Annual Financial Statements and Management Report

December 31, 2020

Goldman Sachs Bank Europe SE

INDEX

Introduction

Goldman Sachs Bank Europe SE (GSBE or the bank) provides a wide range of financial services to a diversified client base that includes corporations, financial institutions, and ultra-high-net-worth individuals, from its registered office in Frankfurt am Main and branches in Amsterdam, Copenhagen, Dublin, London, Luxembourg, Madrid, Milan, Paris, Stockholm and Warsaw. The sole shareholder of GSBE is Goldman Sachs (Cayman) Holding Company with its registered office in George Town, Cayman Islands. The bank is registered with the commercial register number HRB 114190.

GSBE is supervised by the European Central Bank (ECB) within the context of the European Single Supervisory Mechanism, the Federal Financial Supervisory Authority (BaFin) and the Deutsche Bundesbank.

The bank's ultimate parent undertaking and controlling entity is The Goldman Sachs Group, Inc. (Group Inc.). Group Inc. is a bank holding company and a financial holding company regulated by the Board of Governors of the Federal Reserve System (FRB). In relation to the bank, "group undertaking" means Group Inc. or any of its subsidiaries. Group Inc., together with its consolidated subsidiaries, form "GS Group". GS Group is a leading global financial institution that delivers a broad range of financial services across investment banking, securities, investment management and consumer banking to a large and diversified client base that includes corporations, financial institutions, governments and individuals. GS Group's purpose is to advance sustainable economic growth and financial opportunity. GS Group's goal, reflected in the *One Goldman Sachs* initiative, is to deliver its full range of services and expertise to support its clients in a more accessible, comprehensive and efficient manner, across businesses and product areas. GS Group has a presence in Europe, Middle East and Africa (EMEA) through a number of subsidiaries, including GSBE.

The bank seeks to be the advisor of choice for its clients and a leading participant in financial markets. As part of GS Group, the bank also enters into transactions with affiliates in the normal course of business as part of its market-making activities and general operations.

The bank generates revenues from the following business activities: Investment Banking, Fixed Income, Currency and Commodities (FICC); Equities; and Investment Management, which includes Asset management and Wealth management.

As a result of the U.K.'s withdrawal from the E.U. (Brexit) and in connection with GS Group's Brexit strategy, certain activities have moved from GS Group's U.K. entities to GSBE, including moving a significant number of relationships with E.U.-based clients of its Investment Banking, FICC, Equities, and Investment Management businesses; establishing access to exchanges, clearing houses and depositories and other market infrastructure in the E.U.; establishing branches in nine E.U. member states and in the U.K.; and strengthening the capital, personnel and other resources of GSBE. This has resulted in a significant increase in the bank's Balance Sheet in comparison to 2019.

All references to 2020 and 2019 refer to the years ended, or the dates, as the context requires, December 31, 2020 and December 31, 2019, respectively. Any reference to a future year refers to a year ending on December 31 of that year. Any statements relating to future periods are subject to a high degree of uncertainty.

GSBE uses certain key performance indicators (KPIs) to manage the development of its business and capital strength. The primary KPI for the development of the business is the net revenues, defined as the sum of interest, commission, net trading result and other operating income. The primary KPI to manage the bank's capital strength is the total capital ratio.

Executive Overview

Income Statement

The Income Statement is set out on page 24 of this annual report. The bank's profit for 2020 was €89 million, an increase of 65% compared to 2019.

Net revenues for 2020 were €333 million, 61% higher than 2019. GSBE had expected a significant increase in net revenues for 2020 and that expectation was met.

Total expenses were €196 million, 61% higher than 2019, primarily due to higher administration expenses due to an increase in the average number of employees from 197 for 2019 to 339 for 2020.

See "Results of Operations" below for information about the bank's net revenues and administrative expenses.

Capital Ratios

GSBE calculates its prudential capital requirements based on International Financial Reporting Standards (IFRS) in accordance with Art. 24 (2) of Regulation (EU) No 575/2013 since the third quarter 2020.

The total capital ratio as of year-end 2020 was 40.1% (2019: 57.8%) reflecting risk-weighted assets of €8.0 billion (2019: €1.2 billion) and total regulatory capital of €3.2 billion (2019: €0.7 billion). This was in line with the bank's expectation that the total capital ratio will decrease in line with increasing business activity but remain sufficiently above the minimum requirements.

The CET1 capital ratio as of December 2020 was 39.9% (2019: 56.2%), reflecting risk-weighted assets as above and CET1 capital of €3.2 billion (2019: €0.7 billion).

Balance Sheet

The balance sheet is set out on page 23 of this annual report. As of December 2020, total assets were €22.4 billion, an increase of €19.0 billion from December 2019, primarily reflecting the increase of trading assets and liabilities, as well as associated collateral balances, reported as other assets or other liabilities.

As of December 2020, total shareholder's equity was €3.4 billion, an increase of €2.6 billion from December 2019, mainly reflecting capital injections totalling €2.5 billion from the shareholders of GSBE in the financial year.

Business Environment

In the beginning of 2020, the spread of coronavirus (COVID-19) across the globe and the accompanying temporary closures of non-essential businesses and stay-at-home requirements caused a sharp contraction in global economic activity, widespread unemployment, high levels of volatility across most financial assets and global markets, an unprecedented decline in global equity prices, and a significant widening of credit spreads. Global central banks responded quickly with accommodative monetary policy by reducing policy interest rates and increasing large scale asset purchases, and the establishment of a number of facilities to support the functioning of markets and to provide liquidity to markets. In addition, governments globally intervened with fiscal policy to mitigate the impact, which provided economic relief to businesses and individuals. These monetary and fiscal interventions, combined with the reopening of businesses and relaxation of earlier lockdowns, contributed to a sharp rebound in global economic activity during the second half of 2020. As a result, investors became more optimistic towards the prospect of a quicker economic recovery and a return to pre-pandemic levels, effecting sharp increases in equity prices and tighter credit spreads. Late in the year, medical professionals developed effective COVID-19 vaccines and governments began to distribute them globally, which is expected to reduce virus spread and further aid economic recovery.

In December 2019, the U.K. and E.U. ratified the Brexit withdrawal agreement, resulting in the U.K. leaving the E.U. in January 2020. In December 2020, the U.K. and E.U. agreed the Trade and Cooperation Agreement, which includes provisions for the future trade arrangements between the two parties.

Despite broad improvements in the overall economy since the pandemic began, there continues to be uncertainty related to the prospects for economic growth, virus resurgence, vaccine distribution, further fiscal stimulus and geopolitical risks.

Results of Operations

Net Revenues

Net revenues are defined as the sum of interest, commission, net trading result and other operating income. Net revenues arise from transactions with both third parties and affiliates. The table below presents the net revenues of the bank's business activities. The presentation of the prior year figures has been changed to reflect the presentation of the 2020 business activities.

	Period Ended December	
€ in millions	**2020**	2019
Investment Banking	**€ 101**	€ 73
FICC	**69**	42
Equities	**103**	43
Investment Management	**60**	49
Net revenues	**€ 333**	€ 207

The bank's main business activities, as well as the results of the reporting period compared to the prior reporting period are described in the following paragraphs.

Investment Banking

Investment Banking consists of:

Financial Advisory. Includes strategic advisory engagements with respect to mergers and acquisitions, divestitures, corporate defence activities, restructurings and spin-offs.

Underwriting. Includes public offerings and private placements, including local and cross-border transactions and acquisition financing, of a wide range of securities and other financial instruments, including loans.

Corporate lending. Includes lending to corporate clients, including through relationship lending, middle-market lending and acquisition financing.

2020 versus 2019. Net revenues in Investment Banking were €101 million for 2020, 39% higher than in 2019, reflecting significantly higher net revenues in Financial Advisory, Underwriting, and Corporate Lending.

The increase in Financial Advisory net revenues was due to significantly higher merger fees reflecting a higher market share in Germany and the expansion of activities of the bank in 2020. The increase in Underwriting net revenues was due to significantly higher net revenues in both Equity and Debt underwriting, reflecting an expansion of activities of the bank in 2020. The increase in Corporate Lending is reflecting the increase in activities of the bank in 2020.

FICC and Equities

FICC and Equities serve the bank's clients who buy and sell financial products, raise funding and manage risk. The bank does this by acting as a market maker and offering expertise on a global basis. FICC and Equities make markets and facilitate client transactions in fixed income, equity, currency and commodity products. In addition, the bank makes markets in, and clears client transactions on, major stock, options and futures exchanges worldwide.

The bank executes a high volume of transactions for its clients in large, highly liquid markets. The bank also executes transactions for its clients in less liquid markets for spreads and fees that are generally somewhat larger than those charged in more liquid markets. Additionally, the bank structures and executes transactions involving customised or tailor-made products that address its clients' risk exposures, investment objectives or other complex needs, as well as derivative transactions related to client advisory and underwriting activities.

FICC. FICC generates revenues from intermediation and financing activities.

- **FICC intermediation.** Includes client execution activities related to making markets in both cash and derivative instruments, as detailed below.

  Interest Rate Products. Government bonds (including inflation-linked securities) across maturities, other government-backed securities, and interest rate swaps, options and other derivatives.

  Credit Products. Investment-grade and high-yield corporate securities, credit derivatives, exchange-traded funds (ETFs), bank and bridge loans, municipal securities, emerging market and distressed debt, and trade claims.

  Currencies. Currency options, spot/forwards and other derivatives on G-10 currencies and emerging-market products.

  Commodities. Commodity derivatives and, to a lesser extent, physical commodities, involving crude oil and petroleum products, natural gas, base, precious and other metals, electricity, coal, agricultural and other commodity products.

- **FICC financing.** Includes providing financing to the bank's clients through securities purchased under agreements to resell (resale agreements), as well as through structured credit and asset-backed lending, which are typically longer term in nature.

2020 versus 2019. Net revenues in FICC were €69 million, 64% higher than in 2019, due to significantly higher net revenues in in both FICC intermediation and FICC financing, reflecting the expansion of activities of the bank across Europe in 2020.

Equities. Equities generates revenues from intermediation and financing activities.

- **Equities intermediation.** Includes client execution activities related to making markets in equity products and commissions and fees from executing and clearing institutional client transactions on major stock, options and futures exchanges worldwide, as well as over-the-counter (OTC) transactions.
- **Equities financing.** Includes prime brokerage and other equities financing activities, including securities lending, margin lending and swaps and generates revenues primarily in the form of interest rate spreads or fees. The bank also acts as an issuing and paying agent and provides the entire asset servicing for issuances for Goldman Sachs & Co. Wertpapier GmbH (GSWP).

2020 versus 2019. Net revenues in Equities were €103 million for 2020, 143% higher than in 2019 due to significantly higher net revenues in both Equities intermediation and Equities financing, reflecting the expansion of activities of the bank across Europe in 2020.

Investment Management

Investment Management includes Asset management and Wealth management.

Asset Management generates revenues from the following:

- **Management and other fees.** The majority of revenues in management and other fees consists of asset-based fees on client assets that are being managed. The fees charged vary by asset class, distribution channel and the type of services provided, and are affected by investment performance, as well as asset inflows and redemptions.

Wealth management includes wealth advisory services, including portfolio management and financial counselling, brokerage and other transaction services to high-net-worth individuals and families.

2020 versus 2019. Investment Management net revenues were €60 million for 2020, 22% higher than in 2019, due to higher Asset Management and PWM revenues, reflecting the expansion of activities of the bank in 2020.

Expenses

Total expenses relate to general administrative expenses, depreciation and amortization and other operating expenses. Expenses are primarily driven by compensation (including the impact of Group Inc. share price on share-based compensation), headcount and levels of business activity.

The table below presents the bank's total expenses and headcount. In the prior year Headcount at year-end was presentend in FTE.

	Period Ended December	
€ in million	**2020**	2019
Salaries and wages	**€114**	€ 76
Social security contributions	**8**	4
Other administrative expenses	**61**	32
Depreciation and amortization	**4**	2
Other operating expenses	**9**	8
Total expenses	**€196**	€122
Headcount at year-end	**556**	243

2020 versus 2019. Total expenses of €196 million for 2020 were 61% higher than 2019.

Salaries and wages were €114 million for 2020, 50% higher than 2019. The higher costs reflect an increase in headcount, as well as the mark-to-market of share-based compensation due to the increase in the share price of Group Inc.

Other administrative expenses were €61 million for 2020, 90% higher than 2019. These increased mainly due to increased Bank Levy, professional fees and occupancy expenses.

Tax on Profit

The effective tax rate for 2020 was 34.7%. The effective tax rate represents the bank's tax on profit divided by its profit before taxation.

Net Earnings

Net earnings increased by 63% to €89 million mainly due to an increased footprint in Investment Banking, FICC and Equities. Overall net earnings essentially met the expectations for 2020.

Balance Sheet and Funding Sources

The table below presents the bank's balance sheet on an aggregated level.

	As of December	
€ in million	**2020**	2019
Cash	**€ 2,595**	€ 1,010
Receivables from banks/customers	**4,738**	281
Trading assets	**9,452**	1,202
Remaining other assets	**5,572**	879
Total assets	**22,357**	3,372
Liabilities to banks/customers	**6,200**	660
Trading liabilities	**7,677**	903
Provisions	**241**	130
Remaining other liabilities	**4,862**	919
Subordinated Debt	**20**	20
Shareholder's equity	**3,357**	740
Total liabilities and shareholder's equity	**€ 22,357**	€ 3,372

In the table above:

- Cash increased by €1.6 billion to €2.6 billion due to increased balances with central banks held as Global Core Liquid Assets (GCLA).
- Receivables from banks/customers increased by €4.5 billion mainly relating to an increase in reverse repurchase agreements.
- Trading assets increased by €8.3 billion and trading liabilities increased by €6.8 billion as a result of increased market making activities in 2020.
- Remaining other assets primarily refer to balances related to listed derivatives of €2.9 billion (2019: €0.1 billion), and collateral balances of €2.3 billion (2019: €0.6 billion) and are the result of increased activities commenced in 2020. Remaing other assets include intangible assets (including Goodwill) of €0.1 billion (2019; €0 billion) and are the result of the move of certain activities and employees from GS Group's U.K. entities to GSBE.
- Remaining other liabilities primarily refer to balances related to listed derivatives of €3.0 billion (2019: €0.3 billion) and collateral balances of €1.6 billion (2019: €0.6 billion) and are the result of increased activities commenced in 2020.
- Equity increased by €2.6 billion to €3.4 billion due to capital increases totalling €2.6 billion in the reporting period.

