



Goldman Sachs Group UK Limited

# Pillar 3 Disclosures

For the period ended December 31, 2022

## TABLE OF CONTENTS

	<b>Page No.</b>
Introduction .....	4
Risk Management.....	9
Capital Framework.....	13
Minimum Requirement for Own Funds and Eligible Liabilities (MREL).....	16
Risk-Weighted Assets.....	18
Credit Risk .....	20
Securitisations .....	31
Market Risk.....	35
Interest Rate Sensitivity.....	41
Operational Risk .....	43
Model Risk .....	46
Asset Encumbrance.....	47
Liquidity Risk.....	54
Net Stable Funding Ratio .....	62
Leverage Ratio .....	66
Capital Adequacy.....	69
Own Funds Template .....	70
Countercyclical Capital Buffer Template .....	75
Capital and MREL Instruments.....	77
Prudential Valuation Adjustments.....	82
Governance Arrangements .....	84
Climate Risk.....	87
UK Remuneration Disclosures .....	89
Cautionary Note on Forward-Looking Statements.....	99
Glossary.....	100
Appendix I: Scope of Consolidation Tables.....	102
Appendix II: Credit Risk Tables .....	107
Appendix III: Counterparty Credit Risk Tables .....	139
Appendix IV: Securitisation Tables.....	144
Appendix V: Index of Tables to PRA Templates .....	147

## INDEX OF TABLES

	Page No.
Table 1: Key Metric Template.....	14
Table 2: Own Funds and Eligible Liabilities.....	16
Table 3: Own Funds and Eligible Liabilities Composition.....	16
Table 4: Own Funds and Eligible Liabilities Creditor Ranking.....	17
Table 5: Overview of RWAs .....	18
Table 6: Analysis of CCR Exposure by Approach .....	23
Table 7: Exposures to CCPs .....	24
Table 8: Transactions subject to own funds requirements for CVA risk.....	24
Table 9: RWA Flow Statements of CCR Exposures under the IMM .....	25
Table 10: RWA Flow Statements of Credit Risk Exposures under the IRB Approach.....	25
Table 11: CRM techniques overview: Disclosure of the use of credit risk mitigation techniques .....	27
Table 12: IRB approach- Effect on the RWAs of credit derivatives used as CRM techniques .....	28
Table 13: Credit Derivatives Exposures .....	28
Table 14: Securitisation exposures in the non-trading book .....	33
Table 15: Securitisation exposures in the trading book.....	34
Table 16: IMA Values for Trading Portfolios.....	37
Table 17: Market Risk under the internal Model Approach (IMA) .....	37
Table 18: RWA Flow Statements of Market Risk Exposures under the IMA .....	38
Table 19: Comparison of VaR estimates with gains/losses .....	39
Table 20: Market Risk under the Standardised Approach .....	40
Table 21: Interest Rate Risks of non-trading book activities .....	41
Table 22: Operational Risk Capital Requirement .....	44
Table 23: Operational Risk own funds requirements and risk weighted amounts .....	44
Table 24: Encumbered and Unencumbered Assets.....	47
Table 25: Components of Encumbered and Unencumbered Assets .....	48
Table 26: Collateral Received .....	50
Table 27: Components of Collateral Received.....	51
Table 28: Sources of Encumbrance .....	52
Table 29: Liquidity Coverage Ratio .....	55
Table 30: Unsecured Net Cash Outflows .....	56
Table 31: Secured Net Cash Outflows .....	56
Table 32: Derivative Net Cash Outflows.....	57
Table 33: Unfunded Commitments Net Cash Outflows.....	58
Table 34: Other Net Cash Outflows.....	58
Table 35: GSGUK Liquidity Coverage Ratio Summary .....	59
Table 36: GSI Liquidity Coverage Ratio Summary.....	60
Table 37: GSIB Liquidity Coverage Ratio Summary .....	61
Table 38: GSGUK Net Stable Funding Ratio Summary.....	63
Table 39: GSI Net Stable Funding Ratio Summary.....	64
Table 40: GSIB Net Stable Funding Ratio Summary .....	65
Table 41: Leverage Ratio .....	66
Table 42: Summary Reconciliation of Accounting Assets and Leverage Ratio Exposures .....	66
Table 43: Split-up of on balance sheet exposures (excluding derivatives, SFTs and exempted exposures) .....	66
Table 44: Leverage Ratio Common Disclosure.....	67
Table 45: Composition of regulatory own funds .....	70
Table 46: Reconciliation of regulatory own funds to balance sheet in the audited financial statements .....	72
Table 47: Countercyclical Capital Buffer .....	75
Table 48: Geographical Distribution of Credit Exposures Relevant for the Calculation of the Buffer .....	75
Table 49: GSGUK Capital and MREL Instruments' Main Features Template .....	77

