December 2022, an income tax group (*Ertragsteuerliche Organshaft*) was established in accordance with the Corporation Tax Act (*Körperschaftsteuergesetz*).

The Group’s ultimate parent undertaking and controlling entity is Morgan Stanley, Delaware, United States of America (“US”). Morgan Stanley is a global financial services firm authorised as a Financial Holding Company and regulated by the Board of Governors of the Federal Reserve System in the US. All companies of the MSEHSE Group are fully integrated into the global Morgan Stanley Group (the “Morgan Stanley Group”).

MSESE and MSBAG are subject to joint supervision by the ECB, BaFin and the Deutsche Bundesbank.

On 1 September 2022, MSESE, which was previously an investment firm, was granted a formal authorisation as a CRR credit institution (Class 1 Investment Firm). Besides additional reporting implications, the supervisory and regulatory regimes applicable to MSESE remained largely unchanged. Furthermore, MSESE’s activities under its license remained unchanged. MSESE is not authorised to provide either deposit taking services or lending.

The principal activity of MSESE is the provision of financial services to a client base mainly in the European Economic Area (“EEA”) consisting of corporations, governments and financial institutions. To expand its local footprint in the

region, MSESE opened a branch in Copenhagen, Denmark, in 2022 in addition to its established branches in France, Italy, the Netherlands, Poland, Spain and Sweden.

Throughout the year 2022, except for the month of March, the Management Board of MSESE consisted of six members. The Management Board was overseen by the Supervisory Board consisting of eight members. Meetings of the Management Board are generally held fortnightly, but at least once a month. The Supervisory Board meets at least twice per calendar half-year.

Business Strategy

MSESE's business strategy is closely integrated into the strategy of the Morgan Stanley Group's Institutional Securities Group ("ISG"). The Company's principal business units within ISG are the Institutional Equities Division ("IED"), the Fixed Income Division ("FID"), the Investment Banking Division ("IBD") and Global Capital Markets ("GCM").

In executing Morgan Stanley Group's strategies, MSESE is a key contributor in the following areas:

- sales, trading, financing and market-making activities in equity and fixed income products, including foreign exchange and commodities;
- financial advisory services, including advice on mergers, acquisitions and restructurings;

- investment activities; and
- capital raising.

The Company is Morgan Stanley's primary hub to facilitate EEA clients' business. The MSEHSE Group makes Global products available to EEA clients and also provides EEA products to Global clients via other Morgan Stanley entities. Market making activities such as Euro interest rate swaps, Euro inflation swaps, government bonds linked to inflation as well as automated market-making of European bonds and stocks are risk managed within the Group.

Morgan Stanley Group's European operations

The Morgan Stanley Group continues to assess and refine the scope and location of its European operations.

On 1 December 2022, the Real Assets business unit of MSESE was transferred to MSIM Fund Management (Ireland) Limited, a subsidiary of Morgan Stanley International Limited, London, United Kingdom ("MSI"), in exchange for €57 million cash consideration. This resulted in a net gain on transfer after tax of €26 million. The Real Assets business unit was responsible for managing European private real estate and private infrastructure assets on behalf of its clients, as part of a global investment platform.

Economic Report

Business Environment

The Management Report contains certain forward-looking statements. These statements are made by the Management Board in good faith, based on the information available at the time of the approval of this report and such statements should be treated with caution due to the inherent uncertainties, including both economic and business risk factors, underlying any such forward-looking information.

The global economic and geopolitical environment in the period, which has been characterised by persistent inflation, rising interest rates and volatility in global financial markets, had a mixed impact on the Company.

Despite the challenging market conditions, the Company's performance remained resilient in 2022. In addition to the aforementioned conditions, certain institutions have come under significant stress in early 2023. While the full impact of these events in the banking sector remains uncertain, there has so far been limited impact on the results or financial condition of the Company.

Global markets and economic conditions

Growth in global Gross Domestic Product ("GDP") slowed down in 2022. A large part of last year's growth can still be seen as a rebound following 2020's record contraction and as a consequence of significant fiscal and monetary

stimulus decided in the wake of the pandemic. Important regional differences in the recovery persisted. Growth in the US fell markedly as reopening dynamics waned. The Euro area economy expanded, despite the war in Ukraine and a record surge in inflation. Growth in China continued to be significantly affected by Covid-19 related measures which were only ended at the end of 2022. Throughout 2022, the main macroeconomic factor globally has been soaring inflation. In Europe this was mainly driven by disrupted supply chains and higher energy prices, sparked by the ongoing war in Ukraine.

Against that backdrop the policy mix has changed significantly in 2022. Fiscal policy measures to ease the burden of high energy prices were put forward in large parts of Europe. Meanwhile, the process of withdrawal of monetary policy accommodation gathered speed in 2022. With inflation surging unabated until the later parts of 2022, central banks significantly increased the speed with which policy rates were raised, reaching restrictive territory in the US and the United Kingdom ("UK").

In the Euro area, the ECB ended net asset purchases under its Pandemic Emergency Purchase Programme in March and under its Asset Purchase Programme in June. It started raising rates in July 2022, reaching a deposit facility rate of 2% in December 2022. Disbursements under the European Recovery Fund continued throughout 2022, with most countries reaching their set goals. The European Recovery and Resilience Facility is worth €724 billion (in current prices) with funds raised from the capital markets. Of the funds raised, €338 billion is to be provided in grants and up to €386 billion in loans. Euro area inflation reached 8.4% in 2022 with the German measure at 7.9%.

Russia and Ukraine war

The Company is monitoring the war in Ukraine and its impact on the world economies and the financial markets. The Company has no exposure in Ukraine and in Russia.

Net Assets, Financial Position and Results of Operations

MSEHSE Group's internal and regulatory reporting is based upon International Financial Reporting Standards ("IFRS"). Thus, MSESE is also managed on this basis.

Reconciliation from IFRS to the German Commercial Code (Handelsgesetzbuch or "HGB")

The following table summarises Profit after tax and Balance sheet size under IFRS for the MSEHSE Group and also for MSESE.

€ in millions		Profit after tax	Balance Sheet
MSEHSE Group	2022	142	118,977
	2021	141	69,411
Thereof:			
MSESE	2022	133	117,588
	2021	82	68,124

The following table provides a reconciliation of the Profit after tax of the years 2022 and 2021 of MSESE from IFRS to HGB:

€ in millions	2022	2021
PROFIT AFTER TAX (IFRS)	133	82
Risk valuation adjustment according to section 340e (3) and (4) HGB	(37)	–
Adjustments for AT1 capital instruments within equity capital	(43)	(28)
Recognition of deferred tax assets	–	(19)
Valuation adjustments for pensions and similar obligations	3	(6)
Goodwill depreciation	(8)	(8)
Write downs of goodwill from transfer of Real Assets business	(20)	–
Others	14	1
PROFIT AFTER TAX (HGB)	42	22

Income statement

Set out below is an overview of the financial results according to HGB for the years 2022 and 2021. In this year's Management Report, the Company has elected to enhance the presentation of its results of operations with a

more granular breakdown of revenues and expenses to promote clarity of disclosure. The comparative results for 2021 are also presented in this revised format.

€ in millions	2022	2021	Increase/ (decrease)	Variance in %
Sales and trading	495	391	104	27%
Investment banking	125	140	(15)	(11%)
Other	31	(2)	33	>100%
Net revenues	651	529	122	23%
Staff related expenses	(251)	(217)	(34)	16%
Non-staff related expenses	(335)	(251)	(84)	33%
Operating expenses	(586)	(468)	(118)	25%
Profit before tax	65	61	4	7%
Extraordinary income	37	–	37	>100%
Income taxes	(60)	(39)	(21)	54%
Profit after tax	42	22	20	91%

Net revenues**Sales and trading**

Sales and trading income is comprised of commission and trading income. Commission income arises from arrangements in which the client is charged commission for executing and clearing transactions related to securities and other listed products. Trading income is largely derived from client activity and was affected by a variety of interrelated factors, including market volumes, bid-offer spreads and the impact of market conditions on inventory held to facilitate client activity.

Sales and trading revenues in 2022 increased 27% compared to 2021. This was driven by strong client engagement and increased client flow activity in an environment characterised by inflationary pressures, central bank actions and fiscal activity driving higher volatility.

Investment banking

Investment banking fee income is derived from client engagements in which the Company acts as an advisor in relation to mergers and acquisitions, divestitures and corporate restructurings, underwriter of equity and fixed income securities or distributor of capital.

Investment banking revenues in 2022 decreased 11% compared to 2021, reflecting lower volumes in underwriting activity as well as a decrease in advisory revenues due to unfavourable market conditions. The Company

has seen a contraction of client activity in mergers and acquisitions, equity and debt issuance, as well as auxiliary financing in 2022.

Other

Other revenues include all other activities not covered by the aforementioned income streams including €53 million of revenues recognised from the Profit and Loss Transfer agreement with MSBAG. The result of the ordinary operating activities for the financial year ending 31 December 2022 was entirely transferred from MSBAG to MSESE. Refer to the section "Corporate Structure" for further details.

Operating expenses**Staff related expenses**

Staff related expenses include: base salaries and fixed allowances, discretionary incentive compensation, amortisation of deferred cash and equity awards and other items including health and welfare benefits.

The average number of employees of the Company during the year has increased from 527 in 2021 to 645 in 2022 driving much of the 16% increase in staff related expenses.

Non-staff related expenses

Non-staff related expenses include management charges from other Morgan Stanley Group undertakings relating to other services, brokerage fees, administration and corporate

services, professional and other services, expenses and taxes. Non-staff related expenses increased by 33% in 2022 compared to 2021, reflecting an increase in transaction-related expenses, including brokerage and transaction taxes, driven by increased client activity in Sales and trading.

Extraordinary income

Extraordinary income of €37 million in 2022 reflects gains recognised from the sale of the

Real Assets business unit. Refer to the section "Morgan Stanley Group's European operations" for further details.

Income taxes

The Company's income taxes for the period is €60 million, compared to €39 million for the prior year. The main reason for the higher tax expense is the implementation of the income tax group between MSESE and MSBAG.

Balance sheet

€ in millions	31 December 2022	31 December 2021	Increase/ (decrease)	Variance in %
ASSETS				
Cash	14,744	0	14,744	100%
Amounts due from credit institutions and customers	17,576	21,636	(4,060)	(19%)
Trading portfolio	35,486	17,521	17,965	103%
Investments in affiliated companies	603	603	0	0%
Other assets	505	700	(195)	(28%)
TOTAL ASSETS	68,914	40,460	28,454	70%
LIABILITIES				
Amounts due to credit institutions and customers	28,063	18,262	9,801	54%
Trading portfolio	33,448	16,926	16,522	98%
Subordinated debt	1,006	1,002	4	0%
Instruments for Additional Tier 1 Regulatory Capital	1,000	600	400	67%
Provisions	157	135	22	16%
Other liabilities	316	273	43	16%
Fund for general banking risks	26	1	25	>100%
TOTAL LIABILITIES	64,016	37,199	26,817	72%
EQUITY				
TOTAL EQUITY	4,898	3,261	1,637	50%
TOTAL LIABILITIES AND EQUITY	68,914	40,460	28,454	70%

The increase in total assets under HGB of the Company in 2022 is primarily attributed to higher business activity in Sales and trading as well as rising interest rates across all major markets and currency rates fluctuations, driving an increase in the fair value of financial instruments on the balance sheet.

Cash

In 2022, the Company opened a standalone account with Deutsche Bundesbank for direct cash placements. In prior years this was facilitated via MSBAG. This led to an increase of cash on the balance sheet of MSESE to €14,744 million.

Amounts due from credit institutions and customers

Amounts due from credit institutions and customers decreased 19% as at 31 December 2022 compared to the prior year. The decrease mainly reflects the decrease of receivables on demand due from MSBAG from €7,269 million in 2021 to €261 million in 2022 as the Company deposited its liquidity directly with Deutsche Bundesbank. This was partially offset by an increase in cash collateral provided for derivatives and securities repurchase agreements.

Trading portfolio

Trading portfolio primarily includes derivatives measured at fair value. The increase of 103% in

Assets and 98% in Liabilities respectively as at 31 December 2022 compared to the prior year is driven by higher client activity in Sales and trading, as well as elevated fair values of foreign exchange and interest-rate derivatives due to market movements.

Investments in affiliated companies

Investments in affiliated companies all relate to shares in MSBAG.

Other assets

Other assets mainly consist of variation margin posted to central counterparties. The decrease in 2022 reflects fair value movements in listed derivative transactions.

Amounts due to credit institutions and customers

The 54% increase in amounts due to credit institutions and customers as at 31 December 2022 compared to the prior year is mainly driven by €7,379 million of funding received from MSBAG and deposited with Deutsche Bundesbank. This was supplemented by higher amounts of cash collateral received on derivatives and securities lending transactions.

Instruments for Additional Tier 1 (“AT1”) Regulatory Capital

The €400 million increase in AT1 instruments in 2022 reflects an additional issue of Company's perpetual, unsecured and subordinated bonds bearing a fixed annual interest rate of 5.0%.

Provisions

Provisions increased mainly as a result of personnel, pension-related and tax provisions.

Other liabilities

Other liabilities increased from €273 million as at 31 December 2021 to €316 million as at 31 December 2022 and mainly consist of variation margin received for listed derivative transactions.

Fund for general banking risks

The fund for general banking risks within the meaning of section 340e (4) HGB increased from €1 million in 2021 to €26 million in 2022 due to the significant increase in trading income.

Capital Structure

The equity presented in the balance sheet consists of share capital, capital reserves and retained earnings. The increase of equity by 50% from €3,261 million to €4,898 million is

mainly due to the capital contribution in cash of €1,595 million from MSEHSE to MSESE.

The return on investment pursuant to Section 26a (1) Sentence 4 KWG as of 31 December 2022 is positive 0.06% (2021: positive 0.05%).

Capital Management

The Group actively manages and monitors its capital in line with established policies and procedures and in compliance with local regulatory requirements. MSESE and MSBAG have been granted a Capital waiver in accordance with Article 7 of the CRR and therefore capital requirements are met at the consolidated Group level. On 27 September 2022, MSESE applied for the individual consolidation method under Article 9 of the CRR. The permission was granted by the ECB on 5 December 2022 and is applicable as of 1 January 2023. Under this permission, capital requirements will be managed on both levels going forward, MSEHSE Group and MSESE individual consolidated basis. In line with the Morgan Stanley Group's capital management policies, the Group manages its capital position based upon, among other things, business opportunities, risks, capital availability and rates of return together with internal capital policies, regulatory requirements and rating agency guidelines.

Regulatory capital

The Group is subject to minimum capital requirements as calculated in accordance with the CRR and the Capital Requirements Directive (Directive 2013/36/EU or “CRD”).

The Group conducts an Internal Capital Adequacy Assessment Process (“ICAAP”) at least quarterly in order to meet its obligations under CRD and the requirements of the ECB. The ICAAP is a key information tool for the Group Management Boards to approve capital adequacy targets and limits, establish ongoing monitoring processes and internal thresholds, and review identified risks in line with the business strategy. Refer to the section “Risk Report” for further information on ICAAP.

Liquidity and Funding Management

MSESE and MSBAG have been granted a waiver pursuant to CRR Article 8 which permits the MSEHSE Group to manage its liquidity requirements at the MSESE individual consolidated basis.

The primary goal of the Group's liquidity and funding management framework is to ensure that the Group has sufficient liquidity to cover its business operations and regulatory requirements, as well as access to adequate funding across a wide range of market conditions and time horizons. It manages resources mainly based on business opportunities, risks, availability and rates of return, which are driven by internal policies, regulatory requirements and rating agency guidelines.

Liquidity resources, funding and balance sheet management

The Group maintains sufficient liquidity resources ("Liquidity Resources") to comply with internal liquidity stress testing and regulatory requirements. The total amount of Liquidity Resources is actively managed by the Group considering the following components:

- balance sheet size and composition;
- funding needs in a stressed environment inclusive of contingent cash outflows;
- collateral requirements; and
- regulatory requirements.

The amount of Liquidity Resources held is based on the Group's risk tolerance and is subject to change dependent on market and firm-specific events.

The Liquidity Resources consist of cash at central banks and high-quality unencumbered assets. Eligible unencumbered highly liquid securities include primarily Level 1 (as defined in the Commission Delegated Regulation (EU) 2015/61) government bonds and German sub-sovereign obligations.

In managing the Group's funding risk, the composition and size of the entire balance sheet, not just financial liabilities, is monitored and evaluated. The liquid nature of the marketable securities and short-term

receivables arising principally from Sales and trading activities provides the MSEHSE Group with flexibility in managing and monitoring the composition and size of its balance sheet.