As of December 2020, there are €565 million of irrevocable loan commitments (2019: €178 million), which are reported off-balance sheet. Risks arising from these transactions are considered in the impairment calculations and corresponding provisions are recognized.

The liquidity management of the bank is designed to ensure sufficient liquidity is available at all times. As of December 2020, GSBE invested €2.6 billion of its excess free liquidity with the German central bank (2019: €1.0 billion).

The bank had sufficient liquidity to meet its payment obligations at all times during the financial year. The bank is an indirect subsidiary of Group Inc., whose shareholders' equity was $96 billion as of December 2020 and $90 billion as of December 2019. Group Inc. makes a comprehensive range of liquidity and financing possibilities available for the bank, allowing the greatest possible flexibility in refinancing.

Funding Sources

The bank's primary sources of funding are collateralised financings, unsecured borrowings, and shareholder's equity. The bank raises collateralised financings through Securities sold under agreements to repurchase (repurchase agreements) and securities loaned.

The table below presents information about funding sources.

	As of December	
€ in million	**2020**	2019
Collateralised financings	**€ 3,280**	€ 16
Unsecured borrowings	**2,940**	664
Shareholder's equity	**3,357**	740
Total	**9,577**	1,420

Unsecured Borrowings. The bank raises through both intercompany and external unsecured borrowings.

Intercompany Unsecured Borrowings

The bank sources funding through intercompany unsecured borrowings, primarily from Goldman Sachs Funding LLC (Funding IHC).

Funding IHC is a wholly-owned, direct subsidiary of Group Inc. that facilitates the execution of GS Group's preferred resolution strategy. The majority of GS Group's unsecured funding is raised by Group Inc., which lends the necessary funds to Funding IHC and other subsidiaries, including the bank, to meet asset financing, liquidity and capital requirements. The benefits of this approach to subsidiary funding are enhanced control and greater flexibility to meet the funding requirements of the bank and other subsidiaries. Intercompany unsecured borrowings include loans, subordinated loans, overdrafts, and other borrowings.

External Unsecured Borrowings

External unsecured borrowings include registered bonds and promissory notes, Wealth Management deposits, other borrowings, and overdrafts.

Forecast and Opportunities Report

Economy

Although the spot macroeconomic activity data across Europe remains subdued in the first quarter of 2021, we are comfortable with our forecast for a sharp rebound in activity into the summer. Our current activity indicators show sluggish activity across Europe in March, but the forward-looking components in the PMIs have improved markedly, including a further brightening in business expectations, rising new orders and a lengthening in delivery times. Similarly, our high-frequency activity trackers suggest momentum troughed in January and has been gradually improving since, with a more material improvement into March.

In terms of virus developments, worries around new strains persist and cases remain elevated in several Euro area countries. Compared to the U.K., the Euro area vaccine roll-out continues to lag significantly and we expect meaningful reopening across the Euro area to start only in May, one to two months after the U.K. As a result, we look for a 0.4% contraction in the first quarter of 2021, but expect 1.9% growth in the second quarter. Risks to our near-term macroeconomic forecast remain to the downside, given the unpredictability around the new virus strains and the possibility of a further infection wave in coming weeks.

We remain optimistic on the Euro area beyond the near-term COVID-19 challenges. Firstly, we expect the vaccine roll-out to accelerate notably in the second quarter of 2021 as supply constraints are loosened, and expect 50% of the population to be vaccinated by June. Secondly, the Euro area is likely to benefit significantly from stronger global growth, including a robust industrial cycle and the expected stimulus-driven strength in US growth. Thirdly, we believe that the E.U. Recovery Fund is on track to disburse funds from the start of the third quarter, which should provide a welcome boost to growth in Italy and Spain. Fourth, the ECB has signalled that it will significantly step up its purchases to contain upward pressure on long-term yields until the economic recovery is on a firmer footing. Our Euro are GDP forecasts therefore remain above consensus for 2021 (5.1% vs 4.2%) and we expect the economy to return to its pre COVID-19 level at the end of 2021, with Southern Europe catching up in early 2022.

Although Euro area inflation surprised sharply to the upside in January, we estimate that much of this increase is attributable to one-off factors, such as the reversal of the German VAT cut, delayed winter sales and Harmonised Index of Consumer Prices (HICP) weight changes. Technical factors will likely lead to sharp volatility this year, with area-wide core HICP inflation dropping to zero percent in July before climbing back to 1.4% in November. But our updated output gap estimates suggest that very substantial slack remains in the Euro area. Although the uncertainty is substantial, we estimate an output gap of -7% in the fourth quarter of 2020, with more limited slack in the North (-4% in Germany) and much larger output gaps in the South (-12% in Spain).

Our estimates imply that the Euro area will only return to its potential at the end of 2024 despite our above-consensus growth forecast, suggesting that it will take time for underlying inflation pressures to firm.

We see both upside and downside risks around this baseline. In the near term, the biggest downside risk is that elevated new infections delay the reopening across Europe. In a downside scenario, which assumes that no incremental easing of restrictions takes place through the summer until August, the return to pre-pandemic activity levels could be delayed by around one quarter in the Euro area. In this case, annual Euro area growth in 2021 would be 1.0pp lower than in our baseline (at +4.1%). The most prominent upside risk is that a faster run-down of forced savings could lead to a further sizeable boost to demand. In this upside scenario, we see Euro area GDP growth in 2021 1.1pp higher (at +6.2%) than in our baseline.

Business Outlook

The Executive Board continues to be cautiously optimistic about the business outlook for 2021. As a result of Brexit, GSBE's role within GS Group has changed in the following manner:

- GSBE, acts as the main operating subsidiary of GS Group in the E.U. and has assumed certain functions that can no longer be efficiently and effectively performed by GS Group's U.K. operating subsidiaries.
- A significant number of relationships with E.U.-based clients of the Investment Banking, FICC, Equities, and Investment Management businesses have moved from the U.K. to GSBE.
- GSBE has set up branches in a number of jurisdictions in the E.U. and in the U.K. to enable Investment Banking, FICC, Equities, and Investment Management personnel to be situated in the bank's offices in those countries.

Following the end of the Brexit transition period, GSBE has further expanded business activities across Investment Banking, FICC, Equities, and Investment Management. On February 12, 2021 certain business activities of Goldman Sachs Paris Inc. et Cie (GSPIC) pertaining to the Investment Banking business and the major part of the FICC and Equities business were transferred to the Paris Branch of GSBE. As part of that transfer a total headcount of 94 has moved from GSPIC to GSBE.

As of March 31, 2021 the total headcount of GSBE was 851, a further increase of 295 compared to December 2020.

The transfer of activities to GSBE from other GS Group entities is expected to result in a significant increase in net revenues in Investment Banking, FICC, Equities and Investment Management for 2021.

A contribution of €500 million to the free capital reserves was conducted by the shareholders of GSBE following the end of the reporting period on February 3, 2021. We expect that the total capital ratio will decrease gradually in line with increasing business activity but remain conservatively above the minimum requirements.

As at the time of publication, there continues to be uncertainty regarding the impact of the COVID-19 pandemic on the near term economic outlook, even as efforts to distribute vaccines are underway. The bank continues to successfully execute on its Business Continuity Planning (BCP) strategy and its priority remains to safeguard its employees and to seek to ensure continuity of business operations on behalf of its clients. The extent of the impact of the COVID-19 pandemic on the bank's operational and financial performance, will depend on future developments.

Risk Report

Risks are inherent in the bank's businesses and include liquidity, market, credit, operational, model, legal, compliance, conduct, regulatory, business environment and strategic risks, and reputational risks. The bank's risks include the risks across its risk categories, regions or businesses, as well as those which have uncertain outcomes and have the potential to materially impact the bank's financial results, its liquidity and its reputation. For further information about the bank's risk management processes, see "Overview and Structure of Risk Management". For information about the bank's areas of risk and capital adequacy, see "Liquidity Risk Management", "Market Risk Management", "Credit Risk Management", "Operational Risk Management", "Compliance Risk Management", "Model Risk Management", "Strategic and Business Environment Risk" and "Capital Adequacy".

Changes in Risk Management

As the bank continued to execute GS Group's Brexit transition plan during 2020, this resulted in a further increase in the activities and risk taking across market, credit, liquidity and operational risks in the bank, which were supported by increases in Capital and Risk Appetite Limits. Most notably, this included a meaningful further expansion of the bank's FICC and Equities activities in GSBE including the commencement of market risk management for certain trading book activities and the associated migration of existing risk positions from other GS Group entities to GSBE. To adequately manage these risks, the bank further evolved its risk management framework, policies and processes during the year. Key risk management changes implemented during 2020 thereby included the introduction of additional credit risk management frameworks and reporting capabilities to support new business activities. In addition, the bank also further expanded its staffing level in several areas to ensure a sufficiently resourced and experienced independent control function to provide for an active and appropriate monitoring, evaluation and management of the risks associated with the bank's activities.

While the heightened market volatility observed in response to the COVID-19 outbreak led to increases in GSBE's credit and liquidity exposure metrics during 2020, the pandemic and its implications on the economy had no major risk profile impact for GSBE as of December 31, 2020 given the strong credit risk portfolio of mainly investment grade counterparties and adequate capital and liquidity buffers maintained throughout the year. The pandemic also had limited impact on GSBE's market, credit or operational risk profile during the year. Additional monitoring and approval processes were introduced to timely identify and ensure closer monitoring, risk management and reporting of counterparties with heightened default risk. The COVID-related business continuity plan (BCP) for GSBE has been successful, with work from home (WFH) arrangements for most of the GSBE employees and no business disruptions.

Overview and Structure of Risk Management

Overview

The bank believes that effective risk management is critical to its success. Accordingly, the bank has established an enterprise risk management framework that employs a comprehensive, integrated approach to risk management, and is designed to enable comprehensive risk management processes through which the risks associated with the bank's business are identified, assessed, monitored and managed.

The implementation of the bank's risk governance structure and core risk management processes are overseen by the bank's Executive Board, which is responsible for ensuring that the bank's framework provides a consistent and integrated approach to managing the various risks in a manner consistent with the its risk appetite.

The bank has defined its Risk Strategy which together with its Risk Appetite Statement (RAS), and in conjunction with the GS Group RAS, lays out the primary risk management philosophy, objectives and principles on how risks are managed within appetite. For all material risks, the bank articulates its risk appetite and how it manages the risk profile within that appetite using qualitative, and where applicable, quantitative measures, thresholds and/or limits.

Together with the bank's Executive Board, an adequate cross-divisional committee structure with representation from senior management of the bank is the key to the risk management culture throughout the bank. The bank's risk management structure, consistent with GS Group, is built around three core components: governance; processes; and people.

Governance. Risk management governance starts with the bank's Executive Board, which defines the risk strategy and risk appetite of the bank and, both directly and through established committees, including the GSBE Risk Committee, oversees the bank's risk management policies and practices implemented through the enterprise risk management framework.

The bank's revenue-producing units, as well as Treasury, Engineering, Human Capital Management, Operations and Corporate and Workplace Solutions, are considered the first line of defence. They are accountable for the outcomes of the bank's risk-generating activities, as well as for assessing and managing those risks within the bank's risk appetite.

The bank's independent risk oversight and control functions are considered as the second line of defence and provide independent assessment, oversight and challenge of the risks taken by the first line of defence, as well as lead and participate in risk committees. Independent risk oversight and control functions include Compliance, Tax and Controllers that directly report to the bank's chief operating officer, Credit Risk, Liquidity Risk, Market Risk, Model Risk Management, Operational Risk, Risk Engineering that directly report to the bank's chief risk officer, and Legal that directly report to the General Counsel of GSBE.

Internal Audit is considered as the third line of defence and directly reports to the bank's Executive Board. Internal Audit includes professionals with a broad range of audit and industry experience, including risk management expertise. Internal Audit is responsible for independently assessing and validating the effectiveness of key controls, including those within the risk management framework, and providing timely reporting to the bank's Executive Board, senior management and regulators.

The three lines of defence structure promotes the accountability of first line risk takers, provides a framework for effective challenge by the second line, and empowers independent review from the third line.

Processes. The bank maintains various processes that are critical components of its risk management framework, including: (i) risk identification and assessment, (ii) risk appetite, limit and threshold setting, (iii) risk reporting and monitoring, and (iv) risk decision making.

The bank has a comprehensive data collection process, including bank-wide policies and procedures that require all employees to report and escalate risk events. The bank's approach for risk identification and assessment is comprehensive across all risk types, is dynamic and forward-looking to reflect and adapt to the bank's changing risk profile and business environment, leverages subject matter expertise, and allows for prioritisation of the bank's most critical tasks. The bank's approach leverages the firmwide identification process complemented by an entity level process by which all material risks are determined.

To effectively assess and monitor the bank's risks, the bank maintains a daily discipline of marking substantially all of its inventory to current market levels.

An important part of the bank's risk management process is stress testing. It allows the bank to quantify its exposure to tail risks, highlight potential loss concentrations, undertake risk/reward analysis, and assess and mitigate its risk positions. Stress tests are performed on a regular basis and are designed to ensure a comprehensive analysis of the bank's vulnerabilities and idiosyncratic risks combining financial and non-financial risks, including, but not limited to, market, credit, liquidity and funding, operational and compliance, strategic, systemic and emerging risks into a single combined scenario.

Ad hoc stress tests are also performed in anticipation of market events or conditions. Stress testing is also used to assess capital adequacy as part of capital planning and stress testing process.

The bank has defined a comprehensive risk limit framework reflective of its risk profile and risk appetite which are embedded into the risk decision making of the bank. Limits are set with the aim to ensure GSBE maintains an adequate capital and liquidity position, and overall risk taking on an ongoing basis. Further details on the limit system at the overall entity and risk category level and the risk decision making are described in the following sections.

The bank's risk reporting and monitoring processes are designed to take into account information about both existing and emerging risks, thereby enabling the bank's risk committees and senior management to perform their responsibilities with the appropriate level of insight into risk exposures. A detailed quarterly risk reporting to management is complemented by more frequent regular (daily, weekly or monthly) and ad-hoc reporting on the bank's material risks. Furthermore, the bank's early warning indicators, and limit and threshold breach process provide means for timely escalation.

The bank evaluates changes in its risk profile and businesses, including changes in business mix and jurisdictions in which it operates, by monitoring risk factors at a bank-wide level.

People. The experience of the bank's professionals, and their understanding of the nuances and limitations of each risk measure, guide the bank in assessing exposures and maintaining them within prudent levels.

Structure

Oversight of risk in the bank is ultimately the responsibility of the bank's Executive Board, who oversees risk both directly and through delegation to various committees. A series of committees within the bank with specific risk management mandates covering important aspects of the bank's businesses also have oversight or decision-making responsibilities. The key committees with oversight of the bank's activities are described below.

GSBE Risk Committee. The GSBE Risk Committee is responsible for the ongoing monitoring and control of all financial and non-financial risks associated with the bank's activities. This includes reviewing key financial and risk metrics, including but not limited to profit and loss, capital (including ICAAP), funding, liquidity (including ILAAP), credit risk, market risk, operational risk, price verification and stress tests. Within its mandate, the GSBE Risk Committee approves market risk, credit risk, liquidity and regulatory capital limits or articulate recommendations with regard to those risk limits which require Executive Board approval. Its membership includes senior managers from the revenue-producing divisions and independent control and support functions. The GSBE Risk Committee reports to the bank's Executive Board.

GSBE Operational Risk Committee. The GSBE Operational Risk Committee provides oversight of the ongoing development and implementation of operational risk policies, framework and methodologies, with oversight from the GSBE Risk Committee and monitors the effectiveness of operational risk management. The Committee is accountable for the implementation of business standards and practices, including reputational risk management, client service and conduct risk, within the scope of its mission.

GSBE Credit Risk Council. The GSBE Credit Risk Council is responsible for ensuring that the bank has appropriate and effective credit risk management processes, and the ongoing monitoring and review of counterparty credit risk exposure. The Council reports to the bank's Risk Committee.

GSBE Asset Liability Committee. The GSBE Asset Liability Committee reviews and approves the strategic direction for the bank's financial resources, including capital, liquidity, funding and balance sheet. This committee has oversight responsibility for asset liability management, including interest rate and currency risk, funds transfer pricing, capital allocation and incentives, and credit ratings. This committee makes recommendations as to any adjustments to asset liability management and financial resource allocation in light of current events, risks, exposures, and regulatory requirements and approves related policies. Its membership includes senior managers from the revenue-producing divisions and independent control and support functions. The GSBE Asset and Liability Committee directly reports to the bank's Executive Board.

Regional and Firmwide Risk Governance

As a subsidiary and integrated part of GS Group, the comprehensive regional and global risk governance framework in place forms an integral part of the strategy and risk management processes of the bank. The integration into the firmwide risk management framework allows the bank to use the firm's methods and systems and a consistent implementation of firmwide structures and principles while considering the entity specificities and governance structure.

GS Group has established a series of committees with specific risk management mandates. Committees with oversight of matters relevant to the bank include representation from bank's senior management, where relevant.

The primary regional risk and oversight committees are described below.

European Management Committee. The European Management Committee (EMC) oversees the activities of the Firm in the EMEA region. Its membership includes senior managers from the region's revenue-producing divisions and independent control and support functions, including representation from the bank's senior management.

EMEA Operational Risk Committee. The Committee provides oversight of the ongoing development and implementation of operational risk policies, framework and methodologies in EMEA, and monitors the effectiveness of operational risk management. Its membership includes representation from the bank's senior management.

EMEA Conduct Risk Committee. The EMEA Conduct Risk Committee has oversight responsibility for culture and conduct risk, as well as for the implementation of business standards and practices. Its membership includes senior managers from the revenue-producing divisions and independent control and support functions. The EMEA Conduct Risk Committee reports to the EMC, to GS Group's Firmwide Client and Business Standards Committee and to the bank's Executive Board.

Management Committee. The Management Committee oversees the global activities of GS Group. The committee consists of the most senior leaders of GS Group, and is chaired by GS Group's chief executive officer.

Firmwide Enterprise Risk Committee. The Firmwide Enterprise Risk Committee is responsible for overseeing all of GS Group's financial and non-financial risks. As a part of such oversight, the committee is responsible for the ongoing review, approval and monitoring of GS Group's enterprise risk management framework, as well as the risk limits framework. This committee is co-chaired by GS Group's chief financial officer and chief risk officer, who are appointed as chairs by GS Group's chief executive officer, and reports to GS Group's Management Committee.

Firmwide Client and Business Standards Committee. The Firmwide Client and Business Standards Committee is responsible for overseeing relationships with clients, client service and experience, and related business standards as well as client-related reputational matters. This committee is chaired by GS Group's president and chief operating officer, who is appointed as chair by GS Group's chief executive officer, and reports to the GS Group Management Committee.

Firmwide Asset Liability Committee. The Firmwide Asset Liability Committee reviews and approves the strategic direction for GS Group's financial resources, including capital, liquidity, funding and balance sheet. This committee has oversight responsibility for asset liability management, including interest rate and currency risk, funds transfer pricing, capital allocation and incentives, and credit ratings. This committee makes recommendations as to any adjustments to asset liability management and financial resource allocation in light of current events, risks, exposures, and regulatory requirements and approves related policies. This committee is co-chaired by GS Group's chief financial officer and global treasurer, who are appointed as chairs by GS Group's chief executive officer, and reports to GS Group's Management Committee.

Liquidity Risk Management

Overview

Liquidity risk is the risk that the bank will be unable to fund itself or meet its liquidity needs in the event of bank-specific, broader industry, or market liquidity stress events. The bank has in place a comprehensive and conservative set of liquidity and funding policies. The bank's principal objective is to be able to fund itself and to enable its core businesses to continue to serve clients and generate revenues, even under adverse circumstances. GSBE is subject to the LCR requirements according to Regulation 2015/61 (LCR Delegated Act) of the European Commission of October 1, 2015.

Treasury, which reports to the bank's chief financial officer, has primary responsibility for developing, managing and executing our liquidity and funding strategy within the bank's risk appetite. The bank's Treasury function is also integrated within the firmwide Treasury function. The bank, as a wholly-owned subsidiary of GS Group, is currently financed primarily through Group funding and not dependent on any third-party financing sources.

Liquidity Risk, which is independent of the revenue-producing units and Treasury, and reports to the bank's CRO, has primary responsibility for assessing, monitoring and managing the bank's liquidity risk through oversight across the bank's businesses and the establishment of stress testing and limits frameworks. The bank's framework for managing liquidity risk is consistent with, and part of, the GS Group framework.

Liquidity Risk Management Principles

The bank manages liquidity risk according to three principles: (i) hold sufficient excess liquidity in the highest quality to cover outflows during a stressed period, (ii) maintain appropriate Asset-Liability Management and (iii) maintain a viable Contingency Funding Plan.

GCLA. GCLA is liquidity that the bank maintains to meet a broad range of potential cash outflows and collateral needs in a stressed environment. A primary liquidity principle is to pre-fund its estimated potential cash and collateral needs during a liquidity crisis and hold this liquidity in the form of unencumbered, highly liquid securities and cash. The bank believes that the securities held in its GCLA would be readily convertible to cash in a matter of days, through liquidation, by entering into repurchase agreements or from maturities of resale agreements, and that this cash would allow it to meet immediate obligations without needing to sell other assets or depend on additional funding from credit-sensitive markets.

The bank's GCLA is distributed across asset types, issuers and clearing agents to provide sufficient operating liquidity to ensure timely settlement in all major markets, even in a difficult funding environment.

Based on the results of the bank's internal liquidity risk models, described below, as well as consideration of other factors, including, but not limited to, a qualitative assessment of the condition of the bank, as well as the financial markets, the Bank believes its liquidity position as of 31 December, 2020 was appropriate. The bank strictly limits its GCLA to a narrowly defined list of securities and cash across a range of currencies because they are highly liquid, even in a difficult funding environment. The bank does not include other potential sources of excess liquidity in its GCLA, such as less liquid unencumbered securities or committed credit facilities.

The minimum GCLA required is held by the bank directly and is intended for use only by the bank to meet its liquidity requirements and is assumed not to be available to Group Inc. or Funding IHC. In addition to GCLA held in the bank, GS Group holds a portion of global GCLA directly at Group Inc. or Funding IHC, which in some circumstances may be additionally provided to the bank or other major subsidiaries.

Asset-Liability Management. The bank's liquidity risk management policies are designed to ensure it has a sufficient amount of financing, even when funding markets experience persistent stress. The bank manages maturities and diversity of funding across markets, products and counterparties, and seeks to maintain a diversified external funding profile with an appropriate tenor, taking into consideration the characteristics and liquidity profile of its assets.

The bank's goal is to ensure it maintains sufficient liquidity to fund its assets and meet its contractual and contingent obligations in normal times, as well as during periods of market stress. Through the dynamic balance sheet management process, actual and projected asset balances are used to determine secured and unsecured funding requirements. In a liquidity crisis, the bank would first use its GCLA in order to avoid reliance on asset sales (other than its GCLA). However, the bank recognises that orderly asset sales may be prudent or necessary in a severe or persistent liquidity crisis.

Contingency Funding Plan. GS Group maintains a contingency funding plan, which has a GSBE-specific addendum, to provide a framework for analysing and responding to a liquidity crisis situation or periods of market stress. The contingency funding plan outlines a list of potential risk factors, key reports and metrics that are reviewed on an ongoing basis to assist in assessing the severity of, and managing through, a liquidity crisis and/or market dislocation. The contingency funding plan also describes the bank's potential responses if assessments indicate that the bank has entered a liquidity crisis, which includes pre-funding for what the bank estimates will be its potential cash and collateral needs, as well as utilising secondary sources of liquidity. Mitigants and action items to address specific risks which may arise are also described and assigned to individuals responsible for execution.

The contingency funding plan identifies key groups of individuals and their responsibilities, which include fostering effective coordination, control and distribution of information, implementing liquidity maintenance activities and managing internal and external communication, all of which are critical in the management of a crisis or period of market stress.

Stress Tests

In order to determine the appropriate size of the bank's liquidity pool, an internal liquidity model is used, referred to as the Modeled Liquidity Outflow, which captures and quantifies the bank's liquidity risks over a 30-day stress scenario. Other factors are considered including, but not limited to, an assessment of potential intraday liquidity needs through an additional internal liquidity risk model, referred to as the Intraday Liquidity Model, other applicable regulatory requirements and a qualitative assessment of the condition of the bank, as well as the financial markets. The results of the Modelled Liquidity Outflow and the Intraday Liquidity Model are reported to the Executive Board and senior management on a regular basis.

Modelled Liquidity Outflow. The Modelled Liquidity Outflow is based on conducting multiple scenarios that include combinations of market-wide stress and GS specific stress, characterised by the following qualitative elements:

- Severely challenged market environments, including low consumer and corporate confidence, financial and political instability, adverse changes in market values, including potential declines in equity markets and widening of credit spreads; and
- A GS specific crisis potentially triggered by material losses, reputational damage, litigation, executive departure, and/or a ratings downgrade.

The following are key modelling elements of the Modeled Liquidity Outflow:

- Liquidity needs over a 30-day scenario;
- A two-notch downgrade of the long-term senior unsecured credit ratings of Group Inc. and its rated subsidiaries;
- Changing conditions in funding markets, which limit the bank's access to unsecured and secured funding;
- A combination of contractual outflows, such as upcoming maturities of unsecured debt, and contingent outflows.

Intraday Liquidity Model

The bank's Intraday Liquidity Model measures the bank's intraday liquidity needs using a scenario analysis characterised by the same qualitative elements as the Modelled Liquidity Outflow. The model assesses the risk of increased intraday liquidity requirements during a scenario where access to sources of intraday liquidity may become constrained.

Intraday Liquidity Management

Operations Liquidity Management continuously monitors the intraday liquidity requirements based on projected demand in the relevant currencies and bank accounts. If additional liquidity is required, Operations in line with the Treasury governance framework and in close interaction with Liquidity Risk will ensure liquidity needs on the same day through existing facilities, e.g. existing GS Group loan.

Resolution Liquidity Models

In connection with GS Group's resolution planning efforts, GS Group has established a Resolution Liquidity Adequacy and Positioning framework, which estimates liquidity needs of its major subsidiaries, including GSBE, in a stressed environment. GS Group has also established a Resolution Liquidity Execution Need framework, which measures the liquidity needs of its major subsidiaries, including GSBE, to stabilise and wind-down following a Group Inc. bankruptcy filing in accordance with GS Group's preferred resolution strategy.

In addition, GS Group has established a triggers and alerts framework, which is designed to provide GS Group's Board of Directors with information needed to make an informed decision on whether and when to commence bankruptcy proceedings for Group Inc. GSBE has also established Resolution related liquidity triggers as part of its triggers and alerts framework.

Limits

The bank uses liquidity risk limits at various levels and across liquidity risk types to manage the size of its liquidity exposures. Limits are measured relative to acceptable levels of risk given the liquidity risk tolerance of the bank. The purpose of these limits is to assist senior management in monitoring and controlling the bank's overall liquidity profile. The bank's Executive Board and Risk Committee approve the bank's risk appetite and limits. Limits derived from the Bank's risk appetite are reviewed frequently and amended, with required approvals, on a permanent and temporary basis, as appropriate, to reflect changing market or business conditions.

Limits are monitored by Treasury and Liquidity Risk. Liquidity Risk is responsible for identifying and escalating to the Executive Board and/or the GSBE Risk Committee, on a timely basis, instances where limits have been exceeded.

Liquidity Regulatory Framework

The implementation of the Basel Committee's international framework for liquidity risk management, standards and monitoring calls for a liquidity coverage ratio (LCR) and a net stable funding ratio (NSFR).

The bank is subject to a minimum LCR of 100% under the LCR rule approved by the European Commission. The bank's average monthly LCR for the trailing twelve-month period ended December 2020 was 239.8%.