Refer to the section "Risk Report" for further information on the Liquidity Risk framework, Liquidity framework and Liquidity Stress Tests.

Credit ratings

The cost and availability of financing and cash collateral are impacted by the credit ratings of MSESE, among other variables. In addition, credit ratings can impact trading revenues, particularly in those businesses where longer-term counterparty performance is a key consideration, such as certain over the counter ("OTC") derivative transactions. When determining credit ratings, rating agencies consider both company-specific and industry-wide factors. MSESE's senior unsecured ratings are provided in the section "Non-financial key performance indicators".

Recovery and Resolution Planning ("RRP")

The MSEHSE Group prepares a recovery plan on an annual basis which identifies mitigation tools available to the Group in times of severe stress.

In terms of RRP, the Group is supervised by the Single Resolution Board ("SRB") as well as the BaFin as the national resolution authority. The Group produces information for the aforementioned authorities in the form of resolution reporting templates and ad-hoc regulatory submissions, in accordance with the European Union ("EU") statutory and regulatory requirements.

The Morgan Stanley Group has developed a resolution plan in accordance with the requirements of Section 165(d) of Title I of the Dodd-Frank Wall Street Reform and Consumer Protection Act and its implementing regulations adopted by the Federal Reserve Board and the Federal Deposit Insurance Corporation. The resolution plan presents the Morgan Stanley Group's strategy for resolution of the Morgan Stanley Group upon material financial distress or failure. Both MSESE and MSBAG are considered Material Operating Entities of the Morgan Stanley Group and are within the scope of the resolution strategy adopted by the Morgan Stanley Group.

Minimum Requirement for own funds and Eligible Liabilities and Total Loss Absorbing Capacity

Minimum Requirement for own funds and Eligible Liabilities (“MREL”) serves to ensure that the Group has sufficient eligible liabilities in a bail-in scenario to absorb losses and safeguard existing capital requirements. The BaFin, as the Group’s national supervisor, shares the responsibility to determine MREL requirements with the SRB. MREL is applied to the Group on a consolidated basis and will apply to MSESE on an individually consolidated basis from 1 January 2023.

With a similar objective, Total Loss Absorbing Capacity (“TLAC”) requirements serve to ensure that the Group has sufficient resources to absorb losses. TLAC is applied to the Group on a consolidated basis only.

Financial and Non-financial Key Performance Indicators

The financial and non-financial key performance indicators (“KPIs”) are managed on the MSEHSE Group level and based on IFRS. They are also applicable for MSESE.

The financial and non-financial KPIs of the Group are aligned to its objective to further expand its business activities and strengthen performance, soundness and sustainability of the business considering regulatory requirements. To assess the effectiveness of the execution of the Group’s strategy, the following major KPIs were set by the Group Management Boards and are assessed on a quarterly basis.

Financial Key Performance Indicators

Major financial KPIs to assess the performance of the Group include PBT, Return on Equity (“ROE”) and Efficiency Ratio, also disclosed in 2021, and Tier 1 Capital Ratio, Liquidity Coverage Ratio (“LCR”) and Net Stable Funding Ratio (“NSFR”), disclosed for the first time this year.

In last year’s Management Report the Group expected continued progress on its financial

KPIs. Actual year on year developments are summarised below.

PBT

€ in millions



€ in millions	2022	2021	Increase	Variance in %
PBT	236	195	41	21%

PBT increased by 21% from €195 million to €236 million, reflecting higher revenues in 2022, particularly from Sales and trading and the proceeds of the sale of the Real Assets business unit.

ROE

in %



in %	2022	2021
ROE	2.6%	3.6%

ROE represents profit for the year in relation to year-to-date average equity. The Group’s ROE decreased from 3.6% in 2021 to 2.6% in 2022 driven by lower performance in Investment banking and Lending activities, as well as an increase in average total equity to support business expansion and increased market volatility.

Efficiency Ratio

in %



	2022	2021
Net revenues (€ in millions)	947	686
Operating expense (€ in millions)	706	490
Efficiency Ratio (in %)	75%	71%

Efficiency Ratio, defined as operating expenses in relation to net revenues, measures the Group’s period-to-period operating performance

and increased from 71% to 75% during the financial year. The increase reflects lower than expected revenue growth on the back of an unexpectedly challenging business environment.

Tier 1 Capital Ratio

in %

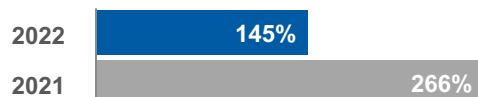


in %	2022	2021
Tier 1 Capital Ratio	21.9%	18.9%

Tier 1 Capital Ratio is the sum of Common Equity Tier 1 ("CET1") and AT1 capital of the Group expressed as a percentage of the total risk-weighted assets. As at 31 December 2022, the Tier 1 Capital Ratio stood at 21.9% compared to 18.9% at 31 December 2021. The increase in the Group's Tier 1 Capital outpaced the increase of the risk-weighted assets supporting future growth of business and increased market volatility.

LCR

in %



in %	2022	2021
LCR	145%	266%

LCR measures the extent to which liquidity outflows less liquidity inflows in stressed conditions are covered by high quality liquid assets. LCR decreased as at 31 December 2022 to 145% from 266% a year before due to utilization of excessive liquidity throughout 2022 to support business growth, but remains well

above the minimum regulatory requirement of 100%.

NSFR

in %



in %	2022	2021
NSFR	194%	208%

NSFR is defined as the amount of available stable funding relative to the amount of required stable funding, both calculated using factors, which reflect the liquidity characteristics of each category of instruments according to the supervisory assumptions. NSFR decreased to 194% as at 31 December 2022, but remains well above minimum regulatory requirement of 100%.

Non-financial Key Performance Indicators**Credit Rating**

The credit ratings of MSESE were stable and have not changed throughout the financial year.

		31 December 2022	31 December 2021
Moody's Investor Service, Inc ("Moody's")	Short Term	P-1	P-1
	Long Term	Aa3	Aa3
	Outlook	Stable	Stable
Standard & Poor's Rating Service ("S&P")	Short Term	A-1	A-1
	Long Term	A+	A+
	Outlook	Stable	Stable

Other performance indicators

Market shares and League Table Rankings of the Group's business units are monitored and assessed, specifically for the IED, FID and IBD/GCM businesses. The Group maintained a top 3 market position by volume for cash equity products in the IED business in its key markets in Germany, France, Spain, Italy and Nordics. Additionally, the Group achieved its target share in core products in the FID business.

Risk Report

During 2022, the Group's Risk Division continued to focus on enhancing the Group's Risk Management Framework and on regulatory engagements. Key areas of focus included:

- evolution of the Risk Management Framework in line with the increased size and complexity of the business;
- management of risks resulting from increased market volatility driven by the Russia and Ukraine war and associated energy crisis, strong inflationary pressures and rapidly increasing interest rates, within the Group's Risk Appetite;
- further development of the incorporation of climate risk in the Risk Management Framework; and
- regulatory approvals for the use of advanced capital models.

Risk Management Framework

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

MSESE and MSBAG have been granted waivers pursuant to CRR Article 7 and Article 8, which permit the Group to manage its own funds requirements at the MSEHSE Group level and liquidity requirements at the level of MSESE sub-consolidated with MSBAG. Consistent with this and in alignment with the waiver pursuant to Section 2a KWG, the Group's Risk Management Framework was established at the level of the consolidated MSEHSE Group, encompassing the risk management culture, risk governance, approach and practices that support risk identification, measurement, monitoring, escalation and decision-making processes.

The Group's Risk Management culture is rooted in the following key principles: integrity, comprehensiveness, independence, accountability and transparency. The MSEHSE Group Management Boards are responsible for overseeing the adoption of the Morgan Stanley Group's risk culture by the Group.

The MSEHSE Group Management Boards have established a Risk Management Framework, including a Committee Structure and a "Three Lines of Defence" framework. The framework separately identifies risk owners from independent risk control functions and creates a clear delineation of responsibilities with a view to address potential conflicts of interest. The structure applies to all legal entities and branches within the Group. The functions responsible for carrying out the activities across the Three Lines of Defence are summarised below:

- **First Line of Defence:** Business units as well as support and control functions have primary responsibility for managing all business unit risks as well as ensuring compliance with applicable laws, rules and regulations and the Group policies. This includes the consideration of emerging risk pathways as determined by the Risk Division, such as the risks arising from climate change.
- **Second Line of Defence:** Responsible for independent identification, analysis, reporting, management and escalation of risks arising from the Group's activities, including the risks arising from climate change, where applicable. It further sets policies and monitors adherence with these policies. This includes (but is not limited to) the below:
 - The Risk Division is responsible for the independent identification, measurement, monitoring and reporting of credit, market, liquidity, operational and model risk arising from the Group's business activities. It reports to the Chief Risk Officer ("CRO"), who is also a member of the MSEHSE Group Management Boards.
 - The Compliance Division maintains an enterprise-wide Compliance Risk Management Program and is responsible for the design and development of the overall Conduct Risk Framework of the Group. The Compliance Division is independent of the business units and reports directly to

the MSEHSE Group Management Boards.

- The Global Financial Crimes division 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 Group's Central Outsourcing Control Office ("COCO") is independent of individual business divisions and 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 Division ("IAD") is independent of the First and Second Lines of Defence. The IAD provides an independent assessment of the Group's control environment and risk management processes and further reviews and tests the Group's compliance with internal guidelines set for risk management and risk monitoring, as well as external rules and regulations governing the Group.

The Group has established policies and procedures which set out the standards that govern the identification, measurement, monitoring, management and reporting of the various types of risk involved in its business activities.

Risk Division organisation

The Risk Division reports to the CRO and assists the MSEHSE Group Executive Risk Committee ("ERC") and Management Boards in monitoring and managing risk through a number of control processes. The CRO is a member of the MSEHSE, MSESE and MSBAG Management Boards and leads the Risk Division, covering market risk, credit risk, liquidity risk, operational risk and model risk.

The Risk Division is organised by the following departments, each with a Department Head, reporting into the CRO:

- Credit Risk
- Liquidity Risk;
- Market Risk;
- Operational Risk;
- Risk Analytics;
- Model Risk Management;
- Risk Control, Stress Testing & Capital; and
- Risk Governance & Risk COO (Chief Operating Office).

The Risk Division assists the MSEHSE Group Management Boards in their oversight through a series of control processes as described in the sections for the respective risk types in this Risk Report.

Committee governance

The MSEHSE Group Management Boards are responsible for the establishment, implementation and oversight of an effective Risk Management Framework. Therefore, the MSEHSE Group Management Boards have established a committee structure for the governance of material risks. This includes the cross-divisional ERC, which is chaired by the CRO and assists the MSEHSE Group Management Boards in the oversight of the Group's management of risk. The Committee is responsible for overseeing:

- (i) the development and implementation of a risk strategy, including the risk appetite statement;
- (ii) risk identification and measurement;
- (iii) risk framework and policies;
- (iv) risk culture;
- (v) financial resource management and capital; and
- (vi) assessment of recovery and/or resolution limits.

The MSEHSE Group ERC has established a series of sub-committees with dedicated

responsibilities for particular risk matters directly reporting to the MSEHSE Group ERC. The following provides an overview of these sub-committees:

- **MSEHSE Group Credit Risk Committee:** Reviews, approves and recommends actions on matters related to credit risk management within the Group.
- **MSEHSE Group Market Risk Committee:** Provides oversight of the risk profile, control and governance framework on matters related to market risk management within the Group.
- **MSEHSE Group Operational Risk Oversight Committee:** Assists the MSEHSE Group ERC to discharge its responsibilities in relation to operational risk.
- **MSEHSE Group Asset & Liability Committee:** Assists the MSEHSE Group ERC in the oversight of the capital adequacy, funding and liquidity risk management of the Group.
- **MSEHSE Group Stress Testing Committee:** Forum to review and approve all aspects of the Group's Stress Testing Framework.
- **MSEHSE Group Model Oversight Committee:** Provides the Group with oversight of the development, validation and performance of the market, credit, operational, liquidity risk and stress testing models.

In addition to the Committees directly reporting to the MSEHSE Group ERC outlined above, the MSEHSE Group Risk Governance Committee ("RGC") provides the CRO with oversight of the control framework within the Risk Division.

Risk identification, risk appetite and risk limits/tolerances

Risk identification

The Group has established a framework to identify and assess material risks and risk factors stemming from the Group's business activities, which is updated on a quarterly basis. The materiality of risks is assessed 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 Group's Risk Strategy and Risk Appetite Statement, individual risk management frameworks, macroeconomic stress testing scenarios, as well as the Group's Internal Capital and Liquidity Adequacy Assessment Processes ("ICAAP" / "ILAAP").

The following risk types involved in the Group's business activities were assessed as material as determined through the Group's Risk Identification Framework:

- credit risk;
- market risk;
- liquidity risk;
- operational risk;
- earnings at risk and strategic risk;
- model risk;
- conduct risk;
- compliance risk;
- leverage risk;
- valuation risk; and
- reputational risk.

For information on the risk identification of climate and environmental risk drivers, refer to the "Climate and Environmental Risks" section.

The MSEHSE Group Management Boards have established frameworks to identify, analyse, monitor, mitigate and report these risks. Information on how these risks are managed is summarised in the respective sections in this Risk Report.

Risk appetite

The MSEHSE Group Management Boards determine the Risk Strategy of the 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 is the Risk Appetite Statement (“RAS”), which articulates the aggregate level and type of risk that the Group is willing to accept in executing the business strategy while protecting its capital and liquidity resources. The RAS consists of both qualitative and quantitative statements. To remain adequate in a changing environment, the Group’s 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 Group’s business strategy, financial resources and plans as well as any anticipated changes in risk appetite.

Risk limits and tolerances

The Risk Appetite of the Group is translated into a comprehensive set of risk limits and risk tolerances. The Group’s limits and tolerance framework mostly covers limits and tolerance across credit risk, market risk, operational risk and liquidity risk, each at different granularity levels to manage risk taking in line with the Group’s risk appetite.

The 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, but plausible Macroeconomic Scenarios, designed to capture key portfolio vulnerabilities of the Group. The credit and market risk limits are calibrated to reflect the MSEHSE Group’s market and credit risk appetite as expressed by the MSLL. As of 31 December 2022, the stress loss in the Group’s binding macroeconomic stress scenario was €244 million.

Stress testing

Stress testing provides a flexible approach to understanding the aggregate risk for the Group and assessing the 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 Group, informing a number of processes and associated decisions and is performed in line with internal and external regulatory requirements. The Group conducts both cross-risk stress tests and risk

specific stress tests with the following objectives:

- identification of material risk concentrations and vulnerabilities in adverse scenarios;
- estimation of aggregate size of exposure and losses in adverse shocks;
- management of tail risks or vulnerabilities against risk appetite;
- informing ICAAP, ILAAP and the recovery plan; and
- meeting regulatory requirements.

Results are communicated to interested parties and committees, such as the MSEHSE Group ERC, the MSEHSE Group Management Boards and the Group’s Supervisory Board on a regular basis.

Cross-risk stress tests

Cross-risk stress tests 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 and topical stress tests.

Macroeconomic scenarios are the Group’s primary stress testing tool to monitor, assess and manage the Group’s vulnerability to downside risk. The Group runs macroeconomic stress scenarios on a regular basis to measure its market and credit risk loss potential and monitor those against the MSLL. Each scenario is supported by a macroeconomic narrative, a detailed set of macroeconomic projections and instantaneous market shocks, and selected credit risk default rules as appropriate.

There are internal models in place to quantify stress losses for credit risk, market risk and risks from Derivative Valuation Adjustments (“xVA”).

- Stress losses for credit risk are calculated as the sum of expected losses, unexpected losses and Central Counterparty Clearing House (“CCP”) add-on losses, under each scenario.
- Stress losses for market risk (including xVA) are computed by applying risk factor shocks across all asset classes (Credit, Equity, Rates, Foreign Exchange, xVA), either using purely full revaluation or a combination of full

reevaluation and a sensitivities based approach.

The risk appetite for climate risk, which is defined as a driver for market and credit risk, is set via a specific stress loss limit. For more information refer to the “Climate and Environmental Risks” section.

Existential threats to the Group’s business model are captured through the Group’s Reverse Stress Tests (“RST”). The scenarios used in RST are extreme and border-line plausible and are designed for the Group to become unviable and considered as failing or likely to fail. RST is used to inform the ICAAP, the ILAAP and is a key input for recovery planning.

Specific market events or portfolio vulnerabilities are assessed through Topical Stress Tests, such as scenarios related to the Russia and Ukraine war, to evaluate a possible impact of “downside” scenarios on the Group’s risk and resource profile.