The NSFR is designed to promote medium- and long-term stable funding of the assets and off-balance sheet activities over a one-year time horizon.

In June 2019, the European Commission published rules amending the CRR to implement the NSFR for certain E.U. Credit Institutions, including the bank. The NSFR is expected to become effective for the bank on June 28, 2021. The bank expects that it will be compliant with the NSFR requirement when it is effective.

The implementation of these rules and any amendments adopted by the regulatory authorities, could impact the bank's liquidity and funding requirements and practices in the future.

Credit Ratings

The credit ratings of the bank and those of Group Inc. are both important to the bank's liquidity. The bank is an indirect, wholly-owned subsidiary of Group Inc. and relies on Group Inc. for capital and funding. Based on current activities of the bank, a reduction in the bank's credit rating standalone will not be expected to severely impact the bank's overall liquidity position as the bank does not currently rely on any third-party financing or long-term unsecured debt issuances and is funded primarily through Group Inc. A reduction in Group Inc.'s credit ratings could in theory adversely affect the bank's liquidity and competitive position, increase borrowing costs, limit access to the capital markets or funding from Group Inc. However, the bank also has the capabilities to find alternative sources of external financing to maintain adequate liquidity and funding positions.

The table below presents the unsecured credit ratings and outlook of the bank and Group Inc.

	As of December 2020		
	Fitch	**Moody's**	**S&P**
GSBE			
Short-term debt	**F1**	**P-1**	**A-1**
Long-term debt	**A**	**A1**	**A+**
Ratings outlook	**Negative**	**Stable**	**Stable**
Group Inc.			
Short-term debt	**F1**	**P-2**	**A-2**
Long-term debt	**A**	**A3**	**BBB+**
Ratings outlook	**Negative**	**Under Review**	**Stable**

In January 2021, Moody's upgraded Group Inc.'s long-term debt ratings (from A3 to A2) and short-term debt ratings (from P-2 to P-1), and has returned the outlook from ratings under review to stable.

Market Risk Management

Overview

Market risk is the risk of loss in the value of GSBE's inventory in trading book and banking book, as well as certain other financial assets and liabilities, due to changes in market conditions. GSBE employs a variety of risk measures, each described in the respective sections below, to monitor market risk. Categories of market risk include the following:

- Interest rate risk: results from exposures to changes in the level, slope and curvature of yield curves, the volatilities of interest rates, prepayment speeds and credit spreads;
- Equity price risk: results from exposures to changes in prices and volatilities of individual equities, baskets of equities and equity indices;
- Currency rate risk: results from exposures to changes in spot prices, forward prices and volatilities of currency rates; and
- Commodity price risk: results from exposures to changes in spot prices, forward prices and volatilities of commodities, such as crude oil and metals.

Firmwide Market Risk, which is independent of the revenue-producing units and reports to the GS Group's chief risk officer, has primary responsibility for assessing, monitoring and managing GS Group's market risk through oversight across the GS Group's global businesses. The GSBE Market Risk department is an integral part of the GS Group Market Risk function and reports to the GSBE chief risk officer.

Managers in revenue-producing units and Market Risk discuss market information, positions and estimated loss scenarios on an ongoing basis. Managers in revenue-producing units are accountable for managing risk within prescribed GSBE limits. GSBE Market Risk monitors this risk against GSBE limits, independently.

Market Risk Management Process

The bank's process for managing market risk is described in the "Overview and Structure of Risk Management", as well as the following:

- Monitoring compliance with established market risk limits and reporting GSBE's exposures;
- Diversifying exposures;
- Controlling position sizes; and
- Evaluating mitigants, such as economic hedges in related securities or derivatives;

GSBE's framework for managing market risk is consistent with, and part of, the GS Group framework, and results are analysed by business and in aggregate, at both the GS Group and GSBE level.

Risk Measures

GSBE produces risk measures and monitors them against established market risk limits. These measures reflect an extensive range of scenarios and the results are aggregated at the product, business and legal entity level.

A variety of risk measures are used to estimate the size of potential losses for both moderate and more extreme market moves over both short and long-term time horizons. Primary risk measures are value-at-risk (VaR), which is used for shorter-term periods, and stress tests. The GSBE risk report details key risks, drivers and changes, and is distributed daily to the GSBE Executive Board.

Value-at-Risk. GSBE calculates and monitors VaR for trading book positions, which is the potential loss in value due to adverse market movements over a defined time horizon with a specified confidence level. A one-day time horizon with a 95% confidence level is employed. The VaR model is a single model that captures risks, including interest rates, equity prices, currency rates and commodity prices in trading book. As such, VaR facilitates comparison across portfolios of different risk characteristics. VaR also captures the diversification of aggregated risk across GSBE.

VaR is analysed at the legal entity level and a variety of more detailed levels, including risk category and business. Inherent limitations to VaR include:

- VaR does not estimate potential losses over longer time horizons where moves may be extreme;
- VaR does not take account of the relative liquidity of different risk positions; and
- Previous moves in market risk factors may not produce accurate predictions of all future market moves.

To comprehensively capture GSBE's exposures and relevant risks in the VaR calculations, historical simulations with full valuation of market factors at the position level by simultaneously shocking the relevant market factors for that position are used. These market factors include spot prices, credit spreads, funding spreads, yield curves, volatility and correlation, and are updated periodically based on changes in the composition of positions, as well as variations in market conditions. A sample from five years of historical data is taken to generate the scenarios for the VaR calculation. The historical data is weighted so that the relative importance of the data reduces over time. This gives greater importance to more recent observations and reflects current asset volatilities, which improves the accuracy of estimates of potential loss. As a result, even if positions included in VaR were unchanged, VaR would increase with increasing market volatility and vice versa.

Given its reliance on historical data, VaR is most effective in estimating risk exposures in markets in which there are no sudden fundamental changes or shifts in market conditions.

The VaR model is applied consistently across GS Group, including GSBE. Daily backtesting of the VaR model is performed (i.e., comparing daily trading net revenues to the VaR measure calculated as of the prior business day) at the GS Group and GSBE level. The trading book VaR (95%, 1 day) of GSBE was €2 million as of 31 December 2020 (2019: € 0 million). This increase is due to businesses in FICC and Equities becoming live with managing market risk in the entity as part of Group's Brexit strategy and represents a significant change in GSBE's market risk. Hence, risk concentrations are identified in the trading book across interest rates, credit, equities and foreign exchange.

Stress Testing. Stress testing is a method of determining the effect on GSBE of various hypothetical stress scenarios. GSBE uses stress testing to examine risks of specific portfolios, as well as the potential impact of significant risk exposures across GSBE. A variety of stress testing techniques to calculate the potential loss from a wide range of market moves on the bank's portfolios are used, including firmwide stress tests which are considered to be appropriate for GSBE's positions, sensitivity analysis and scenario analysis. Where relevant, market liquidity considerations are incorporated. The results of the various stress tests are analysed together for risk management purposes.

Unlike VaR measures, which have an implied probability because they are calculated at a specified confidence level, there may not be an implied probability that GSBE stress test scenarios will occur. Instead, stress tests are used to model both moderate and more extreme moves in underlying market risk factors. When estimating potential loss, it is generally assumed that positions cannot be reduced or hedged (although experience demonstrates that some risk reduction or hedging is possible).

Interest Rate Risk in the Banking Book (IRRBB). GSBE's exposure to IRRBB arises from differences in interest earned or paid as interest rates change, due to the reset characteristics of our assets and liabilities. Among the banking book market risk in GSBE, IRRBB is the major concentrated risk and is driven by GSBE's pension liabilities. IRRBB is subject to stress testing and the results are monitored against appropriate limits.

The table below presents the change in Economic Value of Equity (EVE) for +/-100bps shocks across GSBE banking book positions as of December 2020. This scenario assumes instantaneous shocks with no rate flooring. This is a change from what was reported in 2019 of +/- 200bp with rate flooring consistent with the change in our internal risk management approach to better capture the adverse possibility of increasingly negative rates. IRRBB as measured by -100bp parallel shock in interest rates (without rate flooring) was -€62.0 million as of December 2020 driven by GSBE unfunded pension liabilities This compares to -€18.8 million as of December 2019 for the -200bp scenario with rate flooring. This exposure is materially Euro denominated and other currencies are not material.

	As of December 2020	
€ in millions	**+100bps**	**-100bps**
∆EVE ex Pension	**-0.3**	**1.5**
∆EVE Pension	**43.5**	**-63.4**
∆EVE	**43.1**	**-62.0**

Limits

GSBE uses market risk limits at various levels to manage the size of the GSBE market exposures. These limits are set based on VaR and stress tests relevant to the GSBE exposures and reported to the Executive Board, mainly daily.

Market Risk is responsible for monitoring these limits, and identifying and escalating to senior management and/or the GSBE Risk Committee in accordance with the delegation authority granted by the Executive Board, on a timely basis, instances where limits have been exceeded (e.g., due to positional changes or changes in market conditions, such as increased volatilities or changes in correlations). Such instances are remediated by an inventory reduction, hedging and/or a temporary or permanent increase to the limit.

Credit Risk Management

Overview

Credit risk represents the potential for loss due to the default or deterioration in credit quality of a counterparty (e.g., an OTC derivatives counterparty or a borrower) or an issuer of securities or other instruments the bank holds. The bank further differentiates between trading counterparty risk, lending risk, deposit placement risk and settlement risk within its risk management approach.

The bank's exposure to credit risk comes mostly from client transactions in OTC derivatives and cash placements mainly with Central Banks. Credit risk also comes from securities financing transactions (i.e. resale and repurchase agreements and securities borrowing and lending activities) and lending activity. In addition, the bank may hold other positions that give rise to credit risk (e.g., bonds held in inventory) — these credit risks are captured as a component of market risk measures, which are monitored and managed by Market Risk, consistent with other inventory positions.

Credit Risk which is independent of the revenue-producing units and reports to GS Group's chief risk officer, has primary responsibility for assessing, monitoring and managing GS Group's credit risk through oversight across the GS Group's global businesses.

The bank's framework for managing credit risk is consistent with the framework of GS Group established by GS Group's Risk Governance Committee, with the bank's Credit Risk department being an integral part of the GS Group Credit Risk function and reporting to the bank's chief risk officer.

The bank's credit risk strategy in the reporting year aimed to maintain a high credit quality standard, to mitigate credit exposure as appropriate through the use of collateral or other forms of risk mitigation, and to avoid excessive concentration risks. The majority of counterparts to which GSBE takes credit risk is expected to be of investment grade quality.

Credit Risk Management Process

The process for managing credit risk includes the critical components of the bank's risk management framework described in the "Overview and Structure of Risk Management", as well as the following:

- Setting of credit limits and monitoring compliance with established credit risk limits;
- Regular reporting (daily, weekly, monthly, quarterly) on the bank's credit exposures and credit concentrations to the chief credit officer, chief risk officer, the Credit Risk Council, the Risk Committee, and the Executive Board of GSBE;
- Assessing and determining internal credit ratings for counterparties and the associated likelihood that a counterparty will default on its payment obligations;
- Measuring the bank's current and potential credit exposure and losses resulting from a counterparty default;
- Using credit risk mitigants, including collateral and hedging; and
- Maximising recovery through active workout and restructuring of claims.

The bank performs credit reviews, which include initial and ongoing analyses of the bank's counterparties. A credit review is an independent analysis of the capacity and willingness of a counterparty to meet its financial obligations, resulting in an internal credit rating. The determination of internal credit ratings also incorporates assumptions with respect to the nature of and outlook for the counterparty's industry, and the economic environment. Senior personnel, with expertise in specific industries, inspect and approve credit reviews and internal credit ratings.

The credit risk management systems capture credit exposure to individual counterparties and on an aggregate basis to counterparties and their subsidiaries. These systems also provide management with comprehensive information about aggregate credit risk by product, internal credit rating, industry, country and region.

The bank assesses the expected credit losses (ECL) associated with financial assets measured at amortised cost on a forward looking basis in accordance with the provisions of IFRS 9 in conjunction with IDW RS BFA 7. The ECL is determined by projecting the probability of default, loss given default and exposure at default for each individual exposure. To calculate expected credit losses these three components are multiplied together and discounted back to the reporting date. The bank uses internal credit risk ratings that reflect the assessment of the probability of default of individual counterparties.

Risk Measures

Credit risk is measured based on the potential loss in the event of non-payment by a counterparty using current and potential exposure which are calculated using the firm's own models. For derivatives and securities financing transactions, current exposure represents the amount presently owed to the bank after taking into account applicable netting and collateral arrangements, while potential exposure represents the bank's estimate of the future exposure that could arise over the life of a transaction based on market movements within a specified confidence level (usually at the 95th-percentile). Potential exposure also takes into account netting and collateral arrangements.

Stress Tests

The bank conducts regular stress tests to calculate the credit exposures, including potential concentrations that would result from applying shocks to counterparty credit ratings or credit risk factors (e.g., currency rates, interest rates, equity prices). These shocks cover a wide range of moderate and more extreme market movements, including shocks to multiple risk factors, consistent with the occurrence of a severe market or economic event. In the case of sovereign default the bank estimates the direct impact of the default on its sovereign credit exposures, changes to its credit exposures arising from potential market moves in response to the default, and the impact of credit market deterioration on corporate borrowers and counterparties that may result from the sovereign default. Unlike potential exposure, which is calculated within a specified confidence level, stress testing does not generally assume a probability of these events occurring.

Limits

Credit limits are used at various levels (e.g., counterparty, economic group, industry and country) to control the size and nature of the bank's credit exposures. The bank's Executive Board and the GSBE Risk Committee approve credit risk limits at the bank-wide level, and where appropriate the business and product level, consistent with the bank's risk appetite. Furthermore, the GSBE Executive Board or Risk Committee (and the Credit Risk Council) approves the framework that governs the setting of credit risk sub-limits at the bank level, which is delegated to Credit Risk.

Credit Risk is responsible for monitoring these limits, and identifying and escalating to senior management and/or the appropriate risk committee, on a timely basis, instances where limits have been exceeded.