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 Group conducts risk-specific stress tests for operational risk, market risk, credit risk and liquidity risk.

Risk reporting

The Group has put in place a Risk Reporting Framework to monitor and report the Group’s risk profile against set risk limits and tolerances and to provide timely risk information and/or escalation to responsible limit owners, the Group’s Risk Committees and the MSEHSE Group Management Boards, as appropriate. Furthermore, the Group’s Risk Reporting Framework covers all material risks, it identifies matters for escalation and decisions and highlights emerging risks, mitigating actions and other risk matters that are deemed significant to the Group’s Risk Committees 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 group level, across business lines and between legal entities. To provide this information, the

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, the Group has established a set of overarching 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. The Group’s Data Quality (“DQ”) monitoring and reporting processes are integrated into the Morgan Stanley Group’s global DQ management processes. The data quality for risk-related data is reviewed through defined KPIs which are summarised in respective DQ Dashboards for certain risk areas such as credit risk, market risk and liquidity risk. At the Group level, any material data limitations/issues on risk data goes through governance and is escalated to the MSEHSE Group Management Boards if necessary.

Detailed information about the reporting for each risk type is included in the respective risk sections on the following pages.

Internal Capital Adequacy Assessment Process

The ICAAP is a key information tool for the MSEHSE Group Management Boards to plan the Group’s capital actions, approve capital adequacy targets and limits, establish ongoing monitoring processes and internal thresholds and review identified risks in line with the business strategy. As such, the ICAAP is designed to ensure that all material risks, which the Group is exposed to, are appropriately capitalised. The ICAAP is updated at the beginning of each year in line with the annual strategic planning process as well as quarterly for material changes.

The ICAAP comprises of two capital assessment perspectives, the “Normative Perspective” and the “Economic Perspective”. While methodologies differ in forecasting horizon and objectives, the two perspectives are set up to complement and inform each other.

Normative perspective

The assessment under the Normative Perspective is conducted over a three-year planning horizon, assessing the Group's ability to fulfil all its capital-related supervisory requirements. It assesses the Group's capital adequacy under expected and stressed operating environments over the three-year capital planning horizon. It uses stress testing to size capital buffers aimed at ensuring the Group will continue to operate above regulatory requirements under a range of severe but plausible stress scenarios. The Normative Perspective takes into account all material risks affecting the relevant regulatory ratios, over the planning horizon. It is also used as a basis to set and review internal capital targets.

The Normative Perspective requires base and adverse scenarios to be assessed over the planning horizon. The Group's base scenario considers the main macroeconomic variables, including GDP growth, inflation rate changes, interest rates and currency market movements. These variables are applied on the business growth laid down in the Group's Business Strategy. In addition to the base forecast, the Group assesses its capital-related supervisory requirements in two macroeconomic stress scenarios (European Crisis and Financial Crisis). These scenarios capture the vulnerabilities of the Group's forecast portfolio comprehensively and conservatively.

To model stress capital impacts under the Normative Perspective, the Group uses internal models (refer to the "Stress Testing" section) that appropriately cover all material risk types.

Capital requirements are calculated in accordance with regulatory rules, taking into account the Group's permissions to use internal models.

In addition to capital-related supervisory requirements, internal capital ratio minima are set to ensure the Group has sufficient capital to meet its regulatory requirements at all times. Set out below are details of the Group's Capital Resources.

€ in millions	31 December 2022	31 December 2021
<i>Normative Perspective</i>		
CET1 Capital	5,069	3,412
AT1 Capital	1,000	600
Tier 1 Capital	6,069	4,012
Tier 2 Capital	1,000	1,000
Total Own Funds	7,069	5,012
Risk Weighted Assets ("RWAs")	27,760	21,221
CET1 Capital Ratio	18.3 %	16.1 %
Tier 1 Capital Ratio	21.9 %	18.9 %
Total Capital Ratio	25.5 %	23.6 %

The Group's Tier 1 Capital Ratio increased from 18.9% as of 31 December 2021 to 21.9% as of 31 December 2022 due to the capital actions totaling €1,850 million executed in 2022, primarily required to support business growth and increased market volatility.

Additional information is presented in the "Capital Management" section.

Economic perspective

In the Economic Perspective, the Group assesses its capital adequacy by ensuring that all material risks that could cause losses or have other material impacts on its capital position are quantified and adequately covered by its internal capital ("Risk Bearing Capacity" or "RBC"). In line with the ECB ICAAP guidelines, capital requirements are assessed using internal methodologies, which generally target a 99.9% loss severity over a time horizon of one year.

Credit risk: For the calculation of credit risk capital requirements, the Group employs a multifactor credit concentration model, using internal credit risk parameters for Exposure at Default ("EAD"), Probability of Default ("PD") and Loss Given Default ("LGD"). The model simulates the asset returns of the individual counterparties in a correlated manner to capture the dependency between the defaults. The default triggers are derived from the PDs of the counterparties and internal downturn LGDs are used to quantify the default losses. Counterparty credit risk ("CCR") exposures are quantified using Morgan Stanley's global Internal Model Method ("IMM") model for the calculation of Own Funds Requirements, which has a wider product scope than MSEHSE Group's IMM model. Default events are simulated using a Monte-

Carlo model, and the tail loss at a 99.9% confidence level is calculated.

Operational risk: To calculate the capital requirements related to operational risk, the Group utilises an internal loss model. Under this model, operational risk capital is calculated for each of the Group's Risk Segments, some of which are designated as Top Operational Risks ("TORs") and Top Operational Risk Pathways ("TORPs"). Standalone capital is calculated for each of the Risk Segments by fitting parametric distributions to Scenario Analysis loss estimates. To derive an aggregate loss distribution for the Group, the Operational Risk Capital Model combines the marginal loss distributions of all the Risk Segments. The 99.9% percentile of the final distribution is chosen as the loss estimate.

Market risk: Market risk capital is primarily calculated using the Group's Economic Value-at-Risk ("EVaR") and Incremental Risk Charge ("IRC"). The EVaR is calculated using historical simulation and includes xVA in its scope. The EVaR is derived as the 99.9% percentile of a loss distribution over a one-year risk horizon, which is calculated from bootstrapped returns based on 15 years of market data. A six-month liquidity horizon is used for portfolios with low market depth (such as xVA), while a three-month liquidity horizon is applied to portfolios with higher market activity or ability to hedge, such as market making portfolios. Risks Not in VaR ("RNIV") capital add-ons are also used as a component to calculate market risk capital. The IRC is calculated over the time period of one year (Pillar 1 IRC model). Refer to the "Market Risk" section for more information.

Other risks under the Economic Perspective include: Interest Rate Risk in the Banking Book ("IRRBB"), pension risk and valuation risk.

Capital requirements are conservatively aggregated without diversification benefits. Total internal capital requirements are then compared with available internal capital resources, i.e., the RBC. To calculate the RBC, regulatory Own Funds are used as the starting point and AT1 and Tier 2 capital are deducted; additionally, minor adjustments may be made to reflect other risks.

The Group aims to maintain an Economic Capital Adequacy Ratio (RBC divided by internal capital requirements) of at least 100%.

Economic Capital Adequacy is assessed on a quarterly basis.

The table below presents a comparison of internal capital (RBC) and economic capital requirements for year-end 2021 and 2022.

€ in millions	31 December 2022	31 December 2021
<i>Economic Perspective</i>		
Risk Bearing Capacity	5,053	3,365
Capital Requirements	2,870	2,237
Credit risk	1,929	1,514
Market risk	279	221
Operational risk	535	411
Other	127	91

As of 31 December 2022, the Group was adequately capitalised and reported an economic capital adequacy ratio of 176% (2021: 150%).

The Group has performed stress testing to understand sensitivities of the capital assessment to severe, but plausible macroeconomic stress scenarios. At the time of assessment, the Group remains well capitalised under these stress scenarios.

Credit Risk

Credit risk is an inherent part of the Group's business activities. Credit risk refers to the risk of loss arising when a borrower, counterparty or issuer does not meet its financial obligations. Credit risk includes country risk – i.e., the risk that economic, social and political conditions and events in a country will adversely affect a client's⁽¹⁾ ability and/or willingness to fulfil its obligations. As part of credit risk, credit concentration risk refers to the risk of loss due to an outsized exposure to a client or a group of connected counterparties in the same industry or geographic region. The assessment of credit risk also considers climate risk, in particular the credit exposure to obligors and counterparties highly vulnerable to transition and/or physical climate risks. Respective definitions and further information are disclosed in the "Climate and Environmental Risks" section.

⁽¹⁾ Client refers to a borrower, counterparty or issuer in this context.

The Credit Risk Management (“CRM”) Department reports to the CRO and is independent from the business units. It is responsible for managing and overseeing the credit risk profile of the Group. CRM has put in place a Risk Management Framework to identify, measure, control and report credit risks. Key components of the Credit Risk Framework include:

- (1) **Risk Identification:** The identification and assessment of credit risks forms an integral part of CRM and is performed on an ongoing, continuous basis. To identify and assess credit risks, CRM uses ongoing monitoring of clients’ credit quality, the utilisation of credit limits, credit risk concentrations and single factor as well as multi-factor stress results. Additionally, the New Product Approval (“NPA”) process is leveraged to identify and assess credit risks arising from new activities.
- (2) **Risk Measurement:** The measurement of credit risks primarily comprises of the analysis of clients’ credit quality and credit risk exposures generated from transactions.

The analysis of obligors’ credit quality results in the assignment of internal credit ratings which reflect the obligor’s likelihood of default and are subject to credit officer review and approval. As part of this internal rating process, each rating is linked to a single name credit limit and mapped to a specific PD. The Group has developed industry specific rating templates, of which the templates for supranationals, financial institutions, including banks and broker-dealers, and corporates are the most material. To estimate the PD, the Group maps internal ratings to S&P ratings and then applies S&P’s extensive default history to determine the PD. The Group takes different approaches to estimate PDs for its low default portfolio (“LDP”) and its non-LDP. Internal models are used to estimate the expected loss in the event of default; these include, in addition to the PD, the LGD and EAD, whereby the most material risk for the LGD is for traded products.

To measure credit risk exposures, the Group uses a list of metrics such as current and simulated future exposures, as well as single and multi-factor stress metrics and

portfolio risk sensitivities, all of which are calculated using internal models.

- (3) **Risk Appetite and Limits:** In order to ensure that credit losses remain within the defined risk appetite, CRM has implemented a Credit Limits Framework, which includes limit categories to capture single name, industry (including sub-industries such as shadow banks and climate segments), country, and product limit concentrations as well as different limit types to monitor lending, counterparty, treasury placement and other exposures to ensure appropriate governance with the different levels comprising the MSEHSE Group Management Boards, the MSEHSE Group ERC, the MSEHSE Group Credit Risk Committee and CRM.
- (4) **Risk Reporting:** All significant credit risk exposures, concentrations and limit utilisations are reported on a regular and ad-hoc basis to the MSEHSE Group ERC, the MSEHSE Group Management Boards and other interested parties.

The Group’s credit risk is mainly driven by:

- **Treasury Placements:** Credit risk arising from Treasury activities primarily relates to deposit placements at the ECB via the Deutsche Bundesbank.
- **Counterparty Risk:** Counterparty risk arises from the Group’s sales and trading business. The Group offers clients a wide spectrum of traded products, including OTC derivatives, foreign exchange, secured financing transactions and listed derivatives, all of which give rise to counterparty credit risk.
- **Lending:** Lending risk arises from extending commitments to corporate clients in the form of relationship or event loans.
- **Morgan Stanley Affiliates:** Credit risk to Morgan Stanley Affiliates results from indirect clearing, back-to-back trades with Morgan Stanley Group entities and loan sub-participations or guarantees.

To reduce credit and counterparty risks, CRM relies on standard risk mitigants including netting provisions and the provision of collateral, including with other Morgan Stanley Group undertakings. Collaterals for derivatives are mostly cash and liquid securities. Lending risk

may be mitigated through the transfer of risk to Morgan Stanley Affiliates, for example to reduce concentrations.

The Group has a limited amount of issuer risk exposures, which are managed within the market risk limits framework and feed into aggregated credit risk exposure metrics.

Consistent with its business and risk strategy, the Group's credit risk portfolio is dominated by investment grade quality obligors in the EEA.

The Group has established processes to calculate ECL for provisions in accordance with IFRS 9 "Financial Instruments". The Group's provisioning levels are not material which is a reflection of the high credit quality of the Group's loan book and the use of risk transfers within the Morgan Stanley Group.

The below table shows RWAs and EADs for credit risk as of 31 December 2022 and 31 December 2021, including Credit Valuation Adjustment risk ("CVA risk"). The RWAs calculated via the advanced capital models (Internal Model Method or "IMM" and Foundation Internal Ratings Based or "F-IRB") and under the standardised approach are shown separately. Consistent with its regulatory approvals, the Group calculates its own fund requirements for credit risk with a partial use F-IRB approach. For counterparty credit risk, the EADs, which serve as an input for the calculation of the own funds requirements according to partial use F-IRB approach, are computed with a partial use IMM approach.

€ in millions	31 December 2022		31 December 2021	
	RWAs	EADs	RWAs	EADs
Credit risk ⁽¹⁾	2,622	18,916	3,262	13,449
Of which, internal models (F-IRB)	2,028	2,801	2,674	13,123
Counterparty credit risk (excluding CVA risk) ⁽²⁾	12,270	21,189	7,148	20,056
Of which, internal models (IMM)	8,165	11,503	4,651	9,808
Total (excluding CVA and Settlement risk)	14,892	40,105	10,410	33,505
Credit Valuation Adjustment (CVA risk)	3,211	9,108	3,561	7,469
Settlement risk	45	12	336	55
Total	18,148	49,225	14,307	41,029

⁽¹⁾ Credit risk from lending, treasury and other sources of credit risk.

⁽²⁾ Exposures subject to Equity IRB approach are reported under Credit Risk. Exposures to central counterparties are reported under Counterparty credit risk.

The Group has implemented a Credit Limits Framework to monitor credit concentration risk. Credit risks are primarily concentrated in treasury and counterparty exposures with regional focus on EU 27-countries, UK and the US. From a counterparty perspective, the credit portfolio is primarily concentrated in Financials and Governments and from a country perspective in the UK, the US and Germany whereas treasury exposures are mostly driven by cash balances placed with central banks. Overall, the country risk evaluation includes a determination of Country of Risk and Country of Jurisdiction. The Country of Risk is the country whose political, economic and commercial environment most affects an entity's ability to meet its obligations. The Country of Jurisdiction is defined as the country of registered incorporation or formation of the obligor. For calculation purposes, the breakdown in the following table is based on the Country of Risk whilst the Industry classifications are based on

the Global Industry Classification Standards ("GICS").

The following tables provide an overview of the Group's industry and country concentration, whereby the exposure metric used is consistent with internal credit risk management. This metric captures exposure from Treasury placements, lending commitments and trading activities, offset by credit risk mitigants such as collateral.

Breakdown per industry

Exposure € in millions	31 December 2022	31 December 2021
Financials	6,557	5,249
Governments	16,022	8,482
All others	4,190	3,538
Total⁽¹⁾	26,769	17,268

⁽¹⁾ Exposures to Morgan Stanley Group Affiliates are excluded.

Breakdown per
country

Exposure € in millions	31 December 2022	31 December 2021
France	3,359	2,794
US	3,052	2,374
UK	1,925	1,242
Germany	1,607	1,452
All others	3,932	3,487
Total⁽¹⁾	13,875	11,349

⁽¹⁾Exposures to Supranationals are excluded.

The Group's credit risk remained within risk appetite for 2022, as in 2021. The impact of the Russia and Ukraine war and associated energy crisis on credit risk exposures and obligors' credit quality was a key focus throughout 2022.

At the inception of the war between Russia and Ukraine, on-shore agent bank balances in Russia were materially reduced and residual counterparty exposures were de-risked. No credit losses were incurred. To capture second order impacts on other parts of the portfolio, selected counterparties were added to an internal focus list for heightened monitoring. The overall increase in volatility across interest rates, foreign exchange, inflation and commodities led to selected single name and portfolio exposure increases, for which appropriate mitigation actions were taken. The continued impact of the war on both credit risk exposures as well as obligors' credit quality will remain a key focus throughout 2023.

Market Risk

Market risk is an inherent part of the Group's business activities. Market risk is the risk that a change in the level of one or more market prices, rates, indices, volatilities, correlations or other market factors, such as market liquidity, will result in losses for a position or portfolio owned by the Group. This includes risks from xVA, which refers to the risk of changes in derivative valuation adjustments due to changes in credit spreads and other market factors. Market risk includes the consideration of financial risk arising from climate change. Further, market risk includes non-traded market risk such as IRRBB.

Price risk arises for example, in trading portfolios, lending portfolios measured at fair value and associated mark-to-market hedges.

The Market Risk Department ("MRD"), which is independent from the business units, has put in place a Risk Management Framework to identify, measure, control and report market risks. Key components of the Market Risk Framework include:

- (1) Risk Identification: To identify and assess market risks, MRD monitors significant changes in the market risk profile, limit utilisation, risk concentrations as well as stress tests results.
- (2) Risk Measurement: Market risks are measured by simulating shocks for a selection of input market parameters from securities and derivatives valuation models, the results of which are used as standard risk sensitivities and stress testing measures. MRD measures market risks using the internal Value at Risk ("Management VaR"), Regulatory VaR, Regulatory Stressed VaR ("SVaR") and IRC models. The VaR models are maintained to be measured against limits and used for capital requirement purposes. For the VaR models, a potential loss over a given time horizon (1 day or 10 days) and confidence interval (95% or 99%) is used. For the Regulatory SVaR, the same methodology and portfolio composition as Regulatory VaR is used, however, the Regulatory SVaR is based on a continuous one-year historical period of significant market stress which is recalibrated on a regular basis. For the IRC model, a potential loss from default and migration risk of unsecuritised credit products in the trading book over a one-year time horizon and 99.9% level of confidence is used.
- (3) Risk Appetite and Limits: To ensure that market risk losses remain within risk appetite, MRD has established overarching VaR limits as well as sensitivity limits for individual market risk factors.
- (4) Risk Reporting: All significant changes in market risk exposures, market risk concentrations and market risk limit utilisations are reported on a regular and ad-hoc basis to the MSEHSE Group ERC, the MSEHSE Group Management Boards and other interested parties.

Interest rate risk is inherent in the business of financial institutions. Interest rate risk is the exposure of the Group's financial condition

arising from adverse movements in interest rates both in absolute and relative terms. IRRBB is defined as the risk of losses arising from adverse changes in the interest rate curves within the defined banking book population either from a present value (Delta Economic Value of Equity or "Delta EVE") or Net Interest Income (Delta Net Interest Income, or "Delta NII") perspective. IRRBB arises from interest rate exposures derived from traditional treasury and banking activities such as customer lending as well as inter-affiliates borrowing and lending. The MRD and the Group's Treasury Department are responsible for the monitoring and control of these exposures through the calculation of the measures Delta EVE and Delta NII. As of 31 December 2022, IRRBB exposure is a small component of the Group's market risk profile. It is monitored daily and reported at least quarterly to senior management. Both, Delta EVE and NII are subject to risk limits to ensure the IRRBB remains within the Group's Risk Appetite.

The following table presents the results for the regulatory prescribed scenarios as of 31 December 2022:

	31 December 2022
€ in millions	Delta EVE
Parallel shock down	(5.4)
Parallel shock up	2.7
Flattener shock	1.2
Steeper shock	(2.9)
Short rates shock down	(5.2)
Short rates shock up	2.6

As of 31 December 2022, IRRBB was approximately 0.09% of CET1 capital under the Delta EVE perspective with "Parallel shock down" as the relevant scenario as it results in the highest loss.

The Group's market making activities in Euro interest rate swaps, European government bonds, Euro inflation swaps as well as automated market making of European bonds and stocks are risk managed within the Group. Risk from xVA is also hedged by a dedicated trading desk within the Group which manages exposures coming from counterparties such as credit and funding risk. The main risk factors resulting from these exposures are credit, interest rates, funding basis, equity and foreign exchange related exposures. The organic growth of the client activity in the EEA led to an increase in xVA risk.

The Group uses the Management and Regulatory VaR to assess portfolio market risk. The Regulatory VaR is calibrated and scoped using regulatory requirements to capitalise for market risk and is subject to a daily backtesting calculation validating the accuracy of the model. In addition, the Management VaR is used for internal risk management purposes to ensure the Group's risk appetite stays within approved limits. The average total Management VaR of the Group for the year 2022 was €3.9 million (2021: €2.1 million), equally driven by credit sensitivity from xVA as well as interest rate and basis risk from fixed income trading activities.

The following shows the market risk RWAs as of 31 December 2022 and 31 December 2021, as calculated using the advanced capital model (Internal Model Approach, "IMA") and under the standardised approach, where applicable. Consistent with its regulatory approvals, the Group currently uses the advanced capital model for the calculation of own funds requirements for market risk.

RWAs	31 December 2022	31 December 2021
€ in millions		
Standardised approach	81	42
Internal model approach ⁽¹⁾	8,522	6,239
Total	8,603	6,281

(1) Including RWAs for Risk not in VaR ("RNIV")

The increase in RWA is attributable to the increase in market volatility as well as higher interest rate, inflation and credit exposures related to the expansion of market making activities. Additionally, RWA increased due to discounting valuation adjustments on highly collateralised exposures.

The Russia and Ukraine war has triggered a significant increase in market volatility. In particular, rapid jumps in energy prices, heightened inflation and the sharp rise of interest rates across European and North American economies have affected market volatility. The Group has ensured that appropriate mitigation actions were taken to remain within the Group's risk appetite throughout 2022. The continued impact of the increased market volatility on market risk exposures will remain a key focus throughout 2023.

Liquidity Risk

Liquidity risk is an inherent part of the Group's business activities. Liquidity risk is the risk that the 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.

Liquidity risks from the Group's business activities primarily arise from OTC and listed derivatives as well as lending. These liquidity risks are covered by the Group's liquidity resources. Intraday risk continues to be a key driver of liquidity risk for MSEHSE Group and remains a core focus area.

The responsibility for daily liquidity management sits within Treasury, while the Liquidity Risk Department ("LRD") is responsible for the oversight of liquidity risk arising from the Group's business activities. LRD has put in place a Risk Management Framework to identify, measure, control and report liquidity risks arising from business activities. Key components of the Liquidity Risk Framework include:

- (1) Risk Identification: The identification and assessment of liquidity risks forms an integral part of the Group's liquidity risk management and is performed on an ongoing basis, considering risks to the financial condition or overall soundness in a business-as-usual environment and in stress conditions. To identify and assess liquidity risks, LRD uses ongoing monitoring of limit utilisations, regulatory as well as internal liquidity risk metrics, including the Internal Liquidity Stress Test ("ILST") results. Additionally, the NPA process is leveraged to identify and assess liquidity risks arising from new activities.
- (2) Risk Measurement: Liquidity risks are measured using established methods and processes for the assessment of current and projection of future cash and securities flows over various time horizons (including intraday) in business-as-usual and stress scenarios. Key metrics include the Liquidity Coverage Ratio, the Net Stable Funding Ratio and the coverage of assumed cash

outflows under internally developed liquidity stress scenarios as part of the ILST, which consider market wide idiosyncratic as well as combined stress scenarios.

- (3) Risk Appetite and Limits: Risk Appetite for Liquidity Risk is expressed via Liquidity and Funding Limits, which are owned by the MSEHSE Group Management Boards and which consist of the excess liquidity limit for the most binding of the ILST scenarios, for a period of one day up to 12 months with limited reliance on parent support beyond month one, or the LCR and NSFR Funding Limit. In order to ensure that liquidity outflows under stress remain within the defined risk appetite, LRD has implemented a Liquidity Risk Limit Framework comprising of excess liquidity requirements over regulatory and internal stress requirements as well as minimum cash and business unit level limits and Key Risk Indicators ("KRIs").
- (4) Risk Reporting: The monitoring of adherence to relevant regulatory requirements, internal limits and KRIs, including ensuring sufficient levels of highly liquid assets is reported on a regular and ad-hoc basis to the MSEHSE Group ERC, the MSEHSE Group Management Boards and other stakeholders.

The LCR, per the Delegated Act (EU) 2015/61 as a supplement to the CRR, is a regulatory stress test with the objective of promoting short-term resilience of the Group's liquidity risk profile by ensuring that it has sufficient high-quality liquid assets ("HQLA") to withstand a significant stress scenario lasting 30 days. The Group's LCR exceeded the regulatory minimum requirement as of 31 December 2022 and 31 December 2021. The details of the Group's LCR are presented in the following table:

€ in millions	31 December 2022	31 December 2021
HQLA	16,801	9,349
Cash Outflows	18,248	9,380
Cash Inflows	6,653	5,861
Net Outflow	11,595	3,519
LCR Ratio	145 %	266%

High quality liquid assets and cash outflows both increased during 2022 due to the significant increase in deposits received from other Morgan Stanley Group affiliates, which were

subsequently deposited at the Deutsche Bundesbank. Another driver of increased total cash outflows was increased business activity. As of 31 December 2022, the Group's HQLA comprises cash balances with central banks and government bonds.

The NSFR is another regulatory metric which measures the stability of the Group's funding profile over a one-year time horizon, as determined by the prescribed factors assigned to on-balance sheet and specific off-balance sheet assets (Required Stable Funding or "RSF") and liabilities (Available Stable Funding or "ASF"). It complements the LCR by requiring the Group to maintain minimum amounts of stable funding to support the Group's assets, commitments and derivatives exposures over the one-year horizon. As of 31 December 2022, the Group's NSFR ratio exceeded the regulatory minimum requirement as in the previous year.

The Group further uses Liquidity Stress Tests to model external and intercompany liquidity flows across multiple scenarios over a range of time horizons. The ILST is designed to simulate severe but plausible stress conditions with eligible liquidity resources having to exceed ILST requirements for a period of one day up to 12 months with limited reliance on parent support beyond month one.

As of 31 December 2022, the Group maintained sufficient liquidity to meet current and contingent funding obligations as modelled in its Liquidity Stress Tests.

Operational Risk

Operational risk is defined as the risk of loss, or damage to the Group's reputation, resulting from inadequate or failed processes or systems, human factors or from external events (e.g., fraud, theft, legal and compliance risks, cyber-attacks or damage to physical assets). This includes legal risk and risks arising from Environmental, Social and Governance factors (e.g., climate risk) but excludes strategic risk.

Primary responsibility for the management of operational risk is with the business units, the support and control functions, and the business managers therein. The business managers maintain processes and controls designed to identify, assess, manage, mitigate and report operational risk. In the event of a new product or a business activity, operational risks are

considered and any necessary changes in processes or controls are implemented.

The Operational Risk Department ("ORD"), which is independent from the business units, is responsible for the assessment and monitoring of operational risks. ORD has put in place a comprehensive Risk Management Framework to identify, measure, control and report operational risks arising from business activities. Effective operational risk management is essential to reducing the negative impact of operational risk incidents and mitigating legal and regulatory risks. The Framework is continually evolving to account for changes in the Group and to respond to the changing regulatory and business environment. Key components of the Operational Risk Framework include:

- (1) Risk Identification: Operational risk data and assessment systems are employed to monitor and analyse internal and external operational risk events, which are captured in dedicated databases to assess business environment as well as internal control factors and to perform scenario analysis. Internal operational risk events are captured in the Morgan Stanley Group's internal loss database. Operational Risk and Control Self-Assessments ("RCSA") are a key instrument for operational risk identification. RCSAs are executed by the business units while the ORD oversees the process and challenges the results.
- (2) Risk Measurement: Internal capital requirements for operational risks are measured using an operational risk capital model which encompasses both quantitative and qualitative assessments. The quantitative results are based on scenario analysis results, which are direct inputs into the model, while internal and external operational incidents, business environment and internal control factors are evaluated as part of the scenario analysis process.
- (3) Risk Appetite and Tolerances: To ensure that potential losses remain within the defined risk appetite the MSEHSE Group Management Boards have set risk tolerance levels for the Group in aggregate and for all Top Operational Risks. ORD monitors that tolerance levels are not exceeded through a combination of loss projections from scenario analysis and realised operational risk losses. As of

31 December 2022, the binding scenario resulted in a scenario loss of €47 million.

- (4) Risk Reporting: All significant Operational Risk Incidents and the operational risk profile relative to the tolerance level are reported on a regular and ad-hoc basis to the MSEHSE Group ERC, the MSEHSE Group Management Boards and other stakeholders.

Regulatory own funds requirements for operational risk are currently calculated under the Basic Indicator Approach (“BIA”). As of 31 December 2022, the Group’s operational RWAs were €1,005 million (2021: €632 million). The 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 (refer to the operational risk figure disclosed in the table in the “Internal Capital Adequacy Assessment Process” section, “Economic perspective” sub-section).

The Group holds sufficient capital to cover the incremental capital requirement over and above the Pillar 1 requirement for Operational Risk.

The ORD scope also includes oversight of technology risk, cybersecurity risk and information security risk. ORD partners with the MSEHSE Group Anti Money Laundering and Fraud Prevention Officer to oversee fraud risk. ORD, in conjunction with the COCO, oversees third party risk (supplier and affiliate risk).

Cybersecurity

The Group’s Cybersecurity and Information Security Framework, which includes policies, procedures and technologies, is designed to protect the Group’s own data, client data and the Group’s employee data against unauthorised disclosure, modification or misuse and is also designed to address regulatory requirements. This Framework covers a broad range of areas including the following: identification of internal and external threats, access control, data security, protective controls, detection of malicious or unauthorised activity, incident response and recovery planning.

Business Continuity Management and Disaster Recovery

Morgan Stanley Group’s Resilience organization maintains global programs for Business

Continuity Management (“BCM”), Disaster Recovery (“DR”) and Third Party Resilience and Key Business Service Resilience that facilitates activities designed to protect the Morgan Stanley Group during a business continuity incident. A business continuity incident is an interruption with potential impact to normal business activity of the Morgan Stanley Group’s personnel, technology, suppliers and/or facilities. These programs require plans to be documented that identify and detail the options available to recover assets and services during an incident. Additionally, plans are required to be tested to provide a reasonable expectation that, during a business continuity incident, the Business Unit will be able to recover and perform its critical business processes and limit the impact of the incident to the Morgan Stanley Group, its clients and financial markets. As a part of Morgan Stanley Group’s Resilience organization, the MSEHSE Group has dedicated staff responsible for management of the aforementioned programs, which are governed by the Business Resilience Governance Committee. In addition, the MSEHSE Group Management Boards oversee the program implementation at the MSEHSE Group level.

Third party risk management

In connection with its ongoing operations, the Group utilises the services of third party suppliers which include other Morgan Stanley Group undertakings as well as external third party vendors. The Group mostly utilises the services of other Morgan Stanley Group undertakings as they are subject to the same global standards and frameworks. These services include, for example, outsourced processing and support functions and other professional services. The Group’s risk-based approach to managing exposure to these services includes the execution of due diligence, risk assessments, implementation of service level and other contractual agreements as well as consideration of operational risks and performance of ongoing monitoring and supervision of the third party suppliers’ performance. In addition, a dedicated Second Line of Defence control function (COCO) reviews adherence to applicable regulatory requirements. The Group maintains a third and fourth party inventory and an Outsourcing and Sourcing Framework which includes governance through policies, procedures, templates and technology and is designed to meet applicable regulatory requirements and be in line with the

Morgan Stanley Group's third party risk management program.

Model Risk

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 the Group's reputation.

The independent Model Risk Management ("MRM") department performs the Second Line of Defence function with the objective that all models in use are fit for purpose and establishes the standards, principles and practices, governance processes, definitions, roles and responsibilities for sound model risk management. Key components of the Model Risk Framework include:

- (1) Risk Identification: MRM employs model identification and tiering frameworks, aligning model risk management activities with the level of models' inherent risk.
- (2) Risk Management and Monitoring: MRM conducts independent review and validation of models to verify that the models are performing as expected and in line with their designed objectives and intended use. Ongoing monitoring ensures that models continue to perform consistently with their intended purpose and that the outputs of models remain reliable.
- (3) Risk Appetite and Tolerances: To ensure that model risk does not pose a material risk to capital adequacy, reputation and regulatory standing, model governance and control processes have been established.
- (4) Risk Reporting: MRM reports on model risk to the MSEHSE Group Model Oversight Committee and provides a quarterly report on model risk to the MSEHSE Group ERC and the MSEHSE Group Management Boards.

The Group uses internal models for valuation, risk management and capital calculations. Valuation models include models that are used to produce valuation and/or risk measures for end of day books and records related to a position and models that are used to adjust a portfolio's value. Risk models are used for the

measurement and management of credit risk, market risk, counterparty risk, operational risk and liquidity risk, for stress testing, and for the calculation, planning and management of regulatory and internal capital requirements.

Conduct Risk

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 Group where the outcome has an adverse impact on clients or markets.

The Group's independent Compliance Division is responsible for the design and development of a Conduct Risk Framework and for the execution of compliance-related responsibilities as defined in the Group's policies and procedures. A consistent global framework is in place for managing conduct risk and Conduct Risk Incidents ("CRIs") including within the Group.