Risk Mitigants

To reduce credit exposures on derivatives and securities financing transactions, the bank may enter into netting agreements with counterparties that permit it to offset receivables and payables with such counterparties. The bank may also reduce credit risk with counterparties by entering into agreements that enable it to obtain collateral from them on an upfront or contingent basis and/or to terminate transactions if the counterparty's credit rating falls below a specified level. The bank monitors the fair value of the collateral to ensure that credit exposures are appropriately collateralised. The bank seeks to minimise exposures where there is a significant positive correlation between the creditworthiness of counterparties and the market value of collateral received.

When the bank does not have sufficient visibility into a counterparty's financial strength or when it believes a counterparty requires support bank, the bank may obtain third-party guarantees of the counterparty's obligations. The bank may also mitigate its credit risk using credit derivatives.

The table below presents a summary of the bank's gross credit exposure and net credit exposure by financial asset class as of December 2020.

€ in millions	Gross credit Exposure	Assets captured by market risk / Non-financial assets	Counterparty Netting	Cash collateral	Security collateral received	Net credit exposure
Cash reserves	**€ 2,595**	**€ -**	**€ -**	**€ -**	**€ -**	**€ 2,595**
Receivables from banks	**140**	**-**	**-**	**-**	**-**	**140**
Receivables from customers	**4,598**	**-**	**(2,695)**	**-**	**(1,639)**	**264**
Securities	**17**	**(17)**	**-**	**-**	**-**	**-**
Trading assets	**9,452**	**(1,919)**	**(3,516)**	**(992)**	**(490)**	**2,534**
Intangible assets	**71**	**(71)**	**-**	**-**	**-**	**-**
Fixed assets	**30**	**(30)**	**-**	**-**	**-**	**-**
Other assets	**5,453**	**(8)**	**(56)**	**(220)**	**-**	**5,168**
Total	**€ 22,357**	**€ (2,046)**	**€ (6,267)**	**€ (1,212)**	**€ (2,129)**	**€ 10,702**

The table below present the bank’s gross credit exposure by the bank’s internally determined public rating agency equivalents as of December 2020.

€ in millions	Gross credit exposure
AAA	**€ 4,672**
AA	**3,310**
A	**9,693**
BBB	**1,723**
BB or lower	**836**
Unrated	**2,123**
Total	**€ 22,357**

Credit Concentrations

The bank’s concentrations to credit risk arise primarily from its client facilitation, underwriting, lending and collateralised transactions, and cash management activities, and may be impacted by changes in economic, industry or political factors. These activities expose the bank to many different industries and countries, and may also subject the bank to a concentration of credit risk to a particular central bank, counterparty, borrower or issuer, or to a particular clearing house or exchange. Material counterparties are also subject to additional interconnectedness assessment taking into consideration economic dependencies. The bank seeks to mitigate credit risk including potential wrong way risk exposures (where the size of GSBE’s credit exposure to a counterparty is considered adversely correlated to the counterparty’s credit quality), by actively monitoring aggregate exposures against limits on individual entities and their consolidating groups, as well as countries and industries, and obtaining collateral from counterparties as deemed appropriate.

During 2020, the credit exposures of GSBE primarily resulted from counterparts domiciled in Germany, the United Kingdom, Netherlands and France, with more than 75% of the total net credit exposure, such that GSBE was not exposed to any notable country risks. The majority of exposure was thereby taken to mutual / pension funds, banks & brokers (including central banks) and central counterparties with more than 80% of total net credit exposure. Aggregation to respective country and industry is based on classification of each single counterparty.

The bank measures and monitors its credit exposure based on amounts owed to the bank after taking into account risk mitigants that management considers when determining credit risk. Such risk mitigants include netting and collateral arrangements and economic hedges, such as credit derivatives, futures and forward contracts. Netting and collateral agreements permit the bank to offset receivables and payables with such counterparties and/or enable the bank to obtain collateral on an upfront or contingent basis.

Operational Risk Management

Overview

Operational risk is the risk of an adverse outcome resulting from inadequate or failed internal processes, people, systems or from external events. Exposure to operational risk arises from routine processing errors, as well as extraordinary incidents, such as major systems failures or legal and regulatory matters.

Potential types of loss events related to internal and external operational risk include:

- Clients, products and business practices;
- Execution, delivery and process management;
- Business disruption and system failures;
- Employment practices and workplace safety;
- Damage to physical assets;
- Internal fraud; and
- External fraud.

Operational Risk, which is independent of revenue-producing units, and reports to GS Group’s chief risk officer and locally into GSBE’s chief risk officer, has primary responsibility for developing and implementing a formalised framework for assessing, monitoring and managing operational risk with the goal of maintaining the bank’s exposure to operational risk at levels that are within its risk appetite.

Operational Risk Management Process

The bank’s process for managing operational risk includes the critical components of the bank’s risk management framework described in the “Overview and Structure of Risk Management”.

Top-down and bottom-up approaches are combined to manage and measure operational risk. From a top-down perspective, senior management assesses bank-wide and business-level operational risk profiles.

From a bottom-up perspective, the first and second lines of defence are responsible for risk identification and risk management on a day-to-day basis, including escalating operational risks to senior management.

The bank’s framework for managing operational risk is fully integrated into GS Group’s comprehensive control framework designed to provide a well-controlled environment to minimise operational risks. The EMEA and the GSBE Operational Risk Committees provide oversight of the ongoing development and implementation of operational risk policies, framework and methodologies, and monitors the effectiveness of operational risk management with oversight from the Executive Board.

The operational risk management framework is designed to comply with the operational risk measurement rules under Basel III and has evolved based on the changing needs of the bank’s businesses. A comprehensive data collection process is in place for operational risk events.

Policies are in place that require all employees to report and escalate operational risk events. When operational risk events are identified, policy requires that the events be documented and analysed to determine whether changes are required in the systems and/or processes to further mitigate the risk of future events.

Operational risk management applications are used to capture and organise operational risk event data and key metrics. One of the bank's key risk identification and assessment tools is an operational risk and control self-assessment process, which is performed by the bank's senior management and applies to all divisions. This process consists of the identification and rating of operational risks, on a forward-looking basis, and the related controls. The risk assessment is overseen by Operational Risk Management. The results from this process are analysed to evaluate operational risk exposures and identify businesses, activities or products with heightened levels of operational risk.

Risk Measurement

The bank's operational risk exposure for economic internal perspective purposes is measured using both statistical modelling and scenario analyses, which involve qualitative and quantitative assessments of internal and external operational risk event data, business environment and internal control factors for each of the bank's businesses. Internal capital requirements for operational risk are based on a loss distribution approach and quantified using an Advanced Measurement Approach (AMA). The loss distribution approach is calculated based on a Monte Carlo simulation and calibrated to a 99.9 % percentile for a time horizon of one year.

The results from these scenario analyses are used to monitor changes in operational risk and to determine business lines that may have heightened exposure to operational risk. These analyses are used in the determination of the appropriate level of operational risk capital to hold. GSBE also performs stress tests (sensitivity analysis), in which the elementary model parameters, loss severity and frequency are varied to measure the sensitivity of the outputs. See "Capital Adequacy" for the 2020 results.

See "Overview and Structure of Risk Management" for information about stress tests.

Risk Monitoring and Reporting

The bank has established operational risk limits and thresholds to monitor the impact of an operational risk event, including single loss events, as well as escalation protocols. Operational Risk is responsible for monitoring these limits and thresholds, and identifying and escalating to senior management and/or the risk committee, on a timely basis, instances where thresholds have been exceeded.

Types of Operational Risks

Operational risk within GSBE (in line with the event categories above) is managed by applying and ensuring a consistent implementation of the Operational Risk framework as described in the "Overview and Structure of Risk Management" section. In recognizing the potential residual operational risk that exists in our businesses identified i.e. via the self-assessment process, GS Group and GSBE have identified three critical risk driver in an increased reliance on technology and third-party relationships, which has resulted in increased operational risks, such as information and cyber security risk, third-party risk and business resilience risk. The bank manages those risks as follows:

Information and Cyber Security Risk. Information and cyber security risk is the risk of compromising the confidentiality, integrity or availability of the bank's data and systems, leading to an adverse impact to the bank, its reputation, its clients and/or the broader financial system. The bank seeks to minimise the occurrence and impact of unauthorized access, disruption or use of information and/or information systems. The bank deploys and operates preventive and detective controls and processes to mitigate emerging and evolving information security and cyber security threats, including monitoring the bank's network for known vulnerabilities and signs of unauthorized attempts to access its data and systems. There is increased information risk through diversification of the bank's data across external service providers, including use of a variety of cloud provided or hosted services and applications.

Third-Party Risk. Third-party risk, including vendor risk, is the risk of an adverse impact due to a third party failing to perform its contractual duties or failing to adhere to regulatory and legal guidelines and expectations. The bank strives to minimise the failure of third parties to adhere to regulatory and legal guidelines and expectations, as well as vendor engagement in any other inappropriate practices. The bank identifies, manages and reports key third-party risks and conduct due diligence across multiple risk domains, including information security and cyber security, resilience and additional third-party dependencies. The program monitors, reviews and reassesses third-party risks on an ongoing basis.

Business Resilience Risk. Business resilience risk is the risk of disruption to the bank's critical processes. The bank seeks to monitor threats and assess risks to ensure its state of readiness in the event of a significant operational disruption to the normal operations of its systemically critical functions or their dependencies, such as, critical facilities, systems, third-parties, data and/or personnel. The bank approaches business continuity planning (BCP) through the lens of business and operational resilience. The resilience framework defines the fundamental principles for BCP and crisis management to ensure that critical functions can continue to operate in the event of a disruption.

The BCP is comprehensive, consistent across GS Group and up-to-date, incorporating new information, techniques and technologies as and when they become available, and the bank's resilience recovery plans incorporate and test specific and measurable recovery time objectives in accordance with local market best practices, regulatory requirements and specific scenarios.

Compliance Risk Management

Compliance risk is the risk of legal or regulatory breaches, material financial loss or damage to the bank's reputation arising from its failure to comply with the requirements of applicable laws, rules and regulations, and its internal policies and procedures. Compliance risk is inherent in all activities through which the bank conducts its businesses. GS Group's Compliance Risk Management Program, administered by Compliance, assesses its compliance, regulatory and reputational risk; monitors for compliance with new or amended laws, rules and regulations; designs and implements controls, policies, procedures and training; conducts independent testing; investigates, surveils and monitors for compliance risks and breaches; and leads GS Group's responses to regulatory examinations, audits and inquiries. GSBE monitors and reviews business practices to assess whether they meet or exceed minimum regulatory and legal standards in all markets and jurisdictions in which it conducts business.

Model Risk Management

Overview

Model risk is the potential for adverse consequences from decisions made based on model outputs that may be incorrect or used inappropriately. GS Group, including GSBE, relies on quantitative models across its business activities primarily to value certain financial assets and liabilities, to monitor and manage its risk, and to measure and monitor its regulatory capital.

GS Group's Model Risk, which is independent of the revenue-producing units, model developers, model owners and model users, and reports to GS Group's chief risk officer, has primary responsibility for assessing, monitoring and managing GS Group's model risk through oversight across GS Group's global businesses, and provides periodic updates to senior management, risk committees and GS Group's Risk Committee of the Board.

The bank's framework for managing model risk is consistent with and part of GS Group's framework. GS Group's model risk management framework is managed through a governance structure and risk management controls, which encompass standards designed to ensure it maintains a comprehensive model inventory, including risk assessment and classification, sound model development practices, independent review and model-specific usage controls. GS Group's Firmwide Model Risk Control Committee oversees the model risk management framework.

Model Review and Validation Process

The Model Risk department consists of quantitative professionals who perform an independent review, validation and approval of the models. This review includes an analysis of the model documentation, , assumptions, input and output, data, limitations and uncertainties, independent testing, an assessment of the appropriateness of the methodology used, and verification of compliance with model development and implementation standards, and assessment of adequacy of the ongoing monitoring plan. GSBE and the broader GS Group regularly refine and enhance its models to reflect changes in market or economic conditions and the business mix of GS Group and its subsidiaries (including GSBE). All models are reviewed on an annual basis, and new models or significant changes to existing models and their assumptions are approved prior to implementation. The model validation process incorporates a review of models and trade and risk parameters across a broad range of scenarios (including extreme conditions) in order to critically evaluate and verify the model's conceptual soundness, suitability of calculation techniques, accuracy and sensitivity to input parameters and assumptions, as well as the scope of testing performed by the model developers.

See "Liquidity Risk Management", "Market Risk Management", "Credit Risk Management", "Operational Risk Management", and "Capital Adequacy" for further information about the bank's use of models within these areas.

Strategic and Business Environment Risk

Overview

Strategic and Business Environment Risk is the risk of an adverse outcome to the bank from its strategic business decisions or structural changes to the bank's business environment.

Risk Monitoring and Reporting

To adequately mitigate and control the key strategic and business environment risks inherent in its activities, the bank has implemented a number of governance structures and controls processes. Consistent with the firmwide three lines of defence framework, business divisions take responsibility to identify, monitor and manage risk in executing the bank's strategy and relating to changes in the operating environment. The bank's control functions have established robust monitoring processes which are designed to ensure regular reporting of performance metrics and underlying drivers to the bank's governance bodies, including the Executive Board, and appropriate escalation procedures. Certain aspects of strategic and business environment risk may also manifest through other risk categories such as credit risk, market risk, liquidity risk or operational risk, which are in turn managed by the respective risk functions.

See "Capital Adequacy", "Liquidity Risk Management", "Market Risk Management", "Credit Risk Management", and "Operational Risk Management" for further information.

Capital Adequacy

Overview

Capital adequacy is of critical importance to the bank. We determine the appropriate level and composition of capital by considering multiple factors including but not limited to the current and future regulatory capital requirements, our Internal Capital Adequacy Assessment Process (ICAAP), results of stress testing processes, and the business environment and conditions in the financial markets.

Internal Capital Adequacy Assessment Process

The bank undertakes regular internal capital adequacy assessments as part of its broader ICAAP framework with the objective of ensuring appropriate capitalization relative to the bank's risk. The bank's ICAAP is a comprehensive internal process which coherently integrates several key components including risk identification and materiality assessment, capital planning, and risk appetite.

In line with the ECB Guide "ECB Guide to the internal capital adequacy assessment process (ICAAP)" (November 2018), the ICAAP comprises two complementary perspectives, the Normative Perspective and the Economic Internal Perspective. The bank's limit and escalation framework incorporates metrics based on both perspectives.

In the Normative Perspective, capital adequacy is considered from a regulatory and accounting view on a quarterly basis, and expressed in terms of regulatory metrics. The perspective includes a 3-year forward looking projection of the bank's ability to meet regulatory capital requirements under baseline and adverse macro-economic conditions. Capital requirements are calculated in accordance with regulatory capital rules over the assessment time horizon, taking into account the permission to use internal models for market risk (Internal Model Approach, IMA), as well as internal models to calculate the counterparty credit risk exposure (Internal Model Method, IMM) and the basic indicator approach for operational risk. The bank thereby leverages internal methodologies to project stress impacts reflective of the underlying scenario and consistent with the principles of the Normative Perspective. In all assessments performed during the year, GSBE was projected to have sufficient capital to meet its regulatory capital requirements over the assessment period of the Normative Perspective.

The Economic Internal Perspective consists of the definition and quantification of internal capital resources and the amount of capital that the bank needs to hold to mitigate risks that could have a material impact on its capital position from an economic view on risk.

The bank uses the regulatory definition of total capital resources as a starting point to quantify internal capital, and incorporates adjustments to reflect economic value considerations. The bank applies its internal risk quantification methodologies that allow capturing an economic view on risk, targeting a risk horizon of one year.

Capital requirements for Market Risk in the Trading book is primarily quantified using Stressed Value at Risk (sVaR) and Incremental Risk Charge (IRC). SVaR is the potential loss in value of inventory positions during a period of significant market stress. sVaR is calculated at a 99% confidence level over a 10-day holding period, and is calibrated based on a historical stress period which is appropriate for the bank's portfolio. IRC estimates the 99.9% tail loss in the loss distribution due to events of rating migration or default over the capital horizon of one year for the portfolio of credit-sensitive instruments. Further stress-based methods are applied to quantify additional risks in the trading book, which were of comparatively lower significance in the reporting year. Capital requirements for Market Risk in the Banking Book is mainly driven by Interest Rate Risk in the Banking Book quantified through economic value of equity using +/- 100bp shocks without flooring (vs. +/- 200bp shocks with flooring in 2019). Other stress tests may be applied where appropriate to risk concentrations.

Credit risk economic capital requirements are mainly driven by simulated losses in the bank's derivative portfolio which are calibrated to a confidence level of 99.9% and assume a 1-year holding period. For non-derivative portfolio, the economic capital requirements are mainly determined using a credit risk model, which is based on internal assessments (including internal credit ratings). Additional stress and model based approaches are used to calculate further capital requirements for credit risk, which were of comparatively lower significance in the reporting year.

Capital requirements for Operational Risk are quantified using the bank's internal Advanced Measurement Approach (AMA) model, which is calibrated to a confidence level of 99.9% and assumes a 1-year holding period. The internal capital requirement thereby reflects the tail exposure posed by GSBE's current and anticipated activities. The bank does not see any incremental loss potential for strategic and business environment risk to be considered in the Economic Internal Perspective in the reporting year based on the entity's robust control framework in place and historical performance analysis.

Economic capital requirements are conservatively aggregated across material risk categories without taking benefit of diversification effects. The bank's limit system requires a minimum economic capital adequacy ratio of 100%. Capital is not deemed an adequate mitigant for liquidity risks which are managed in the course of the bank's liquidity management. The risk bearing capacity based on Economic Internal Perspective is assessed on a monthly basis.

The table below presents the comparison of internal capital and economic capital requirements as of December 2020:

€ in millions	**As of December 2020**
Components of Internal Capital resources	
Total Regulatory Capital	**3,193**
Tier 2 sub-debt	**(20)**
Other adjustments between regulatory and internal capital	**14**
Internal Capital Resources	**3,187**
Risk Components	
Market Risk	**194**
Credit Risk	**383**
Operational Risk	**289**
Strategic and Business Environment Risk	**0**
Economic Capital Requirements	**866**
Economic Capital Adequacy ratio	**368%**

As of December 2020, the bank was adequately capitalized and reported an economic capital adequacy ratio of 368%.

The assessment of capital adequacy is viewed in tandem with our assessment of liquidity adequacy and is integrated into our overall risk management structure, governance and policy framework. See ‘Risk Management’, and ‘Liquidity Risk Management’ for further details.

Miscellaneous

GSBE is a member of the deposit protection scheme of the Association of German Banks.

Relationship with Affiliated Companies

Based on the circumstances known to it at the time that the transaction was performed or delivered, the Executive Board declares that the bank received appropriate consideration for each transaction and the performance or delivery of the transactions was not detrimental to the bank.

GOLDMAN SACHS BANK EUROPE SE

Balance Sheet

Balance Sheet as of December 31, 2020

€ in millions	Note	As of December 2020		As of December 2019	
Assets					
Cash reserve					
Balances with central banks (thereof with Deutsche Bundesbank: **€2,550**, 2019: €1,000)		**€**	**2,595**	€	1,010
Receivables from banks					
Due on demand	3,4		**140**		59
Receivables from customers	3,4		**4,598**		223
Bonds and other fixed-income securities	5				
Bonds and notes of other issuers			**17**		18
Trading assets	7		**9,452**		1,202
Intangible assets					
Purchased intangible assets	10		**13**		0
Goodwill	10		**59**		0
Fixed assets	10		**30**		23
Other assets	11		**5,453**		837
Total assets		**€**	**22,357**	€	3,372
Liabilities					
Liabilities to banks	3,4				
Due on demand		**€**	**49**	€	2
With agreed term or notice period			**10**		10
Liabilities to customers	3,4				
Other liabilities					
Due on demand			**2,950**		15
With agreed term or notice period			**3,191**		633
Trading liabilities	7		**7,677**		903
Other liabilities	11		**4,838**		915
Deferred income			**9**		1
Provisions	13				
Provisions for pensions and similar commitments			**82**		57
Tax provisions			**33**		23
Other provisions			**126**		50
Subordinated debt	14		**20**		20
Fund for general banking risks (thereof: trading-related special reserve: **€15**, 2019: €3)			**15**		3
Shareholders' equity					
Ordinary share capital	15		**314**		310
Capital surplus			**2,610**		86
Profit reserves					
Other profit reserves			**344**		290
Distributable profit			**89**		54
Total liabilities and shareholders' equity		**€**	**22,357**	€	3,372
Other obligations					
Irrevocable loan commitments	16		**565**		178

Income Statement for the period from January 1, 2020 to December 31, 2020

		Period Ended December	
€ in millions	**Note**	**2020**	2019
Interest income from			,
Lending and money market business (thereof negative interest **€17**, 2019: €6)		**€ (11)**	€ (1)
Interest expense (thereof: positive interest **€7**, 2019: €1)		**(13)**	(9)
Commission income		**250**	184
Commission expense		**(4)**	(13)
Net trading result (thereof: additions to the trading-related special reserve **€13**, 2019: €3)		**103**	27
Other operating income	18	**8**	18
General administration expenses			
Staff expenses			
Wages and salaries		**114**	76
Compulsory social security contributions and expenses for pensions and other employee benefits (thereof for pensions **€2**, 2019: €1)		**8**	4
Other administrations expenses		**61**	32
Depreciation, amortization, and valuation allowance for intangible and fixed assets		**4**	2
Other operating expense	18	**9**	8
Result from ordinary activities		**137**	85
Income tax expense		**(48)**	(31)
Net income / Distributable profit	19	**€ 89**	€ 54

Note 1.

General Information

Goldman Sachs Bank Europe SE (GSBE or the bank) is registered with the commercial register number HRB 114190 at the local district court in Frankfurt am Main, Germany.

The annual financial statements of GSBE have been prepared in accordance with the requirements of the German Commercial Code (HGB), the German Stock Corporation Act (AktG), the Banking Act (KWG) and the Ordinance Regulating the Accounting Requirements for Banks and Financial Services Institutions (RechKredV). For clarity, figures are presented as € millions, except where otherwise stated.

Note 2.

Accounting and Valuation Methods

Cash Reserve and Receivables

The cash reserve and receivables are recognized at their nominal value. Receivables from credit institutions and from customers are recognized at their nominal values less any irrecoverable amounts and include accrued interest.

Impairment

The bank assesses the expected credit losses (ECL) associated with financial assets measured at amortised cost on a forward-looking basis in accordance with the provisions of IFRS 9 in conjunction with IDW RS BFA 7. The measurement of ECL reflects an unbiased and probability weighted amount that is determined by evaluating a range of possible outcomes, the time value of money, and reasonable and supportable information that is available without undue cost or effort at the reporting date about past events, current conditions and forecasts of future economic conditions. Expected credit losses are recognized in the profit- and loss statement.

The bank's impairment model is based on changes in credit quality since initial recognition of financial assets measured at amortised cost and incorporates the following three stages:

- **Stage 1.** Financial assets measured at amortized cost that are not credit-impaired on initial recognition and where there has been no significant increase in credit risk since initial recognition. The ECL is measured at an amount equal to the expected credit losses that result from default events possible within the next twelve months.
- **Stage 2.** Financial assets measured at amortized cost where there has been a significant increase in credit risk since initial recognition, however not yet deemed to be credit-impaired. The ECL is measured based on expected credit losses on a lifetime basis.
- **Stage 3.** Financial assets measured at amortised cost that are in default, or are defined as credit-impaired. The ECL is measured based on expected credit losses on a lifetime basis.

Determination of the relevant staging for each financial asset is dependent on the definition of 'significant increase in credit risk' (stage 1 to stage 2) and the definition of 'credit-impaired' (stage 2 to stage 3). The bank considers a financial asset to have experienced a significant increase in credit risk when certain quantitative or qualitative conditions are met. Quantitative thresholds include absolute probability of default thresholds on investment-grade financial assets and relative probability of default thresholds on non-investment grade financial assets. Qualitative review is also performed as part of the bank's credit risk management process, including a back-stop consideration of 30 days past due. The bank considers a financial asset to be credit-impaired when it meets Credit Risk Management's definition of default, which is either when the bank considers that the obligor is unlikely to pay its credit obligations to GS Group in full, without recourse by the bank to actions, such as realising security (if held), or the obligor has defaulted on a payment and/or is past due more than 90 days.

The ECL is determined by projecting the probability of default, loss given default and exposure at default for each individual exposure. To calculate expected credit losses these three components are multiplied together and discounted back to the reporting date. The discount rate used in the ECL calculation is the original effective interest rate. The probability of default represents the likelihood of a borrower defaulting on its financial obligation. The loss given default is the bank's expectation of the extent of loss on the default exposure, and takes into consideration amongst other things, collateral on the financial asset. The exposure at default is the amount the bank expects to be owed at the time the financial obligation defaults. The bank uses internal credit risk ratings that reflect the assessment of the probability of default of individual counterparties. The bank uses multiple macroeconomic scenarios within the ECL calculation, the weightings for which are subject to ongoing internal review and approval.

Forward-looking information, such as key economic variables impacting credit risk and expected credit losses, is incorporated into both the assessment of staging and the calculation of ECL. Economic variables have been forecasted using internally generated projections to provide an estimated view of the economy over the next nine quarters. After nine quarters a mean reversion approach has been used, which means that economic variables tend to either a long run average rate or a long run growth rate.

The bank writes off financial assets, in whole or in part, when it has concluded that there is no reasonable expectation of recovery. When a financial asset is deemed to be uncollectable, the bank concludes this to be an indicator that there is no reasonable expectation of recovery. The bank still seeks to recover amounts it is legally owed in full, but which have been wholly or partially written off due to no reasonable expectation of full recovery.

Securities

Securities classified to the banking book are accounted at acquisition cost less other than temporary impairments. Impairments of securities are reversed if the reason for the write-down no longer exists. Securities lending/borrowing transactions remain recognized in the transferor's balance sheet.

Trading Assets and Liabilities

Financial instruments which are held with a trading intent are recognized at fair value less risk adjustment. The fair value of a financial instrument is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets are marked to bid prices and financial liabilities are marked to offer prices. Fair value measurements do not include transaction costs. Fair value gains or losses are included in the net trading result.

We apply a three-level hierarchy for fair value measurements. This hierarchy prioritises inputs to the valuation techniques used to measure fair value, giving the highest priority to level 1 inputs and the lowest priority to level 3 inputs. A financial instrument's level in this hierarchy is based on the lowest level of input that is significant to its fair value measurement.

The fair value hierarchy is as follows:

Level 1. Inputs are unadjusted quoted prices in active markets to which the bank had access at the measurement date for identical, unrestricted assets or liabilities.

Level 2. Inputs to valuation techniques are observable, either directly or indirectly.

Level 3. One or more inputs to valuation techniques are significant and unobservable.

Valuation techniques of level 3 cash instruments vary, but are generally based on discounted cash flow techniques. The bank's level 2 and level 3 derivatives are valued using derivative pricing models (e.g., discounted cash flow models, correlation models, and models that incorporate option pricing methodologies, such as Monte Carlo simulations).

The fair values for substantially all of the bank's financial assets and liabilities are based on observable prices and inputs and are classified in levels 1 and 2 of the fair value hierarchy. Certain level 2 and level 3 financial assets and liabilities may require valuation adjustments that a market participant would require to arrive at fair value for factors, such as counterparty and the bank's and GS Group's credit quality, funding risk, transfer restrictions, liquidity and bid/offer spreads. Valuation adjustments are generally based on market evidence.

Valuation adjustments are integral to determining the fair value of derivative portfolios and are used to adjust the mid-market valuations produced by derivative pricing models to the exit price valuation.

These adjustments incorporate bid/offer spreads, the cost of liquidity, credit valuation adjustments, debt valuation adjustments and funding valuation adjustments, which account for the credit and funding risk inherent in the uncollateralised portion of derivative portfolios. The bank also makes funding valuation adjustments to collateralised derivatives where the terms of the agreement do not permit the bank to deliver or repledge collateral received.

Market-based inputs are generally used when calibrating valuation adjustments to market-clearing levels. In addition, for derivatives that include significant unobservable inputs, the bank makes model or exit price adjustments to account for the valuation uncertainty present in the transaction.