Key components of the Conduct Risk Framework include:

- (1) Risk Identification: Business units as well as support and control functions are responsible for identifying, assessing, managing and recording the conduct risks, which arise from their current or planned strategies and activities.
- (2) Risk Management and Monitoring: Internal controls and processes have been established to manage conduct risks identified. CRIs are identified and escalated through a range of processes within the First, Second and Third Lines of Defence. A review will be performed by the appropriate division and recommendations made to relevant decision-makers on next steps.
- (3) Risk Appetite and Tolerances: The Group does not have an appetite for conduct risk. However, the Group acknowledges that it remains inherent in the Group's products, activities, processes and systems and, therefore, cannot be eliminated entirely.
- (4) Risk Reporting: Processes have been established to ensure reporting of risks and incidents as well as prompt escalation and appropriate notification. The Group's Head of Compliance attends the Europe, Middle

East and Africa (“EMEA”) Conduct Risk Committee and reports to the MSEHSE Group Management Boards periodically on the Group relevant conduct matters and on developments in the Conduct Risk Framework as well as on developments in the applicable regulatory environment.

The MSEHSE Group Management Boards hold executive management accountable for compliance with business conduct risk standards through a variety of measures and controls.

Compliance Risk

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 organization standards and codes of conduct applicable to the Group’s activities.

The Group’s independent Compliance Division is responsible for identifying applicable compliance risks and obligations as well as for establishing and maintaining a compliance risk management program for the Group. All of the Group’s businesses and operations are subject to the compliance risk management program. Key components of the compliance risk management programme include:

- (1) **Risk Identification:** Business units as well as support and control functions are responsible for identifying, assessing, managing and reporting compliance risk. The Group’s Compliance Division completes an annual Compliance Risk Assessment for the Group to identify material compliance risk.
- (2) **Risk Management and Monitoring:** The annual Compliance Risk Assessment for the Group evaluates compliance risks and is reported to the MSEHSE Group Management Boards. In addition, the Compliance Division subsequently develops an Annual Compliance Plan for the Group that prioritises Compliance Division activities (including Compliance monitoring) based on the Compliance Risk Assessment and other inputs, as appropriate.
- (3) **Risk Appetite and Tolerances:** The Group seeks to comply with applicable laws, rules

and regulations. The Group has no appetite for transactions, business activities, or conduct by employees, contingents, customers, or counterparties that give rise to a significant breach of the Group’s compliance obligations.

- (4) **Risk Reporting:** The Group’s Compliance Division reports to the MSEHSE Group Management Boards on a quarterly basis on compliance risk, significant regulatory compliance related developments and the progress of the Annual Compliance Plan. The Group’s Compliance Division also produces an annual Compliance report which is reviewed by the Management Boards.

Climate and Environmental Risks

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

The Morgan Stanley Group divides climate and environmental risks into 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 Group may be exposed to litigation risk or reputational risk losses arising from reliance on statements or representations in relation to Environmental, Social and Governance ("ESG") matters, which are later discovered to be incorrect or misleading.

Managing climate and environmental risks

Climate and environmental risks are managed by integrating climate change and other environmental considerations 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 integrated into policies and procedures. The MSEHSE Group Risk Management Framework continues to be developed to meet the requirements set out in new and evolving regulations.

Risk identification and materiality assessment

Materiality assessment in the short-term

As part of its established Risk Identification and Materiality Assessment process, the Group performed a granular risk assessment of short-term climate and environmental risks. This includes:

- **Risk inventory:** The risk inventory captures climate and environmental risks as drivers of existing risks. In 2022, 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 policy (management of water stress, biodiversity protection and reduction of pollution); and 2) climate physical risk (heat stress, wildfire, river floods, sea level rise and coastal floods and violent weather). In addition, the Group has assessed the impact of climate and environmental risks on litigation, reputational 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 2022 for the MSEHSE Group, climate transition risk driven by carbon repricing or an accelerated green energy technology transition was assessed as material for credit risk exposures. Climate transition and physical risks were assessed as non-material for MSEHSE Group collateral positions. 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. As the assessment is performed quarterly, the materiality assessment may change in the future.

Materiality assessment in the long-term

The Group also performed a long-term assessment of climate risks. 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.

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 Climate Stress Loss Limit ("CSLL") across credit and market risks which is reviewed on an annual basis.

In addition to the Climate Stress Loss Limit, climate risk is incorporated into the Credit Risk Management Framework through industry sector limits as well as country and borrower 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 manage portfolio risk appetite via the CSLL. To monitor

potential credit and market risk losses against this limit, the Group runs a short-term transition risk carbon repricing scenario assuming that a global effort to address carbon emissions leads to a sudden and sustained carbon repricing across all countries. The results of this scenario are reported to the MSEHSE Group ERC and the MSEHSE Group Management Boards on a monthly basis.

- **Industry Sector Limits:** Credit risk limits are established for industries 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 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.
- **Borrower 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 Group includes an assessment of ESG risks in the lending transaction approval documentation in line with the European Banking Authority's guidelines on loan origination and monitoring.

Liquidity and operational risk limits: Climate risk

In 2022, climate risks are assessed as non-material for liquidity and operational risk. Hence, 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 2022, other environmental risks were assessed as non-material for credit, market, liquidity and operational risk. Hence, 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 Group's Climate Risk Management Framework.

- **Short-term credit and market risk scenario analysis:** Informed by carbon emissions data from external providers, the Group assesses the financial impact of climate policy (carbon repricing) in a scenario that captures both counterparties' probability of default 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. Physical risk vulnerabilities are assessed on a quarterly basis and as of 2022 are deemed as non-material. As transition risk is a material credit risk, a Climate Stress Loss Limit was established for a transition risk scenario.
- **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.
- **Reverse Stress Testing:** The Group has developed a reverse stress test focused on physical risk of sea level rise. The scenario losses are below the Group's reverse stress testing outcome definition.
- **Long-term strategy scenarios:** The Group conducted an exploratory long term scenario analysis, running two 30-year quantitative scenarios modelling late action (transition risk) and no additional action (physical risk) to inform the Group's materiality assessment and business strategy.

Metrics

Climate Stress Loss Limit

The Group remained within its portfolio Climate Stress Loss Limit throughout 2022.

Credit exposures

The 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 comprise 8% and 4% of the Group's aggregate credit and counterparty risk net exposure, respectively. 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

Climate Risk	2022		2021	
	Exposure	% of Portfolio Total	Exposure	% of Portfolio Total
€ in millions				
Transition Risk	2,088	8%	1,945	11%
Physical Risk ⁽¹⁾	971	4%	784	5%
Portfolio Total ⁽²⁾	26,769		17,268	

⁽¹⁾ The industries identified as having high climate physical risk were updated in 2022. The 2021 figures included in this table have been re-stated 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 (high and very high presented in the table). The segments are sub-industries with consistent climate risk profile. The assessment considers expert credit assessment, greenhouse gas emissions data and external physical risk scores.

Other Material Risks

In addition to the above risks, the Group has put in place a framework to identify, measure, control and report on the following other material risks:

- **Leverage risk:** Leverage risk is defined as 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 that might result in losses or in valuation adjustments to its remaining assets.

- **Valuation risk:** Valuation risk represents the possibility that a valuation estimate of a position measured at fair value would differ from the price in an actual transaction on the same terms at the reporting date.
- **Earnings at risk and Strategic risk:** Earnings at risk and Strategic risk are defined as the risk to earnings posed by falling or volatile income ("Earnings at risk"), and the broader risk of a legal entities' business model or strategy proving inappropriate due to macroeconomic, geopolitical, industry, regulatory, climate change or other factors ("Strategic risk").
- **Reputational risk:** Reputational risk (also referred to as "Franchise risk") describes potential risks associated with the way in which the Group conducts its business and the perception of the Group by external parties including its shareholders, clients, regulators and the public.

Risk Summary

The Group's risk strategy and risk appetite are aligned with the Group's business strategy as well as capital and liquidity resources and are embedded into risk management processes. The Group's risk bearing capacity was sufficient at each quarter-end during 2022. In addition, the Group's capital and liquidity are deemed sufficient to exceed regulatory minimums under both normal and in stressed market environments. Adequate capital and liquidity were maintained as of 31 December 2022. Whilst periods of heightened market volatility were observed in 2022 due to the Russia and Ukraine war and the associated energy crisis, strong inflationary pressures and sharp increases in interest rates, the Group remained within the set risk appetite. The Group's Risk Management Framework and the Group's Risk Governance structures are effective and commensurate with the size and complexity of the Group's risk profile and the Group's Risk Division is appropriately staffed with experienced risk managers.

Opportunities and Outlook

The outlook for global markets and economic environment, summarized in this section, represents the Group's and the Company's internal projections and expectations based upon propriety models and research as of March 2023. The assumptions underpinning particular forward-looking statements are disclosed where appropriate.

Global markets and economic outlook

Global growth is expected to slow down from 3% in 2022 to 2.6% in 2023, at a level below potential and in a territory that is typically seen as recessionary. Consumption is expected to remain weak and tighter monetary policy to weigh negatively on the world economy. While supply chain impasses have largely receded, tendencies to focus economies on domestic growth and reduce strategic dependencies are notable headwinds for growth in 2023. The ongoing war between Russia and Ukraine continues to be a source of significant uncertainty. Europe's transition away from Russian energy towards a greener economy will be key in shaping the economic outlook for the years to come.

For some time, Europe lagged other key regions in its economic recovery, catching up only around the middle of 2021, when it grew at a stronger pace than the US and China. This trend has also continued in 2022, albeit at a more muted pace than expected at the beginning of 2022, mainly due to the impact from the Russia and Ukraine war. Growth is set to weaken significantly in 2023 and the Euro area is expected to stagnate in the first quarter of 2023, widening the gap to the US and China. Weak consumption and subdued investment demand, set in a challenging global background with weak external demand and tightening monetary policy will likely prevent a strong rebound. Euro area GDP is expected to expand below potential both in 2023 and 2024. From a medium-term perspective, the required acceleration of the energy transition and associated investments appear to provide a promising path to higher growth. The ongoing progress in the implementation of the Next Generation EU Recovery Fund, while slower than originally envisaged, should also contribute to an increase in potential growth. Finally, Euro area economies will have to confront the issue of

changing demographics over the next decade, before shrinking labour forces start weighing on the potential growth of many Euro area economies.

Business priorities

Despite the macroeconomic headwinds the Company continues to see opportunities for its products and services with existing and new clients. Specifically, MSESE sees business opportunities in its stable and sustainable client relationships, its strategic advisory approach, its extensive product range, and its ability to deliver the Integrated Investment Bank to its clients. The Company will focus on maintaining its strong position in Investment Banking across advisory as well as capital markets activities, both on the debt and equity side. The Company expects an uptick in client interest to strengthen their balance sheet positions as further clarity on monetary policy and softening of inflation outlook globally provides certainty to clients. After a challenging and uncertain year for Global Capital Markets in 2022, the Company expects improved levels of debt and equity capital market activity in 2023. In this context, MSESE will continue to monitor the impact on the Company's risk profile and risk appetite closely to ensure the Company's risk management framework remains aligned to its business strategy.

The following forward-looking statements are disclosed on a MSEHSE Group level, at which the KPIs and the strategy of the Group and its subsidiaries are managed. They remain applicable to MSESE.

Financial projections

The MSEHSE Group forecasts a significant increase in PBT in 2023 in comparison to 2022, due to the higher interest rate environment and the assumption of increased underwriting revenues as client activity normalises. This will have a limited impact on ROE, which will stay broadly flat, as the increase in PBT is forecast to be largely offset by the impact of capital issuances required to support the expanded market risk management of EU products (see below). Efficiency Ratio is forecast to moderately decrease in 2023, as are the Tier-1 Capital Ratio and NSFR, reflecting expected

growth in business, balance sheet and capital. Tier-1 Capital Ratio and NSFR will remain well above the regulatory minimums. The forecast for LCR is to moderately increase due to reduced unsecured funding requirements as a result of the increased capital base.

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

The Group expects to remain in compliance with all capital requirements as its business continues to grow.

Regulatory Developments

Finalising Basel III reforms

The Basel Committee on Banking Supervision (“BCBS”) sets the standard for international banking prudential regulation in a series of accords (“Basel Accords”), that are implemented in the EU through the CRR and the CRD as well as standards issued by the European Banking Authority (“EBA”) and the ECB.

Following the impact of the COVID-19 pandemic on the global banking system, the BCBS has decided to defer the remaining standards of the Basel III reform package (referred to as “Finalisation of Basel III”) by one year to 1 January 2023. The key remaining amendments include revised market RWA requirements through the Fundamental Review of the Trading Book, new CVA RWA requirements, revisions to the credit RWA calculations covering both standardised and advanced treatments, and a new RWA requirement for operational risk. They also introduce an aggregate floor for RWA generated by the internal models, which will be set at 72.5% of total standardised RWA. The output floor will be phased in over five years. Banks will also need to disclose their RWA based upon the standardised approaches.

In October 2021, the European Commission published a proposal of amendments, known as the CRR III and CRD VI, to implement these final standards. There is a proposed effective date of 1 January 2025, but the final timing and impact remain uncertain.

The final EBA Guidelines on Interest Rate Risk arising from non-trading book activities (“IRRBB”) will apply incrementally from 30 June 2023 and 31 December 2023. These specify how to deal with risks arising from changes in interest rates and with credit spread risk of non-trading book activities and complete the onboarding into EU law of the BCBS IRRBB standards.

ESG

The Sustainable Finance Disclosure Regulation (Regulation (EU) 2019/2088, “SFDR”) entered into force on 29 December 2019 with most provisions applying from 10 March 2021. Under the SFDR Level 1 requirements, MSESE, as a financial advisor (as defined under SFDR), provides certain disclosures on its website including: information on whether sustainability risks are integrated into investment advice, information on whether MSESE considers principal adverse impacts on sustainability factors of the investment advice provided, and information on how remuneration policies are consistent with the integration of sustainability risks. These disclosures are located on the website at https://www.morganstanley.com/content/dam/msdotcom/global-offices/MSESE_SFDR_disclosure.pdf.

The Taxonomy Regulation (Regulation (EU) 2020/852, “Taxonomy Regulation”) entered into force on 12 July 2020 and establishes criteria for determining whether an economic activity is “environmentally sustainable”. Article 8 of the Taxonomy Regulation requires organisations subject to the Non-financial Reporting Directive (“NFRD”) to report on how and to what extent their activities are associated with environmentally sustainable economic activities. MSESE is subject to Taxonomy Regulation reporting requirements from the financial year ended 31 December 2022.

On 28 November 2022, the European Commission adopted the CSRD which replaces the existing reporting requirements of the NFRD. The CSRD extends the scope of entities required to report on non-financial matters and introduces a requirement to report according to mandatory EU sustainability reporting standards.

The CSRD was published in the Official Journal of the EU on 16 December 2022 and EU Member States have 18 months to transpose the CSRD into their national laws. The

requirements will apply to financial years commencing on or after 1 January 2024, with disclosures required by MSESE for the financial year ending 31 December 2024.

Disclosures in accordance with section 340a (1a) HGB in conjunction with section 289b (2) HGB

The Company is exempted from the obligation under section 340a (1a) HGB to draw up a non-financial statement as it meets the requirements under section 289b (2) HGB. The MSEHSE Group Consolidated Management Report in German language is available at <http://www.bundesanzeiger.de>.