In order to reflect any remaining realization risk for unrealized gains, the result of the fair value measurement is reduced by a risk adjustment, which is deducted from trading assets. The risk adjustment is based on value-at-risk which is calculated using a holding period of ten days and a confidence level of 99% for the whole portfolio. Additionally, a trading-related special reserve is established by taking at least 10 % of the net trading revenues (after risk adjustment). This reserve has to increase until the trading-related special reserve corresponds to 50% of the five-year average of net trading revenues after risk adjustment. The reserve may, amongst others, be consumed to either release an amount exceeding the 50% limit or to cover net trading losses.

To reduce credit exposures on derivatives, the bank may enter into master netting agreements or similar arrangements (collectively, netting agreements) with counterparties that permit it to offset receivables and payables with such counterparties. In addition, the bank receives and posts cash and securities collateral with respect to its derivatives, subject to the terms of the related credit support agreements or similar arrangements (collectively, credit support agreements). Collateral receivables and payables are presented as other assets or other liabilities respectively. Receivables and payables from repos and reverse repos with the same maturity and with counterparties that permit it to offset are reported on a net basis.

Investments in Affiliated Companies

Investments in affiliated companies are recognized at their acquisition cost less any write down due to impairment that is likely to be permanent. If the reasons for prior write downs performed are no longer applicable, they are reversed.

Fixed and Intangible Assets

Fixed and intangible assets are reported at their acquisition or manufacturing cost less any depreciation or amortization. Write-downs are made for any impairment that is likely to be permanent.

The goodwill reported under intangible assets is amortized over its estimated useful life. Its determination is based on economic and organizational factors such as future growth and profit prospects, mode and duration of expected synergies, leveraging customer base and assembled workforce of the acquired business. The estimated useful life of the Goodwill presented is two years.

Deferred Tax Assets

The accounting choice to consider deferred tax assets on the balance sheet has not been taken.

Liabilities

Liabilities are recognized with their settlement amounts. Registered bonds and promissory notes issued by GSBE are recognized at nominal value and presented as liabilities to banks/customers with agreed term or notice period.

Valuation Units (Hedge Accounting)

In instances in which for accounting purposes assets, liabilities, pending transactions or highly probable forecasted transactions (hedged items) and financial instruments (hedging instruments) are designated in a valuation unit to achieve an offset for changes in fair value or cash flows attributable to the hedged risk the general measurement rules are not applicable. The bank utilizes the freeze method, which means that offsetting value changes related to the hedged risk are not recorded and negative fair value changes related to the same type of risk are not recognized during the period of the hedge unless a net loss, i.e., negative ineffectiveness, arises which is recognized as a provision for imminent losses.

Provisions

Provisions are measured at the settlement amount that is determined as necessary in accordance with reasonable commercial judgment. Provisions with a remaining term of more than one year are discounted with the average market interest rate of the past seven years according to their remaining term. The applicable discount rate is determined and announced by the German central bank (Deutsche Bundesbank) in accordance with the German discounting ordinance (Rückabzinsungsverordnung).

A potential provision requirement for interest rate risk for the purposes of the loss-free valuation was assessed for all interest bearing financial instruments in the non-trading book using the present value method. The bank used the simplified two step approach. The assessment resulted in no need to recognize a provision for anticipated losses.

Provisions for pensions are valued using the Projected Unit Credit Method (method according to IAS 19). The basis for valuation is the periodic allocation of the benefit obligation during the service period of the employee, the present value of this obligation is calculated with the help of actuarial assumptions. The actuarial assumptions reflect the fair value of cash flows (actuarial interest rate) and the likelihood of payments (assumptions about mortality, fluctuation and early retirement, etc.). The interest expense component and the effect from changes in the interest rate are recognized in other operating expenses. The interest rate is based on the average interest rate of the previous ten years.

The table below presents the actuarial assumptions used in the calculation.

	As of December 2020
Biometrics	**Mortality tables Heubeck 2018 G**
Actuarial interest rate	**2.45%**
Dynamic of eligible payments	**3.00%**
Dynamics of the social security contribution ceiling of the statutory pension scheme	**2.75%**
Dynamics of adjustments to current pensions (inflation rate p.a.)	**1.00% for commitments after 1 Dec 2007, otherwise 1.80%**

Provisions for share-based compensation are recognized from the granting date up to the delivery date and are valued as of December 2020 with the share price of The Goldman Sachs Group, Inc. (Group Inc.).

Equity

The ordinary share capital is recognized at nominal value and is fully paid in.

Currency translation

Assets and liabilities in foreign currencies were converted to Euro on the balance sheet date using group-wide currency conversion rates. Expenses and income are converted using the foreign exchange rates valid at the time of the transaction. The bank reports foreign currency changes of the trading book in net trading income/net trading expense. Trading book foreign currency forwards are measured at fair value. Due to the specific coverage in the same currency, profits and losses from currency translation in the non-trading book are recognised through profit or loss.

Notes to the Balance Sheet

Note 3.

Residual Maturity of Receivables and Liabilities

€ in millions	As of December 2020	2019
Receivables from customers		
With a remaining maturity of:		
up to three months	**€ 4,597**	€ 212
more than three months up to one year	**1**	11
Total	**€ 4,598**	€ 223

Receivables from customers do not include receivables with an indefinite term.

€ in millions	As of December 2020	2019
Liabilities to banks with agreed term or notice period		
With a remaining maturity of:		
more than three months up to one year	**€ 0**	€ 0
more than one year up to five years	**10**	10
Total	**€ 10**	€ 10
Other liabilities to customers with agreed term or notice period		
With a remaining maturity of:		
up to three months	**€ 2,049**	€ 25
more than three months up to one year	**0**	11
more than one year up to five years	**1,067**	522
more than five years	**75**	75
Total	**€ 3,191**	€ 633

Note 4.

Receivables and Liabilities with Affiliated Companies

The table below presents the bank's receivables and liabilities with affiliated companies.

€ in millions	As of December 2020	2019
Receivables from banks	**€ 7**	€ 3
Receivables from customers	**€ 3,898**	€ 186
Liabilities to banks	**€ 0**	€ 0
Liabilities to customers	**€ 4,388**	€ 495
Subordinated liabilities	**€ 20**	€ 20

Note 5.

Bonds and Other Fixed-Income Securities

Bonds and other fixed-income securities of €17 million are both listed (€16 million) and unlisted (€1 million) and are not due in the following reporting period.

Note 6.

Repurchase Agreements

The book value of assets reported on the balance sheet and sold subject to a repurchase agreement in the amount of €0 (2019: €16 million) related exclusively to securities sold under repo agreements.

Note 7.

Trading Assets and Liabilities

The criteria related to the designation of financial instruments to trading assets and liabilities have not changed in the reporting period. The table below presents a breakdown of trading assets and trading liabilities.

€ in millions	As of December 2020 Trading assets	Trading liabilities
Derivatives	**€ 7,202**	**5,970**
Receivables / Liabilities	**418**	**1,707**
Bonds and other fixed-income securities	**786**	**-**
Equity shares and other variable-yield securities	**1,057**	**-**
Risk adjustment	**(11)**	**-**
Total	**€ 9,452**	**€ 7,677**

Trading assets and liabilities include offsetting of positive fair values of €32,985 million with negative fair values of €32,985 million on financial instruments held for trading with the associated cash collateral receivables of €6,028 million and liabilities of €4,931 million.

The table below presents a breakdown of the trading derivatives by type and notional.

€ in billions	As of December 2020 Notional Amounts
OTC products	
Interest rates	**681**
Credit	**108**
Currency	**349**
Commodity	**63**
Equity	**29**
Exchange-traded products	**6**
Total	**1,236**

See Note 2 for further information about the valuation of trading assets and liabilities.

Note 8.

Foreign Currency Volumes

€ in millions	As of December 2020	2019
Assets	**€ 2,784**	€ 606
Liabilities	**€ 2,817**	€ 712

Note 9.

Non-Current Assets

Non-current assets include intangible assets, fixed assets, investments in affiliated companies and bonds and other fixed-income securities (Securities). Book values of fixed assets included furniture and office equipment of €5 million (2019: €6 million).

The table below presents the bank's non-current assets.

	Acquisition costs			Accumulated depreciation			Net book value	
€ in millions	As of December 2019	**Additions**	**Disposals**	As of December 2019	**Additions**	**Disposals**	As of December 2019	**As of December 2020**
Assets								
Purchased intangible assets	€ 0	**€ 13**	**€ 0**	€ 0	**€ 0**	**€ 0**	€ 0	**€ 13**
Goodwill	0	**59**	**0**	0	**0**	**0**	0	**59**
Intangible assets	0	**72**	**0**	0	**0**	**0**	0	**72**
Fixed assets	55	**11**	**17**	32	**4**	**17**	23	**30**
Securities	18	**0**	**0**	–	**1**	**0**	18	**17**
Total	€ 73	**€ 83**	**€ 17**	€ 32	**€ 5**	**€ 17**	€ 41	**€ 119**

The table below presents companies that GSBE owns more than 20%.

Name	Register	Share of capital in %	Equity in € (k)	Net profit 2019 in € (k)
Goldman, Sachs & Co. Verwaltungs GmbH	**Frankfurt a.M.**	**100**	**26**	**14**
Goldman, Sachs Management GP GmbH	**Frankfurt a.M.**	**100**	**25**	**9**
Goldman Sachs Gives gGmbH	**Frankfurt a.M.**	**100**	**25**	**1**

Note 10.

Other Assets and Liabilities

Other assets primarily consisted of futures-related balances of €2,911 million (2019: €128 million), collateral balances of €2,321 million (2019: €613 million), and default fund contributions to various clearing houses and exchanges of €201 million (2019: €82 million). Other liabilities mainly consisted of futures-related balances of €3,035 million (2019: €274 million) and collateral balances of €1,645 million (2019: €614 million).

Note 11.

Valuation Units

Registered bonds, promissory notes and offsetting interest rate swaps with a nominal value of €136 million (2019: €152 million) were designated to valuation units for their whole duration. The amount of hedged risk is €4 million (2019: €2 million) and represents the net cumulative increase in fair value of assets/increase in liabilities that were not recognized in profit and loss, after considering hedges.

Note 12.

Provisions

Provisions of €82 million were held for pension obligations (2019: €57 million). The pension obligation was calculated with the average interest rate of the past ten years. The difference, according to Section 253 (6) sentence 1 HGB, when applying the average interest rate from the past seven years was €15 million.

Other provisions included provisions for share-based compensation of €42 million (2019: €20 million) and for bonuses of €49 million (2019: €20 million).

In accordance with Section 246 (2) sentence 2 HGB, shares and other variable-income securities relating to the employee benefit plan with a fair value of €32 million were set off against the commitment for the employee benefit plans. There is no excess amount resulting from the offsetting of assets with the obligations.

Note 13.

Subordinated Debt

Subordinated debt of €20 million, which was granted for an indefinite period of time by Group Inc., remained unchanged in the reporting period. For this loan, interest of €0.2 million (2019: €0.2 million) has been paid, with interest charged equal to 3-month euro LIBOR plus 150 basis points. An early repayment obligation does not exist.

Note 14.

Capital and reserves

Share capital

The sole shareholder of GSBE is Goldman Sachs (Cayman) Holding Company (GS Cayman) with its registered office in George Town, Cayman Islands. The table below presents share capital.

Beginning balance	310,000,000
Issuance of new shares	**4,182,700**
Ending balance	**314,182,700**

In the table above:

- With effectiveness as of June 7, 2020, 366,100 shares of € 1 each were allotted to Goldman Sachs International (GSI). The total consideration received was €1,271,447 in cash, incorporating a share premium of €905,347. The shares were issued in exchange for the contribution of the businesses of GSI's Amsterdam branch into GSBE by way of a contribution in kind.
- With effectiveness as of November 5, 2020, 3,816,600 shares of € 1 each were allotted to GSI. The total consideration received was €26,597,615 incorporating a share premium of €22,781,015. The shares were issued in exchange for the contribution of the businesses of GSI's Dublin, Madrid, Milan, Frankfurt and Stockholm branches into GSBE by way of a contribution in kind.

The shares issued to GSI were subsequently transferred by GSI to the former shareholders. The share premium is presented as part of the Capital surplus.

Capital surplus

The capital surplus increased by €2,524 million to €2,610 million due to capital injections of €2,500 million during 2020 (2019: €0 million) and share premium of €24 million (2019: €0 million) as a result on the transfer of assets and liabilities of a number of GSI's Branches by way of a contribution in kind.

Note 15.

Off-Balance Sheet Transactions

As of the balance sheet date, there were €565 million of irrevocable loan commitments (2019: €178 million), which are reported off-balance sheet. Risks arising from these transactions are considered in the impairment calculations and corresponding provisions are recognized.

Notes to the Income Statement

Note 16.

Breakdown of Income by Geographical Markets

The total amount of interest income, commission income, net trading result and other operating income is shown below broken down into geographical markets pursuant to Section 34 (2) No. 1 RechKredV. The total excludes interest expense and commission expense.

	Year Ended December	
€ in millions	**2020**	2019
Germany	**€ 287**	**€ 222**
Europe (ex. Germany)	**63**	**6**
Total	**€ 350**	**€ 228**

Note 17.

Other Operating Income and Expense

Other operating income primarily included income from group internal reimbursements for services and investments of €8 million (2019: €16 million). Other operating expenses primarily related to the interest expense component resulting from discounting of pension provisions and similar commitments of €8 million (2019: €8 million) and included the net result from currency translation of €1 million (2019: income of €0 million).

Note 18.

Profit Distribution

The Executive Board and Supervisory Board will propose that the current year net profit of €89 million is transferred to retained earnings at the Annual General Meeting. The 2019 net profit of €54 million was transferred to retained earnings at the Annual General Meeting in 2020.

Note 19.

Report on Subsequent Events

A contribution of €500 million to the free capital reserves was conducted by the shareholder of GSBE following the end of the reporting period on February 3, 2021.

No further relevant issues occurred after the end of the reporting period that might significantly impact the financial situation of the bank.

Note 20.