ANNUAL FINANCIAL STATEMENTS

Balance Sheet as at 31 December
2022

Income Statement for the period
from 1 January to 31 December
2022

Cash Flow Statement for the period
from 1 January to 31 December
2022

Notes

€ in millions	Note	2022	2021
Cash reserve			
a) Balances with central banks	4	14,744	—
thereof: with Deutsche Bundesbank €14,744 million (2021: €0 million)			
Amounts due from credit institutions	5, 6		
a) Due on demand		5,240	7,580
b) Other amounts due		195	—
		5,435	7,580
Amounts due from customers	5, 6	12,141	14,055
thereof: loans granted to local authorities €120 million (2021: €114 million)			
Trading portfolio	8	35,486	17,521
Investments in affiliated companies	9	603	603
thereof: credit institutions €603 million (2021: €603 million)			
Intangible assets	9		
a) Goodwill		42	70
Property, plant and equipment	9	20	27
Other assets	10	441	603
Prepaid expenses and deferred charges		2	1
Total assets		68,914	40,460

€ in millions	Note	2022	2021
Amounts due to credit institutions	5, 6		
a) Due on demand		11,440	3,411
b) With an agreed maturity or term		501	—
		11,941	3,411
Amounts due to customers	5, 6		
a) Other liabilities			
aa) Due on demand		13,747	12,908
ab) With an agreed maturity or term		2,375	1,943
		16,122	14,851
Trading portfolio	8	33,448	16,926
Other liabilities	10	309	266
Deferred income		7	7
Provisions	12		
a) Provisions for pensions and similar obligations		11	15
b) Provisions for taxation		31	16
c) Other provisions		115	104
		157	135
Subordinated debt	13	1,006	1,002
Fund for general banking risks	8	26	1
thereof: special items according to Section 340e (4) HGB €26 million (2021: €1 million)			
Instruments for Additional Tier 1 Regulatory Capital	14	1,000	600
Equity capital (shareholder's fund)	1, 15		
a) Subscribed capital		3,901	451
b) Capital reserve		931	2,786
c) Revenue reserves		24	2
d) Retained earnings		42	22
		4,898	3,261
Total liabilities and equity		68,914	40,460

€ in millions	Note		2022	2021
Interest income from credit and money market transactions	16	181		(29)
thereof: negative interest income €29 million (2021: €63 million)				
Interest expenses	16	274		33
thereof: positive interest expenses €35 million (2021: €64 million)				
			(93)	(62)
Income from profit sharing, profit transfer or partial profit transfer agreements	17		53	0
Commission income	18	444		567
Commission expenses	18	90		74
			354	493
Net income of the trading portfolio	19		223	11
thereof: special items according to Section 340e (4) HGB €25 million (2021: €1 million)				
Other operating income	20		24	13
General administrative expenses				
a) Personnel expenses				
aa) Wages and salaries		215		185
ab) Social security and other pension costs and benefits thereof: Pension scheme €12 million (2021: €14 million)		36		32
			251	217
b) Other administrative expenses		158		110
			409	327
Depreciation, amortisation and write-downs of intangible assets, and property, plant and equipment	9		13	13
Other operating expenses	20		74	54
Income from ordinary activities			65	61
Extraordinary income	21		37	0
Income taxes	22		60	39
NET PROFIT FOR THE YEAR			42	22
NET PROFIT			42	22

€ in millions	Note	2022	2021
Net income		42	22
Non-cash items included in net income and reconciliation to cash flow from operating activities			
+/- Depreciation on intangible assets and property, plant and equipment	9	13	13
+/- Increase in/reversal of provisions	12	(5)	77
+/- Interest expense / income	16	93	62
+ Extraordinary gains	21	(37)	—
+/- Income tax expense / income	22	60	39
+/- Other adjustments		2	1
= Subtotal		168	214
Changes in assets and liabilities from operating activities			
-/+ Amounts due from credit institutions		2,145	(1,804)
-/+ Amounts due from customers		1,949	(12,588)
-/+ Trading portfolio assets		(17,956)	(10,875)
+/- Other assets from operating activities		161	(410)
+/- Amounts due to credit institutions		8,530	4,050
+/- Amounts due to customers		1,244	10,114
+/- Trading portfolio liabilities		16,517	10,341
+/- Other liabilities from operating activities		63	114
+ Interest received		199	81
- Interest paid		(242)	(101)
- Income taxes paid		(30)	(16)
Cash flow from operating activities		12,748	(880)
- Payments for the acquisition of intangible assets and property, plant and equipment		(2)	(4)
- Payments for the merger of companies		—	63
- Payments for the sale of business units	1	57	13
Cash flow from investing activities		55	72
+ Proceeds from the issuance of instruments for Additional Tier 1 Regulatory Capital	14	400	—
+ Proceeds from contributions to equity	15	1,595	850
- Interest paid for instruments for Additional Tier 1 Regulatory Capital		(41)	(31)
- Interest paid for subordinated debt		(13)	(11)
Cash flow from financing activities		1,941	808
= Change in cash and cash equivalents		14,744	—
+ Cash and cash equivalents at the beginning of the period		—	—
Cash and cash equivalents at the end of the period		14,744	—

General Information

1. Corporate information

Morgan Stanley Europe SE (the “Company”, “Bank” or “MSESE”) is a stock corporation under European Law (European Company (Societas Europaea)) based in Frankfurt am Main. The Company is registered in the Commercial Register B of the Local Court in Frankfurt am Main under number HRB 109880.

Morgan Stanley Europe Holding SE, Frankfurt am Main, (“MSEHSE”) is the sole shareholder of MSESE. MSESE is the sole shareholder of Morgan Stanley Bank AG, Frankfurt am Main (“MSBAG”). The Company, together with its subsidiary MSBAG, form the MSESE Group.

MSESE established its business operations as a securities trading bank pursuant to Section 1 (3d) Sentence 5 of the German Banking Act (Kreditwesengesetz or “KWG”) on 1 March 2019. On 1 September 2022, MSESE was granted a formal authorisation as a CRR credit institution (Class 1 Investment Firm). Besides additional reporting implications, the supervisory and regulatory regimes applicable to MSESE remained largely unchanged. Furthermore, MSESE’s activities under its license remained unchanged. MSESE is not authorised to provide either deposit taking services or lending.

The principal activity of MSESE is the provision of financial services to a client base mainly in the European Economic Area (“EEA”) consisting of corporations, governments, and financial institutions. MSESE operates branch offices in Denmark, France, Italy, the Netherlands, Poland, Spain, and Sweden.

There are control agreements (Beherrschungsverträge) in place between MSEHSE and MSESE as well as MSESE and MSBAG, which include loss compensations in accordance with Section 302 of the German Stock Corporation Act (Aktiengesetz or “AktG”). MSESE and MSBAG entered into a Profit and Loss Transfer Agreement on 5 December 2022. With entry in the Commercial Register on 27 December 2022, an income tax group (“Ertragsteuerliche Organshaft”) was established in accordance with the Corporation Tax Act (“Körperschaftsteuergesetz”).

Capital actions

In 2022, MSESE has undertaken further capital actions to strengthen its regulatory capital. In connection with the expansion of its business activities, MSESE received the following capital contributions in the course of the year:

- Subscribed capital was increased by €600 million and €850 million through the issuance of registered no-par value shares of €1 each on 4 April 2022 and 30 November 2022, respectively;
- Instruments of Additional Tier 1 Regulatory Capital of €400 million were issued on 12 April 2022;
- A capital conversion was carried out by converting excess capital reserves into subscribed shares in the amount of €2,000 million on 16 September 2022; and
- The capital reserve increased by €145 million from cash contributions by MSEHSE on 30 November 2022.

Transfer of business

On 1 December 2022, the Real Assets business unit with 26 employees were transferred to MSIM Fund Management (Ireland) Limited, Dublin, Republic of Ireland (“MSIM FMIL”), a subsidiary of Morgan Stanley International Limited, London, United Kingdom, (“MSI”) for a consideration in cash of €57 million. After write downs of goodwill of €20 million and tax expense of €11 million the Company recognised a gain of €26 million after tax.

2. Basis of accounting

The annual financial statements as at 31 December 2022 have been prepared in accordance with the regulations of the German Commercial Code (Handelsgesetzbuch or "HGB"), the German Ordinance on Accounting Policies for Banks and Financial Service Providers (Verordnung über die Rechnungslegung der Kreditinstitute und Finanzdienstleistungsinstitute or "RechKredV") as well as the German Stock Corporation Act. Unless otherwise stated, all amounts are rounded to the nearest million Euros.

The company which prepares the consolidated financial statements for the smallest consolidation scope is MSEHSE and the company which prepares the consolidated financial statements for the largest consolidation scope is Morgan Stanley, being incorporated in the State of Delaware, in the United States of America ("U.S."). Morgan Stanley, together with the Company and Morgan Stanley's other subsidiary undertakings, form the Morgan Stanley Group. The financial statements of Morgan Stanley are published by the Securities and Exchange Commission ("SEC") in New York, USA, under Central Index Key Number 0000895421. Both consolidated financial statements are available from the Company.

According to Section 291 (1) and (2) HGB, MSESE is exempt from preparing consolidated financial statements and a management report for the MSESE Group. The exempting consolidated financial statements and the Group management report of the Morgan Stanley Europe Holding SE Group, Frankfurt am Main, (the "MSEHSE Group") according to Section 291 (1) HGB in conjunction with Section 315e (3) HGB are prepared in accordance with the International Financial Reporting Standards ("IFRS"). They are published in the electronic Federal Gazette in German language and are available from the Company.

In contrast to the German accounting principles, the following significant differences existed in the IFRS consolidated financial statements of the MSEHSE Group for the financial year 2022:

- Under HGB, financial instruments in the trading portfolio are initially measured at purchase price and subsequently measured at fair value less a risk discount on the basis of the regulatory value-at-risk. Additionally, 10% of the net income from the trading portfolio is allocated, if required, to the fund for general banking risk. IFRS requires initial measurement of these financial instruments with subsequent measurement at fair value. Differences between the transaction price and the fair value at initial recognition are deferred if they are based on significant unobservable market parameters. HGB does not have this accounting concept.
- Under HGB, OTC traded derivatives in the trading portfolio may be netted per counterparty if the variation margin is calculated and paid daily on the basis of the fair value of the derivatives. Furthermore, there are possibilities for netting receivables and liabilities according to Section 10 RechKredV. Under IFRS, financial assets and financial liabilities are offset against each other, and only the net amount is reported, if there is a legal right to offset the recognised amounts in the normal course of business and in the event of a counterparty default. In addition, there must be an intention either to settle on a net basis or to realise the asset and settle the liability simultaneously.
- Commodity derivatives that are only physically settled are not treated as financial instruments under HGB. Under IFRS these transactions fulfill the criteria of a derivative.
- The valuation of provisions for pensions and similar obligations in actuarial opinions is based on different valuation assumptions. The result is reported in IFRS consolidated financial statements under other comprehensive income. Furthermore, the accounting note from the Institute of Public Auditors in Germany (Institut der Wirtschaftsprüfer e.V. or "IDW") RH FAB 1.021 is to be applied for the first time from 31 December 2022. For cash flows where the expected pension obligation matches the fair value of the plan assets, the same valuation methodology assumptions are applied to the asset and the liability.
- Deferred tax assets are recognized in the consolidated financial statements in accordance with IFRS, whereas the Company applies the accounting policy choice according to Section 274 HGB and waives an application.
- Under IFRS, issued Additional Tier 1 instruments are reported in equity while under HGB these are reported in Instruments for Additional Tier 1 Regulatory Capital.

3. Accounting policies

Cash reserve and Receivables

Cash reserve are accounted for at nominal value. Amounts due from credit institutions and customers are accounted for at acquisition costs including pro-rata interest and are reduced by necessary valuation allowances.

Loan loss provision

MSESE recognises loan loss provisions for inherent credit risks for amounts due from credit institutions and customers in the form of a general loan loss provision.

A parameter-based Expected Credit Loss ("ECL") calculation based upon IDW RS BFA 7, which is consistent with IFRS 9, applying a three stage approach to measuring ECLs based on the change in credit risk since initial recognition.

- Stage 1: if the credit risk of the financial instrument at the reporting date has not increased significantly since initial recognition then the loss allowance is calculated weighted with the probability of default within the next 12 months.
- Stage 2: if there has been a significant increase in credit risk ("SICR") since initial recognition, the loss allowance is calculated as the ECL over the remaining life of the financial instrument. If it is subsequently determined that there has no longer been a SICR since initial recognition, then the loss allowance reverts to reflecting 12 month expected losses.
- Stage 3: if there has been a SICR since initial recognition and the financial instrument is deemed credit-impaired, the loss allowance is calculated as the ECL over the remaining life of the financial instrument. If it is subsequently determined that there has no longer been a SICR since initial recognition, then the loss allowance reverts to reflecting 12 month expected losses.

Notwithstanding the above, for specific receivables a lifetime ECL is always calculated, without considering whether a SICR has occurred.

When assessing SICR, MSESE considers both quantitative and qualitative information and analysis. These are based on historical

information and conditions expected in the future, which are assessed by credit risk experts

The determination of a SICR is generally based on changes in the probability of default ("PD"), in conjunction with a rebuttable presumption that a SICR has occurred if a financial asset is more than 30 days past due.

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 existing at the balance sheet date and future economic conditions.
- Loss given default ("LGD"): the LGD represents expected loss conditional on default, taking into account the mitigating effect of collateral, including the expected value of the collateral when realised and the time value of money.
- Exposure at default ("EAD"): this represents the expected EAD, taking into account the expected repayment of principal and interest from the balance sheet date to the date of default event together with any expected drawdowns of the 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.

ECL is recognised in the income statement within "Write-downs and valuation allowances on receivables and certain securities, as well as additions to provisions in the lending business".

Trading portfolio

Financial instruments held in the trading portfolio are initially recognised at purchase price and subsequently measured at fair value less a risk discount in accordance with Section 340e (3) HGB. In accordance with Section 255 (4) HGB, the fair value corresponds to the market price and is measured at the bid and ask price. Guarantees received or provided in respect of trading derivative contracts are accounted for also as trading derivative contracts.

In determining fair value, MSESE uses various valuation approaches and establishes a hierarchy for inputs used in measuring fair value that requires the most observable inputs be used when available.

Observable inputs are inputs that market participants would use in pricing the asset or liability that were developed based on market data obtained from sources independent of MSESE. Unobservable inputs are inputs that reflect assumptions MSESE believes other market participants would use in pricing the asset or liability, that are developed based on the best information available in the circumstances.

The fair value hierarchy is broken down into three levels based on the observability of inputs as follows, with Level 1 being the highest and Level 3 being the lowest level:

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

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

- Level 2 - Valuation techniques using observable inputs

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

- Level 3 - Valuation techniques with significant unobservable inputs

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

Where necessary, valuation adjustments will be made. Factors taken into account include liquidity risk (price range between bid and ask price), counterparty default risk, model uncertainty and concentration risks.

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

In order to capture any remaining realisation risks, the result of the valuation at fair value is reduced by a risk discount, which is deducted from trading portfolio assets. The risk discount is calculated using the regulatory value-at-risk based on a 99% confidence level over a holding period of 10 days.

In addition to the risk discount, at each year end 10% of the net income from the trading portfolio (after risk discount) is allocated to the fund for general banking risks in accordance with Section 340e (4) HGB. The allocation is made until this special item has reached an amount of 50% of the 5-year average of the net income of the trading portfolio after risk discount. The special item may be reversed e.g. to offset a net expense of the trading portfolio or if it exceeds the 50% limit.

MSESE deposits cash collateral and securities collateral in respect of its derivatives in the form of initial margin and variation margin. Variation margin paid or received in cash is recognised as other assets or other liabilities.

Derivatives in the trading portfolio are offset against the associated cash variation margin if, supported by a legally enforceable agreement containing a credit support annex ("CSA"), the exchange of cash collateral takes place on a daily basis taking into account the fair value of the derivative financial instruments. For each counterparty, the amount offset includes the positive and negative market values of derivatives as well as the cash variation margin paid or received.

The conversion to new reference rates for derivatives in connection with the Interbank Offered Rate ("IBOR") reform resulted in compensation payments which are accounted through profit or loss.

Valuation units

Physically settling commodity derivatives (underlying transactions) are combined with offsetting hedging transactions to form micro-valuation units in accordance with Section 254 HGB. There is a match in amount and maturity between the underlying and hedging transactions. The Company applies the freezing method, whereby the changes in value resulting from the hedged risk are not reported on the balance sheet. In order to assess the effectiveness of a valuation unit, the method of matching of critical terms is used. Any unrealised losses from negative changes in fair value relating to the same type of risk are not recognised during the period of the hedge, unless a net loss arises (negative ineffectiveness), in which case these are recognised as a provision for imminent losses. Any unrealised gains are not recognised.

Securities lending and repurchase agreements

Securities repurchase agreements are accounted for in accordance with the applicable principles of Section 340b HGB. Securities lent and securities sold under repurchase agreements continue to be recognised by MSESE in accordance with their economic ownership, while securities borrowed and securities bought under repurchase agreements are not recognised on the balance sheet. Receivables and liabilities arising from repurchase agreements and securities lending transactions that meet the requirements for offsetting under Section 10 RechKredV are reported net.

Investments in affiliated companies

Investments in affiliated companies are carried at amortised cost. If an impairment of an investment is expected to be permanent, the carrying amount is written down to the lower fair value.

Intangible assets and property, plant and equipment

Intangible assets and property, plant and equipment are reported at acquisition cost and, if subject to amortisation, reduced by scheduled depreciation. The underlying useful lives are based on the economic useful life. Write-downs are made for any impairment that is likely to be

permanent. Goodwill reported within intangible assets are determined based on IDW S1 ("Principles for the execution of company valuations") and is amortised over its estimated useful life of 10 years in accordance with Section 253 (3) sentence 4 HGB. Low-value assets are fully depreciated in the year of acquisition.