Other Information

Items not included in the Balance Sheet

Other financial obligations primarily included obligations arising from lease agreements for office facilities and vehicles, as well as other external services of €140 million (2019: €63 million). Other items not included in the balance sheet that are significant for the financial assessment of the bank include guarantees of $1,015 million (2019: $595 million) provided by Group Inc. for certain counterparty exposures.

Total Auditor’s Fee

In 2020, the auditor’s fees consisted of:

a) Audit fees of €4.6 million (2019: €3.1 million),

b) Other audit-related services of €1.1 million (2019: €0.8 million) and

c) Other services of €0 million (2019: €0.1).

Other audit-related services relate to services according to Section 89 of the Securities Trading Act as well as the audit of IFRS financial information. Current year amounts include audit fees of €1.3 million which relate to the prior reporting period.

Executive Board

The table below presents the Executive Board of GSBE, which currently consists of three members.

Name
Dr. Wolfgang Fink, Managing Director (Chairman)
Thomas Degn-Petersen, Managing Director
Dr. Matthias Bock, Managing Director
Pierre Chavenon, Managing Director (until March 30, 2020)
Andrew Philipp, Managing Director (from August 3, 2020 to December 18, 2020)

The total remuneration of the members of the Executive Board for 2020 was €13 million (2019: €11.0 million). No advances or loans were granted to the members of the Board in the reporting period.

Supervisory Board

The table below presents the Supervisory Board of GSBE, which currently consists of four members.

Name
Dermot W. McDonogh, Managing Director (Chairman)
Esta Stecher, Managing Director (Deputy Chairman)
Sally A. Boyle, Advisory Director
Dr. Wolfgang Feuring, Lawyer (since February 24, 2020)
Ulrich Pukropski, German Certified Auditor (since April 9, 2021)

The publication of the information required under Section 285, no. 9, letter a and b HGB has been waived in accordance with the exceptional provision of Section 286, no. 4, HGB. No advances or loans were granted to the members.

Headcount

The table below presents the average headcount in FTE employed by GSBE.

	Year Ended December	
	2020	2019
Investment Banking	**97**	72
Investment Management	**80**	40
FICC & Equities	**28**	4
Federation	**134**	81
Total average FTE	**339**	197

Consolidated Financial Statements

GSBE and its subsidiaries are indirectly wholly-owned by the parent company, Group Inc. and included in its consolidated financial statements for the largest group of companies. The largest group of companies is also simultaneously the smallest group of companies for which consolidated financial statements are prepared. Due to immateriality of its subsidiaries pursuant to Section 296 (2), HGB, GSBE waives its obligation from preparing consolidated financial statements. The parent company’s consolidated financial statements are available both at Group Inc.’s principal place of business or at www.goldmansachs.com/investor-relations/financials/.

Branches of the bank

The table below presents a breakdown of GSBE's head office in Frankfurt and GSBE's Branches according to Section 26a (1) sentence 2 KWG where net revenues refers to the sum of net interest, net commission and net trading result, as well as other operating income. All figures presented are € millions, except FTE which show the average FTE for 2020. All of GSBE's Branches are active in the business activities Investment Banking, FICC, Equities, and Investment Management, except where otherwise stated.

€ in millions				2020			
Name	**Trading Name**	**Business**	**Location**	**Net revenues**	**FTE**	**Profit (loss) before tax**	**Tax on profit or loss**
GSBE Frankfurt Head Office	GSBE	All	Frankfurt, Germany	€ 262	254	€ 106	€ 45
GSBE London Branch	GSBE London Branch	All	London, UK	28	8	19	0
GSBE Succursale Italia	GSBE Milan Branch	All	Milan, Italy	8	13	1	1
GSBE Sucursal en España	GSBE Madrid Branch	All	Madrid, Spain	8	16	3	0
GSBE	GSBE Dublin Branch	All	Dublin, Ireland	2	2	0	0
GSBE Amsterdam Branch	GSBE Amsterdam Branch	Investment Management	Amsterdam, Netherlands	2	4	1	0
GSBE Sweden Bankfilial	GSBE Stockholm Branch	All	Stockholm, Sweden	2	5	0	0
GSBE Luxembourg Branch	GSBE Luxembourg Branch	Investment Management	Luxembourg	1	1	1	0
GSBE Spółka Europejska Oddział w Polsce	GSBE Warsaw Branch	Investment Banking, Investment Management	Warsaw, Poland	2	24	1	0
GSBE Copenhagen Branch, filial af Goldman Sachs Bank Europe SE, Tyskland	GSBE Copenhagen Branch	FICC, Equities, Investment Management	Copenhagen, Denmark	9	4	1	1
GSBE Succursale de Paris	GSBE Paris Branch	All	Paris, France	9	8	4	1
Total				**€ 333**	**339**	**€ 137**	**€ 48**

There were no public subsidies in the reporting period according to Section 26a sentence 2 no. 6. The return on assets, calculated as a ratio of net income to total assets, was 0.4% for 2020 and decreased from 2% in the prior year due to the significant increase of the balance sheet in the reporting period.

Frankfurt am Main, May 6, 2021

Goldman Sachs Bank Europe SE

The Executive Board

Dr. Wolfgang Fink

Thomas Degn-Petersen

Dr. Matthias Bock

Independent auditors’ report to Goldman Sachs Bank Europe SE

The following independent auditors’ report is a translation from the authoritative German text which was issued on the German version of the annual financial statements and management report of Goldman Sachs Bank Europe SE.

Report on the audit of the annual financial statements and of the management report

Audit Opinions

We have audited the annual financial statements of Goldman Sachs Bank Europe SE, Frankfurt am Main, which comprise the balance sheet as at December 31, 2020, and the statement of profit and loss for the financial year from January 1, 2020 to December 31, 2020, and notes to the financial statements, including the presentation of the recognition and measurement policies. In addition, we have audited the management report of Goldman Sachs Bank Europe SE for the financial year from January 1, 2019 to December 31, 2020.

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 and give a true and fair view of the assets, liabilities and financial position of the bank as at December 31, 2020 and of its financial performance for the financial year from January 1, 2020 to December 31, 2020 in compliance with German Legally Required Accounting Principles, and
- the accompanying management report as a whole provides an appropriate view of the bank’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.

Pursuant to § [Article] 322 Abs. [paragraph] 3 Satz [sentence] 1 HGB [Handelsgesetzbuch: German Commercial Code], we declare that our audit has not led to any reservations relating to the legal compliance of the annual financial statements and of the management report.

Basis for the Audit Opinions

We conducted our audit of the annual financial statements and of the management report in accordance with § 317 HGB and the EU Audit Regulation (No. 537/2014, referred to subsequently as “EU Audit Regulation”) in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (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 bank in accordance with the requirements of European law and 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 provide a basis for our audit opinions on the annual financial statements and on the management report.

Key Audit Matters in the Audit of the Annual Financial Statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the annual financial statements for the financial year from January 1, 2019 to December 31, 2020. These matters were addressed 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 our view, the matters of most significance in our audit were as follows:

❶ Group-internal transfer pricing of revenues within commission income and net trading result

❷ Impact of Brexit-related transactions on the bank’s asset, financial and earnings position

Our presentation of these key audit matters has been structured in each case as follows:

① Matter and issue

② Audit approach and findings

③ Reference to further information

Hereinafter we present the key audit matters:

❶ **Group-internal transfer pricing of revenues within commission income and net trading result**

① At €250 million, commission income is the largest income item in the bank's annual financial statements. In addition to revenues realized with external third parties, it primarily includes transfer pricing with affiliated companies that are part of the bank's Investment Banking, Investment Management and FICC/Equities business activities.

Net trading result represents the second major source of income, amounting to €103 million, which mainly results from transfer pricing with affiliated companies. In economic terms, this transfer pricing represents the share of income attributable to the bank from securities transactions executed in the Global Sachs Group.

From our point of view, the realization of income on the basis of the transfer pricing was of particular importance within the scope of our audit, as it is highly dependent on complex internal calculations and does not originate from third party transactions of the bank.

② In the course of our audit, we carried out the following audit procedures, among others:

For Investment Banking, in addition to assessing the appropriateness and effectiveness of the process, including the relevant controls for intercompany transfer pricing and for the approval of outgoing invoices, we have also performed audit sampling of the invoicing process.

For Investment Management, we assessed in particular the automatic reconciliation of cash flows recorded in the internal systems with the corresponding bank accounts and the general ledger.

For FICC/Equities, we have assessed the adequacy and effectiveness of the controls implemented in the transaction recording and confirmation process and reviewed the processing of settlement errors by the bank. We also examined the automated reconciliations between the various sub-ledgers from upstream systems and the bank's general ledger. In addition, we have received and acknowledged a transaction confirmation from the affiliated company regarding the amount of the commission charged.

For all business areas, we have also reconciled the intercompany reconciliation within the group. This reconciliation is carried out to ensure that income from transfer pricing corresponds with corresponding expenses of other group companies. Furthermore, by reviewing the bank's tax opinions, we examined the process of cost allocation with regard to the appropriateness of the chosen method and its parameterization.

On the basis of the audit procedures we performed, we were able to convince ourselves as a whole as to the existence and accuracy of the income not realised from third party revenues and the appropriateness and effectiveness of the processes and controls implemented by the bank.

③ Further information is provided in Note 2 "Accounting and Valuation Methods" of the Notes to the Financial Statements and in Section "Results of Operations" of the Management Report.

❷ Impact of Brexit-related transactions on the bank's asset, financial and earnings position

① As a result of the U.K.'s withdrawal from the E.U. (Brexit) , the Goldman Sachs Group reorganized its business activities within the European Union in the 2020 financial year. In this context, business activities, customers and employees of other group undertakings were transferred to the bank.

In particular, the bank has taken over the European business activities of Goldman Sachs International, London. In addition, the number of employees in the bank was increased, in part by taking over employees from other companies in the Goldman Sachs Group. In order to offset the benefits gained from the transfer of business activities and employees, the bank made compensation payments, the amount of which was determined by an external appraiser.

Furthermore, the branches of Goldman Sachs International in Amsterdam, Dublin, Madrid, Milan, Frankfurt, and Stockholm were transferred to the bank by way of a contribution in kind in exchange for the issue of new shares. The assets and liabilities transferred lead in total to an increase in equity of €28 million.

The compensatory payments made and transferred branches created purchased intangible assets of €13 million and goodwill of €59 million for the financial year 2020.

From our point of view, the accounting treatment of the compensation payments for the business activities and employees transferred as well as the contribution in kind of the branches were of essential importance for the asset, financial and earnings position of the bank, as these represent one-off transactions of extraordinary amounts. Since all contracting parties are related parties, the transactions mentioned are particularly risky from our point of view and, in the case of compensation payments, are also associated with significant estimation uncertainties due to the valuation. In light of these circumstances, this issue was of particular importance for our audit.

② As part of our audit, we gained an understanding of the underlying transactions of the transfer of the business activities and employees of other companies in the Goldman Sachs Group and the transfer of the branches of Goldman Sachs International and assessed the resulting effects on the bank's annual financial statements. In this context, we also assessed the bank's recognition and measurement approach of the business transactions in the annual financial statements.

With regard to the transfer of business activities and employees, we have in particular verified the contractual basis and assessed the valuation reports obtained by the bank together with the professional qualifications of the external experts. Among other things, we also assessed the valuation methodology used and assessed the appropriateness of the valuation parameters used in the valuation.

For the transfer of the branches by way of a contribution in kind, we traced the individual steps of the transactions on the basis of the notarial contracts and, among other things, assessed the proper recording of the assets and liabilities in the bank's books and records using the closing balances of the branches.

On the basis of our audit procedures, we were able to convince ourselves that the accounting of the transfer of business activities and employees as well as the contribution of the branches was carried out appropriately and was adequately documented.

③ The bank's information on the recognition and measurement of intangible assets as well as the affiliated branches are provided in the Notes to the Financial Statements, in particular in Note 2. Accounting and Valuation Method, Note 9. Non-Current Assets, and Note 14. Capital and reserves. Additional information can be found in the management report under "Introduction" and under "Forecast and Opportunities Report".

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

The executive directors are responsible for the preparation of the annual financial statements that comply, in all material respects, with the requirements of German commercial law, and that the annual financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the bank in compliance with German Legally Required Accounting Principles. In addition, the executive directors are responsible for such internal control as they, in accordance with German Legally Required Accounting Principles, have determined necessary to enable the preparation of annual financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the annual financial statements, the executive directors are responsible for assessing the bank's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting, provided no actual or legal circumstances conflict therewith.

Furthermore, the executive directors are responsible for the preparation of the management report that as a whole provides an appropriate view of the bank'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 executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a management report that is 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 bank's financial reporting process for the preparation of the annual financial statements and of the management report.

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

Our objectives are to obtain reasonable assurance about whether the annual financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the management report as a whole provides an appropriate view of the bank's position and, in all material respects, is consistent with the annual financial statements and the knowledge obtained in 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 that includes our audit opinions on the annual financial statements and on the management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with § 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 can arise 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 taken on the basis of these annual financial statements and this management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the annual financial statements and of the management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide 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 internal control relevant to the audit of the annual financial statements and of arrangements and measures (systems) 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 bank.
- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.

- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the bank's ability to continue as a going concern. If we conclude that a material uncertainty exists, 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 conditions may cause the bank 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 assets, liabilities, financial position and financial performance of the bank in compliance with German Legally Required Accounting Principles.
- Evaluate the consistency of the management report with the annual financial statements, its conformity with German law, and the view of the bank's position it provides.
- Perform audit procedures on the prospective information presented by the executive directors in the management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

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

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought 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 of most significance in the audit of the annual financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Other legal and regulatory requirements

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as auditor by the annual general meeting on May 19, 2020. We were engaged by the supervisory board on June 16, 2020. We have been the auditor of the Goldman Sachs Bank Europe SE, Frankfurt am Main, without interruption since the financial year 1991.

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).

German public auditors responsible for the engagement

The German Public Auditor responsible for the engagement is Stefan Palm.

Frankfurt am Main, May 7, 2021

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

sgd. Stefan Palm	sgd. Kay Böhm
Wirtschaftsprüfer	Wirtschaftsprüfer
(German Public Auditor)	(German Public Auditor)