Other assets

Other assets are measured at acquisition cost (nominal value) considering the strict lower-of-cost-or-market principle.

Liabilities

Liabilities are recognised at their settlement amount, including accrued interest, in accordance with Section 253 (1) HGB. These include, among other things, cash collateral received, subordinated debt and instruments for Additional Tier 1 Regulatory Capital.

Prepaid expenses and deferred charges

Prepaid expenses and deferred charges are released to the income statement on a straight-line basis over their term.

Provisions

Provisions for contingent liabilities are recognised at the expected settlement amount using reasonable judgement. If the remaining term of the provision for contingent liabilities is longer than one year, the provision is discounted. MSESE applies the discount rate which is announced by Deutsche Bundesbank in accordance with the Regulation on the Discounting of Provisions.

On 30 April 2021, IDW published accounting note RH FAB 1.021 regarding the valuation of provisions for pensions and similar obligations funded by insurance contracts, which MSESE has applied from 31 December 2022.

Pursuant to accounting note RH FAB 1.021, for matching cash flows, the same valuation methodology assumptions are applied to the asset and the liability. To ensure that the pension obligation and the plan assets are valued using the same assumption, a cash flow approach is used.

For pensions and similar obligations where the cash flows do not match the plan assets and are

not accounted under RH FAB 1.021, the valuation methodology continues to use the projected-unit-credit method. The valuation includes actuarial assumption on demographic developments, increases in salaries and pensions as well as inflation rates. Demographic assumptions are based on the "Heubeck-Richttafeln 2018G" tables. The discount rate is based on the average market interest rate of the last 10 years with an assumed remaining term of 15 years as published by Deutsche Bundesbank according to Section 253 (2) HGB.

In accordance with Section 246 (2) HGB, the pension obligations are offset against the plan assets. The respective expenses and income are also netted. The Company has outsourced the reinsurance policies covering the general pension plan to a contractual trust arrangement ("CTA").

A potential provision requirement for interest rate risks is examined as part of the loss-free valuation of interest related financial instruments. Therefore, the Company uses the present/book value method. The valuation resulted in no need to recognise provisions for onerous contracts.

Instruments for Additional Tier 1 Regulatory Capital

The issued instruments for Additional Tier 1 Regulatory Capital qualify as liabilities and are stated at their settlement or nominal amount. Interest expense is accrued on the basis of expected payments.

Deferred tax assets and liabilities

Deferred tax assets and liabilities are recognised for temporary differences between the accounting and tax values for goodwill, provisions for pensions and similar obligations and interest carry forwards. Deferred tax liabilities are netted against deferred tax assets and the remaining deferred tax assets were not recognised in the balance sheet in accordance with the accounting option set out in Section 274 (1) sentence 2 HGB.

The deferred taxes in the head office are measured using the relevant combined German income tax rate of 32% which includes corporate tax, trade tax and solidarity surcharge. The deferred taxes in the foreign branches are measured using the applicable statutory tax

rates respectively, which range from 19% to 33%.

Currency conversion

Currency conversion is carried out in accordance with the principles of Section 256a and Section 340h HGB. Assets and liabilities denominated in a foreign currency are translated into Euro at the rates ruling at the reporting date. Resulting gains and losses are recognised in the income statement. Foreign exchange rate fluctuations from trading assets and liabilities are reported in the net income of the trading portfolio. Due to the special coverage in the same currency, resulting gains and losses from currency translation are recognised net in the income statement.

Notes to the Balance Sheet

4. Cash reserve

Cash reserve of €14,744 million (2021: €0 million) was deposited at Deutsche Bundesbank. Previously, all Euro liquidity was held with MSBAG.

5. Maturity structure

The following tables present the maturity structure of amounts due from credit institutions and customers:

€ in millions	2022	2021
Amounts due from credit institutions		
Due on demand	5,240	7,580
With a remaining maturity of:		
up to three months	195	—
Total	5,435	7,580

€ in millions	2022	2021
Amounts due from customers		
Due on demand	10,618	13,044
With a remaining maturity of:		
up to three months	1,023	261
three months to one year	500	750
Total	12,141	14,055

The following tables present the maturity structure of amounts due to credit institutions and customers:

€ in millions	2022	2021
Amounts due to credit institutions		
Due on demand	11,440	3,411
With a remaining maturity of:		
three months to one year	501	—
Total	11,941	3,411

€ in millions	2022	2021
Amounts due to customers		
Due on demand	13,747	12,908
With a remaining maturity of:		
up to three months	—	8
one year to five years	2,375	1,935
Total	16,122	14,851

6. Relationship with affiliated companies

The following table presents amounts due to and from affiliated companies:

€ in millions	2022	2021
Amounts due from credit institutions	261	7,269
Amounts due from customers	11,908	9,946
Amounts due to credit institutions	7,379	111
Amounts due to customers	10,133	9,381
Subordinated debt	1,006	1,002
Instruments for Additional Tier 1 Regulatory Capital	1,000	600

The decrease in amounts due from credit institutions relates entirely to amounts with MSBAG.

7. Repurchase agreements

The carrying amount of the assets recognised on the balance sheet and sold under repurchase agreements, lent or pledged as collateral is €1,384 million (2021: €1,182 million).

8. Trading portfolio

The institutional specific criteria used to classify financial instruments to trading assets and trading liabilities remained unchanged in the financial year. Trading assets significantly increased in the period by €17,965 million to €35,486 million and trading liabilities increased by €16,522 million to €33,448 million as a result of higher trading volumes and increased market volatility.

MSESE has allocated an amount of €25 million (2021: €1 million), representing 10% of the net income of the trading portfolio in accordance with Section 340e (4) HGB, to the fund for general banking risks in the financial year 2022.

The following table provides a breakdown of the trading portfolio:

€ in millions	2022	
	Trading assets	Trading liabilities
Derivative financial instruments	24,228	24,187
Receivables / Liabilities	9,489	7,923
Bonds and other fixed-income securities	1,380	1,337
Shares and other non-fixed-income securities	410	1
Risk discount Value-at-Risk	(21)	—
Total	35,486	33,448

Derivatives include offsetting of positive fair values of €193,442 million with negative fair values of €199,285 million with the associated cash collateral received of €11,923 million and cash collateral paid of €17,766 million.

The nominal amount of derivative financial instruments presented by type is as follows:

€ in millions	2022
	Nominal amount
Interest-related transactions	5,675,587
Exchange-rate-related transactions	953,747
Equity-related transactions	131,753
Credit derivatives	73,927
Other transactions	20,501
Total	6,855,515

The basic assumptions used to determine the fair value using recognised valuation techniques are described in note 3 "Accounting policies".

The following table presents the fair value of derivative financial instruments by type:

€ in millions	2022	
	Asset	Liability
Interest-related transactions	8,649	5,362
Exchange-rate-related transactions	11,084	14,197
Equity-related transactions	1,271	1,295
Credit derivatives	228	195
Other transactions	2,996	3,138
Total	24,228	24,187

9. Changes in fixed assets

The following table shows changes in fixed assets:

€ in millions	Intangible assets	Property, plant and equipment	Investments in affiliated companies
Acquisition / production cost 01 Jan 2022	79	42	603
Additions	—	2	—
Disposals	20	4	—
Acquisition / production cost 31 Dec 2022	59	40	603
Accumulated depreciation 01 Jan 2022	9	15	—
Depreciation	8	5	—
Additions	—	—	—
Accumulated depreciation 31 Dec 2022	17	20	—
Carrying amount as at 31 Dec 2021	70	27	603
Carrying amount as at 31 Dec 2022	42	20	603

Intangible assets consist of goodwill €42 million (2021: €70 million) which decreased by €20 million in the financial year due to the transfer of the Real Assets business unit to MSIM FMIL. The valuation of the business transfer is based on an external opinion according to the Institute of Public Auditors in Germany S1 (“Principles for the Performance of Business Valuations”).

Property, plant and equipment include leasehold improvements of €13 million (2021: €16 million) and office equipment of €3 million (2021: €4 million).

Investments in affiliated companies at the end of the financial year relate exclusively to shares in MSBAG. The net profit of MSBAG as at 31 December 2022 amounts to €0 million due to the profit transfer to MSESE. The equity of MSBAG amounts to €660 million.

10. Other assets and liabilities

Other assets of €441 million (2021: €603 million) and other liabilities of €309 million (2021: €266 million) mainly consist of collateral received and paid for derivatives of €418 million (2021: €598 million) and €259 million (2021: €118 million) respectively.

11. Foreign currency volumes

The following table presents the Company's assets and liabilities denominated in foreign currencies:

€ in millions	2022	2021
Assets	14,300	13,771
Liabilities	14,734	12,992

The foreign currency volumes mainly relate to the currency USD.

12. Provisions

Provisions for pensions and similar obligations

Provisions of €11 million (2021: €15 million) were made for pensions and similar obligations. The decrease is mainly due to the initial application of accounting note IDW RH FAB 1.021, which resulted in a reversal of the provisions for pensions and similar obligations of €6 million. Pensions and similar obligations recorded at the reporting date relate primarily to residual risks on unfunded inflation adjustments.

The main actuarial assumptions used are shown in the following table:

Actuarial assumptions	2022	2021
Discount rate	1.8%	1.9%
Income dynamics	2.5%	2.5%
Pension dynamics	2.6%	2.3%

The valuation difference in accordance with Section 253 (6) HGB between the 10-year average interest rate of 1.8% which has been applied at the end of the financial year 2022 and the 7-year average interest rate of 1.4% is subject to a distribution ban and amounts to €1 million as at 31 December 2022 (2021: €5 million). The decrease of the distribution ban is based on the initial application of IDW RH FAB 1.021, as it only relates to the valuation difference of the unfunded portion of pensions and similar obligations.

In accordance with Section 246 (2) HGB, pension obligations of €28 million are offset against the plan assets of €17 million as well as expenses of €5 million and income of €1 million.

Other provisions

Other provisions of €115 million (2021: €104 million) mainly include provisions for personnel which are an additional component of employee compensation. These consist of variable, deferred and share-based compensation measured at the fair value of Morgan Stanley shares at the balance sheet date.

13. Subordinated debt

As at 31 December 2022, MSESE has issued subordinated debt of €1,006 million (2021: €1,002 million) with a variable interest rate at EURIBOR plus 1.6% and maturity date of 27 October 2031. The subordinated debt was issued by the Company to its immediate parent MSEHSE on 27 October 2020.

The subordinated debt does not contain any conditions for converting into equity or any other form of debt. An early repayment obligation does not exist.

In the event of a liquidation or insolvency of the Company, the claims and interest claims of the subordinated creditors will only be repaid after the claims of all non-subordinated creditors have been satisfied.

Interest expense on subordinated debt includes interests not yet due of €6 million (2021: €2 million).

14. Instruments for Additional Tier 1 Regulatory Capital

As at 31 December 2022, liabilities consisted of Additional Tier 1 Regulatory Capital ("AT1 Notes") in accordance with CRR. AT1 Notes with a total nominal amount of €600 million and a denomination of €5 million each were issued on 29 October 2020. In the financial year, AT1 Notes with a total nominal amount of €400 million and a denomination of €5 million each were issued on 12 April 2022.

The AT1 Notes represent the Company's perpetual, unsecured and subordinated debt. The AT1 Notes issued in 2020 and 2022 are interest bearing at a fixed annual interest rate of 4.7% and 5.0%, respectively. Interest expenses on these instruments include accrued interest not yet due of €4 million (2021: €2 million) at year-end 2022 which is included in other liabilities.

15. Equity

Equity as at the balance sheet date is composed as follows:

€ in millions	2022	2021
Subscribed capital	3,901	451
Capital reserve	931	2,786
Revenue reserves	24	2
Retained earnings	42	22
Total	4,898	3,261

Subscribed capital

MSEHSE is the sole shareholder of the Company.

Subscribed capital increased by €600 million and €850 million effective 4 April 2022 and 30 November 2022, respectively. Additionally, capital reserves were converted into subscribed capital in the amount of €2,000 million on 16 September 2022. The subscribed capital is comprised of €3,901 million no-par-value registered shares of €1 each.

Capital reserve

The decrease in the capital reserve was due to the capital conversion of €2,000 million on 16 September 2022.

Furthermore, the capital reserve increased by €145 million to €931 million and results from a cash contributions by MSEHSE on 30 November 2022.

Revenue reserves

For the financial year ending 31 December 2021, by resolution of the Supervisory Board on 27 April 2022, the annual financial statements were determined and by shareholder resolution on 20 May 2022, the net income of €22 million was transferred to revenue reserves.

Retained earnings

It is proposed to include the net profit for the financial year ending 31 December 2022 of €42 million in retained earnings.

Notes to the Income Statement

16. Interest income and expenses

The increase in interest income from credit and money market transactions and interest expenses primarily result from the changed interest environment as well as the increase in business activities.

The following table shows the development of interest income from credit and money market transactions:

€ in millions	2022	2021
Cash collateral	128	(25)
Reverse repurchase	20	(5)
Funding provided to affiliated companies	20	19
Cash deposits	13	(18)
Total	181	(29)
<i>Thereof: negative interest income</i>	<i>(29)</i>	<i>(63)</i>

The following table shows the development of the interest expenses:

€ in millions	2022	2021
Funding received from affiliated companies	156	55
Cash collateral	49	(54)
AT1 Notes	43	28
Subordinated debt	17	11
Repurchase agreements	9	(7)
Total	274	33
<i>Thereof: positive interest expense</i>	<i>(35)</i>	<i>(64)</i>

17. Income from profit sharing, profit transfer or partial profit transfer agreement-related profits

As a result of the Profit and Loss Transfer Agreement, MSBAG's net profit for the financial year ending 31 December 2022 of €53 million was transferred to MSESE.

18. Commission income and expenses

Commission income of €444 million (2021: €567 million) comprises €171 million (2021: €326 million) related to investment banking activities and €273 million (2021: €241 million) from the brokerage of financial products. The decrease in commission income from Investment Banking activities is the result of lower global underwriting activities.

Commission expenses of €90 million (2021: €74 million) mainly result from services received from Morgan Stanley Group companies and fees for securities services from companies outside the Morgan Stanley Group.

19. Net income of the trading portfolio

The net income of the trading portfolio amounts to of €223 million (2021: €11 million). The increase compared to the previous year is the result of strong client activity in interest rate and foreign exchange derivatives, equity derivatives and commodities trading.

20. Other operating income and expenses

Other operating income of €24 million (2021: €13 million) increased primarily due to income from compensation payments for securities settlement as well as intra-group service charges from ongoing operations with affiliated companies in Germany, the UK and the U.S.

Other operating expenses of €74 million (2021: €54 million) consist mainly of French and Spanish financial transaction taxes, for which MSESE is liable. Furthermore, expenses from securities settlement are included.

21. Extraordinary income

In the financial year, an extraordinary income of €37 million was generated as a result of the sale of the Real Assets business unit from MSESE to MSIM FMIL. The determined sales price is based on an external opinion according to IDW S1.

22. Income taxes

Income taxes are composed of the following:

€ in millions	2022	2021
Corporation tax	35	31
Trade tax	25	8
Total	60	39

In the year 2022, due to the implementation of the income tax group between MSESE and MSBAG, income taxes relating to the current taxes of MSBAG are presented in the income taxes of MSESE.

Income taxes related to current taxes for the financial year are influenced partly by non-deductible expenses such as the annual contribution to the Single Resolution Fund and limited deductible interest expenses according to Section 4h of the German Income Tax Act (Einkommenssteuergesetz or "EStG").

Additional Comments

23. Valuation unit

In the financial year, the company continued to trade derivatives on CO2 certificates with non-affiliated companies. These were hedged by offsetting derivatives with companies within the Morgan Stanley Group. These valuation units have an average residual maturity of one year. The pending transactions which are not reported on the balance sheet at year-end are as follows:

€ in millions	Nominal amount	Fair value	
		positive	negative
Underlying transaction	729	47	49
Hedging Instrument	729	49	47

24. Contingencies

Refer to Note 1 "Corporate information" for the concluded control agreements and Profit and Loss Transfer Agreement.

Additionally, letters of comfort are provided by MSEHSE to benefit MSESE and MSBAG and by MSESE to benefit MSBAG.

A revolving liquidity facility between MSESE and MSBAG is in place to ensure the free movement of funds between the two entities and to enable them to meet their individual and joint obligations as they come due.

25. Sundry financial obligations

Irrecoverable payment commitments related to the bank levy according to Bank Recovery and Resolution Directive, the Single Resolution Fund amount to €3 million (2021: €0 million).

26. Auditor's fee

Refer to the consolidated financial statements of MSEHSE Group.

27. Employees

The average number of employees by business unit were as follows:

Business Units	2022	2021
Infrastructure and Control	320	270
Institutional Securities Group	309	239
Real Assets	16	18
Total	645	527

Infrastructure and Control primarily consists of Operations, Finance, Risk Management, Corporate Service, IT and Legal and Compliance.

The Institutional Securities Group includes the business units Institutional Equities Division, Fixed Income Division, Investment Banking Division, Global Capital Markets and Business Resource Management.

28. Management Board and Supervisory Board

The Management Board is comprised as follows:

- Oliver Behrens,
Chairman of the Management Board
- David Best,
Member of the Management Board,
appointed effective as of 1 April 2022
- Martin Borghetto,
Member of the Management Board
- Philipp Lingnau,
Member of the Management Board
- André Munkelt,
Member of the Management Board
- Dr. Hanns Christoph Siebold,
Member of the Management Board,
resigned with effect as from the end of
28 February 2022
- Dr. Jana Währisch,
Member of the Management Board

David Best was appointed effective as of 15 December 2022 as a member of the Board of Directors of Morgan Stanley France Holdings I S.A.S., Paris, France and Morgan Stanley France S.A., Paris, France ("MSF"), respectively. Oliver Behrens is a member of the Board of Directors of MSI.

Dr Hanns Christoph Siebold resigned as a member of the Board of Directors of MSF with effect as from the end of 28 February 2022.

The total remuneration of the Management Board for the financial year amounted to €8 million (2021: €9 million). Pension provisions for members of the Management Board amounted to €3 million (2021: €3 million). Compensation was paid to members of the Supervisory Board of €1 million (2021: €1 million).

The Company has not granted any loans to the members of the Management Board and the Supervisory Board nor has entered into liability relationships with them.

The Supervisory Board is comprised as follows:

- Clare Woodman,
Managing Director,
until 31 December 2022 Chairperson of the
Supervisory Board,
Deputy Chairperson of the Supervisory
Board effective as of 1 January 2023
- Frank Mattern,
Independent advisor,
until 31 December 2022 Deputy Chairman
of the Supervisory Board,
Chairman of the Supervisory Board
effective as of 1 January 2023
- Raja Akram,
Managing Director
- David Cannon,
Independent advisor
- Lee Guy,
Managing Director
- Kim Lazaroo,
Managing Director,
appointed effective as of 15 December
2022
- Maria Luís Casanova Morgado Dias de
Albuquerque,
Independent advisor, appointed effective as
of 29 September 2022
- Lucrezia Reichlin,
University Professor
- Dr. Lutz R. Raettig,
Independent advisor, resigned with effect
from 29 September 2022
- David A. Russell,
Managing Director, resigned with effect
from 15 December 2022

29. Events after the reporting period

The Company received CET1 capital from MSEHSE as an infusion into the capital contribution reserve in the amount of €1,000 million on 3 April 2023.

MORGAN STANLEY EUROPE SE

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Notes

Frankfurt am Main, 18 April 2023

Morgan Stanley Europe SE

The Management Board

Oliver Behrens (Chairman)

David Best

Martin Borghetto

Philipp Lingnau

André Munkelt

Dr. Jana Währisch

INDEPENDENT AUDITOR'S REPORT

To Morgan Stanley Europe SE, Frankfurt am Main

REPORT ON THE AUDIT OF THE ANNUAL FINANCIAL STATEMENTS AND THE MANAGEMENT REPORT

Audit Opinion

We have audited the annual financial statements of Morgan Stanley Europe SE, Frankfurt am Main, which comprise the balance sheet as at 31 December 2022, the income statement and the cash flow statement for the financial year from 1 January 2022 to 31 December 2022, and the notes to the financial statements, including a summary of significant accounting policies. In addition, we have audited the Management Report of Morgan Stanley Europe SE, Frankfurt am Main, for the financial year from 1 January 2022 to 31 December 2022. In compliance with German legal requirements we have not audited the contents of the "Non-financial Disclosures" ("nichtfinanzielle Konzern-erklärung") of Morgan Stanley Europe Holding SE, Frankfurt am Main, to which reference is made in the last section of the Management Report. We have also not audited the content of information referred to by cross-references in the "Climate and Environmental risks" section within the risk report of the Management Report.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying annual financial statements comply, in all material respects, with the requirements of German commercial law applicable to business corporations and give a true and fair view of the assets, liabilities and financial position of the Company as at 31 December 2022 and of its financial performance for the financial year 1 January 2022 to 31 December 2022; in compliance with German Legally Required Accounting Principles; and
- the accompanying Management Report as a whole provides an appropriate view of the

Company's position. In all material respects, this Management Report is consistent with the annual financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the Management Report does not cover the contents of the above-mentioned non-financial consolidated financial statements or to information referred to by cross-references in the "Climate and Environmental risks" section within the risk report of the Management Report.

Pursuant to Section 322 (3) sentence 1 German Commercial Code ("HGB"), we declare that our audit has not led to any reservations relating to the legal compliance of the annual financial statements and the Management Report.

Basis for audit opinion

We conducted our audit of the annual financial statements and the Management Report in accordance with Section 317 HGB and the EU Audit Regulation (No. 537/2014; hereinafter referred to as EU Audit Regulation) and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Annual Financial Statements and of the Management Report" section of our auditor's report. We are independent of the Company in accordance with the requirements of European law as well as German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) point (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to serve as a basis for our audit opinions on the annual financial statements and the Management Report.

Key audit matters in the audit of the financial statements

Key audit matters are those matters that, in our professional judgment, were most significant in our audit of the annual financial statements for the financial year from 1 January 2022 to 31 December 2022. These matters were taken into account in the context of our audit of the annual financial statements as a whole and in forming our audit opinion thereon; we do not provide a separate audit opinion on these matters.

In the following, we present the key audit matter of determining the fair value of assets and liabilities of the trading portfolio within category Level 3.

We have structured our presentation of these key audit matters as follows:

- a) Description (including reference to corresponding information in the annual financial statements).
- b) Audit procedures.

Determination of fair value for assets and liabilities of the trading portfolio in the category level 3

- a) Morgan Stanley Europe SE's core business activity is, among other financial services, client-induced trading in financial instruments for its own account. The assets (EUR 35,486 million) and liabilities (EUR 33,448 million) derived from this business activity amount to EUR 68,934 million after netting as of 31 December 2022. An amount that is not considered to be immaterial relates to assets and liabilities in the trading portfolio for which significant valuation input parameters were not observable in the reporting period (Level 3 category). These are reported by the Company in the trading portfolio within assets or liabilities on the balance sheet and measured at fair value. Due to the provisions of section 340c HGB and the associated recognition of unrealized gains and losses, the measurement at fair value less a risk discount has not only a direct impact on the Company's net assets, but also on its results of operations.

For financial instruments for which there is no active market and therefore no observable price-determining parameters, the fair value must be determined on the basis of model prices using unobservable parameters ("Level 3"). The characteristics of unobservable inputs used represent assumptions or estimates made by management with regard to the valuation assumptions used by market participants to determine the pricing of these assets and liabilities.

In our view, the determination of the fair values for financial instruments classified as Level 3 is of particular importance because the assumptions or estimates are based on the judgment of the Company's management and involve inherent and significant estimation uncertainty for financial reporting purposes.

The disclosures by the Company's legal representatives on the accounting policies for the trading portfolio are included in Note 3

- b) As part of our audit of the financial statements, we obtained an understanding of the valuation models used by the Company to determine the fair value of Level 3 financial instruments. Furthermore, we assessed the extent to which the approach was influenced by subjectivity, complexity or other inherent risk factors.

We have identified the controls implemented by the Company for the fair value measurement and assessed their adequacy and effectiveness. For this purpose, we have assessed, among other things, the appropriateness of the models and input factors used and their stringent and proper processing. We have also considered the relevant business organization and IT systems. Processes and controls that uniformly affect the entire Morgan Stanley Group are performed by a shared service center and audited by the auditors of the Morgan Stanley Group. We have used the results of their work as part of the audit of the annual financial statements.

In addition, we have utilized the following substantive audit procedures of the consolidated financial statements auditor with regard to the determination of fair value for individual financial instruments of the category "level 3":

- Carrying out a so-called back-testing for the fair values estimated by management of selected level 3 instruments for which events or transactions have taken place after the measurement date.
- Independent fair value estimation for selected level 3 structured transactions. For these transactions, we have checked whether the assumptions made by management and the input parameters used are in line with the bank's valuation guidelines.
- Audit of income from fair value measurement for selected level 3 financial instruments. For individual transactions, we have made independent estimates of fair value to verify that the assumptions made by management and the underlying input parameters are consistent with the bank's valuation policies.
- Review of the continuous application of the material and non-observable valuation assumptions made by management for the purpose of determining fair values.

Other Information

The Management Board is responsible for the other information. The other information includes:

- the separate nonfinancial disclosures of Morgan Stanley Europe Holding SE, Frankfurt am Main, referred to in the last section of the Management Report;
- information referred to by cross-references in the "Climate and Environmental risks" section of the risk Report of the Management Report; and
- all other parts of the annual report;
- but not the annual financial statements, not the audited contents of the Management Report and not our auditor's report thereon.

Our audit opinions on the annual financial statements and the Management Report do not cover the other information and consequently we do not express an audit opinion or any other form of assurance conclusion on them.

In connection with our audit, we have a responsibility to read the other information

identified above and to consider whether the other information

- has material discrepancies with the annual financial statements, with the Management Report or with the knowledge we have obtained during the audit; or
- otherwise appears to be materially misstated.

Responsibilities of the Management Board and the Supervisory Board for the Annual Financial Statements and the Management Report

The Management Board is responsible for the preparation of the annual financial statements that comply, in all material respects, with the requirements of German commercial law applicable to business corporations, and that the annual financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Company in compliance with German Legally Required Accounting Principles. Furthermore, the Management Board is responsible for the internal controls which they, in accordance with German Legally Required Accounting Principles, have determined necessary to enable the preparation of annual financial statements that are free of material misstatements, whether due to fraud (i.e. fraudulent financial reporting or the misappropriation of assets) or error.

In preparing the annual financial statements, the Management Board is responsible for assessing the Company's ability to continue as a going concern. Furthermore, they have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting on the basis of the going concern accounting principle, provided no actual or legal circumstances conflict therewith.

Furthermore, the Management Board is responsible for the preparation of the Management Report, which as a whole provides an appropriate view of the Company's position and is, in all material respects, consistent with the annual financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. In addition, the Management Board is responsible for such arrangements and measures (systems) that they have deemed

necessary to enable the preparation of a Management Report in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the Management Report.

The Supervisory Board is responsible for overseeing the Company's financial reporting process for the preparation of the annual financial statements and the Management Report.

Auditor's Responsibilities for the Audit of the Annual Financial Statements and the Management Report

Our objectives are to obtain reasonable assurance as to whether the annual financial statements as a whole are free of material misstatement, whether due to fraud or error, and whether the management report as a whole gives an appropriate view of the Company's position and, in all material respects, is consistent with the annual financial statements and with the knowledge obtained during the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report containing our audit opinions on the annual financial statements and the Management Report.

Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with Section 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements may result from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users made on the basis of these annual financial statements and the Management Report.

Throughout the audit, we exercise professional judgment and maintain professional scepticism. In addition, we

- identify and assess the risk of material misstatements of the annual financial statements and the Management Report,

whether due to fraud or error, design and perform audit procedures in response to these risks, and obtain audit evidence that is sufficient and appropriate to serve as a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls;

- obtain an understanding of the internal controls relevant to the audit of the annual financial statements and the arrangements and measures relevant to the audit of the Management Report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems of the Company;
- evaluate the appropriateness of the accounting policies used by the Management Board as well as the reasonableness of estimates made by the Management Board and related disclosures;
- conclude on the appropriateness of the Management Board's use of the going concern accounting principle and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that there is a material uncertainty, we are required to draw attention in the auditor's report to the related disclosures in the annual financial statements and in the Management Report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or circumstances may cause the Company to cease to be able to continue as a going concern;
- evaluate the overall presentation, structure and content of the annual financial statements, including the disclosures, and whether the annual financial statements present the underlying transactions and events in a manner that the annual financial statements give a true and fair view of the

Company's assets, liabilities, financial position and financial performance in compliance with German Legally Required Accounting Principles;

- obtain sufficient appropriate audit evidence regarding the accounting information of the entity or its divisions to express opinions on the financial statements and the Management Report. We are responsible for the direction, supervision and performance of the audit. We bear sole responsibility for our audit opinions;
- evaluate the consistency of the Management Report with the annual financial statements, its conformity with German law and the view it conveys of the Company's position;
- perform audit procedures on the prospective disclosures presented by the Management Board in the Management Report. On the basis of sufficient appropriate audit evidence, we evaluate, in particular, the significant assumptions on which the Management Board bases the prospective disclosures, and assess the proper derivation of the prospective disclosures from these assumptions. We do not express an additional audit opinion on the prospective disclosures or on the underlying assumptions. There is a substantial unavoidable risk that future events will differ materially from the prospective disclosures.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, as well as significant audit findings, including any significant deficiencies in internal controls that we identify during our audit.

We provide a statement to those charged with governance that we have complied with the relevant independence requirements and communicate with them all relationships and other matters that may reasonably be considered to bear on our independence, and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were most significant in the audit of the annual financial statements for the current period and are therefore the key audit matters. We describe these matters in the auditor's report unless law or regulation preclude the public disclosure of the matter.

OTHER LEGAL AND STATUTORY REQUIREMENTS

Further information pursuant to Article 10 of the EU Audit Regulation

We were elected as auditors by the Annual General Meeting on 20 May 2022. We were engaged by the Supervisory Board on 2 December 2022. We have been the auditor of Morgan Stanley Europe SE, Frankfurt am Main, without interruption since the financial year 2018 and as statutory auditors since the financial year 2019.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the Audit Committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

In addition to the financial statement audit, we have provided to the audited Company or its controlled entities the following services which were not disclosed in the annual financial statements or Management Report:

- Audit pursuant to section 89 (1) WpHG (Securities Trading Act);
- Agreed upon procedures to fulfil the reporting obligations to the National Resolution Authority for the calculation of the 2022 annual contribution to the Single Resolution Fund; and
- Examination to obtain limited security in relation to the statements of the legal representatives according to 17 C.F.R. Section 240.18a-7 of the Securities Exchange Act of 1934 according to AICPA standards.

MORGAN STANLEY EUROPE SE

ANNUAL REPORT 2022

Independent Auditor's Report

GERMAN PUBLIC AUDITOR RESPONSIBLE FOR THE ENGAGEMENT

The German Public Auditor responsible for the engagement is Martin Kopatschek.

Frankfurt am Main, 20 April 2023

Deloitte GmbH

Wirtschaftsprüfungsgesellschaft

signed: Martin Kopatschek
Wirtschaftsprüfer (German Public Auditor)

signed: Kevin Vogt
Wirtschaftsprüfer (German Public Auditor)

Report of the Supervisory Board in accordance with Section 171 (2) of the German Stock Corporation Act (AktG)

In 2022 the Supervisory Board of Morgan Stanley Europe SE (the “Company”) had a strong focus on the development and business activities of the Company through the provision of financial services. There were nine Supervisory Board meetings that took place during 2022. The Supervisory Board discussed fundamental aspects of the corporate planning, business policy, business development, risk situation and risk management with the Management Board. At the Supervisory Board meetings and whenever required, the Management Board regularly reported comprehensively and promptly on all incidents of significant importance and on the development of the financial figures.

The Management Board of Morgan Stanley Europe SE provided the Supervisory Board with the annual financial statements and management report for the financial year 2022 without delay after their preparation. The financial statements consist of:

- Balance sheet,
- Income statement,
- Cash flow statement and
- Notes.

The Management Board therefore carried out its obligations in accordance with section 170 (1)

AktG. At the same time, the Supervisory Board was presented with the Proposal for the Profit Allocation in accordance with section 170 (2) AktG at the Annual General Meeting. This proposal provides for the net profit of € 42.278.253,07 to be allocated to other revenue reserves.

The Supervisory Board examined the documentation submitted in accordance with section 171 (1) AktG. The Auditor’s information was included into the examination. The examination has not led to any reservations.

The Supervisory Board subsequently approved the annual financial statements for the financial year 2022. As a result, the annual financial statements of Morgan Stanley Europe SE were determined in accordance with section 172 AktG.

The statutory auditors, Deloitte GmbH Wirtschaftsprüfungsgesellschaft, Frankfurt am Main, have issued an unqualified audit opinion for the annual financial statement and the Management Report.

The Supervisory Board would like to extend its gratitude to the Management Board and to all employees for their exceptional commitment and successful contributions in 2022.

24 April 2023

Frank Mattern (Chairman)