**Pillar 3 Disclosures**

Table 50: GSI and GSIB Capital Instruments' Main Features Template .....	80
Table 51: Prudential Valuation Adjustments (PVA) .....	82
Table 52: GSI Board of Directors .....	84
Table 53: GSIB Board of Directors .....	86
Table 54: UK REM1 - Remuneration awarded for the financial year .....	96
Table 55: UK REM2 - Special payments to staff whose professional activities have a material impact on institutions' risk profile (identified staff) .....	96
Table 56: UK REM3 - Deferred remuneration .....	97
Table 57: UK REM4 - Remuneration of 1 million EUR or more per year .....	98
Table 58: UK REM5 - Information on remuneration of staff whose professional activities have a material impact on institutions' risk profile (identified staff) .....	98
Table 59: Differences Between Accounting and Regulatory Scopes of Consolidation and Mapping of Financial Statement Categories with Regulatory Risk Categories .....	102
Table 60: Main Sources of Differences Between Regulatory Exposures Amounts and Carrying Values in Financial Statements .....	105
Table 61: Equity exposures under the simple risk weighted approach .....	107
Table 62: Standardised approach – Credit risk exposure and CRM effects .....	107
Table 63: Standardised Approach .....	109
Table 64: Scope of the use of IRB and SA approaches .....	110
Table 65: IRB approach – Back-testing of PD per exposure class (fixed PD scale) .....	112
Table 66: IRB approach – Back-testing of PD per exposure class (only for PD estimates according to point (f) of Article 180(1) CRR) .....	115
Table 67: Maturity of Exposures .....	118
Table 68: Collateral Obtained by Taking Possession and Execution Processes .....	118
Table 69: Credit Quality of Performing and Non-performing Exposures by Past Due Days .....	119
Table 70: Performing and Non-performing Exposures and Related Provisions .....	122
Table 71: Credit quality of loans and advances to non-financial corporations by industry .....	125
Table 72: Credit quality of forborne exposures .....	128
Table 73: IRB approach – Disclosure of the extent of the use of CRM techniques .....	130
Table 74: IRB approach – Credit risk exposures by exposure class and PD range .....	133
Table 75: Changes in the stock of non-performing loans and advances .....	136
Table 76: Quality of non-performing exposures by geography .....	137
Table 77: IRB Approach - CCR Exposures by exposure class and PD Scale .....	139
Table 78: Composition of Collateral for Exposures to CCR .....	142
Table 79: Standardised approach – CCR exposures by regulatory exposure class and risk weights .....	143
Table 80: Securitisation exposures in the non-trading book and associated regulatory capital requirements - institution acting as originator or as sponsor .....	144
Table 81: Securitisation exposures in the non-trading book and associated regulatory capital requirements - institution acting as investor .....	145
Table 82: Exposures securitised by the institution - Exposures in default and specific credit risk adjustments .....	146

## Introduction

### Overview

The Goldman Sachs Group, Inc. (Group Inc. or parent company), a Delaware corporation, together with its consolidated subsidiaries (collectively, the firm), 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. Goldman Sachs Group UK Limited (GSGUKL) is a wholly owned subsidiary of Group Inc. When we use the terms “Goldman Sachs”, “GS Group” and “the firm”, we mean Group Inc. and its consolidated subsidiaries and when we use the terms “GSGUK”, “the company”, “we”, “us” and “our”, we mean GSGUKL and its consolidated subsidiaries.

The Board of Governors of the Federal Reserve System (FRB) is the primary regulator of Group Inc., a bank holding company (BHC) under the U.S. Bank Holding Company Act of 1956 and a financial holding company under amendments to this Act. The firm is subject to consolidated regulatory capital requirements which are calculated in accordance with the regulations of the FRB (Capital Framework).

GSGUK is supervised on a consolidated basis by the Prudential Regulation Authority (PRA) and as such is subject to minimum capital and liquidity adequacy standards. GSGUK major subsidiaries are regulated by the Financial Conduct Authority (FCA) and the PRA and are subject to minimum capital and liquidity adequacy standards also on a standalone basis.

Capital requirements are expressed as risk-based capital and leverage ratios that compare measures of regulatory capital to risk-weighted assets (RWAs), average assets and off-balance-sheet exposures. Failure to comply with these capital requirements could result in restrictions being imposed by our regulators and could limit our ability to repurchase shares, pay dividends and make certain discretionary compensation payments. GSGUK’s capital levels are also subject to qualitative judgements by the regulators about components of capital, risk weightings and other factors.

For information on Group Inc.’s financial statements and regulatory capital ratios, please refer to the firm’s annual Pillar 3 Disclosures and Annual Report on Form 10-K. References to the “2022 Form 10-K” are to the firm’s Annual

Report on Form 10-K for the year ended December 31, 2022. All references to December 2022 refer to the period ended, or the date, as the context requires, December 31, 2022.

<https://www.goldmansachs.com/investor-relations/financials/other-information/2022/4q-pillar3-2022.pdf>

<https://www.goldmansachs.com/investor-relations/financials/10k/2022/2022-10-k.pdf>

The GSGUK consolidated regulatory capital requirement has been calculated in accordance with the U.K’s implementation of the Capital Requirements Directive (CRD), the Capital Requirements Regulation (CRR<sup>1</sup>) and associated PRA supervisory rules and regulatory standards. These requirements are largely based on the Basel Committee’s final capital framework for strengthening international capital standards (Basel III), which is structured around three pillars: Pillar 1 “minimum capital requirements”, Pillar 2 “supervisory review process” and Pillar 3 “market discipline”.

The annual Pillar 3 disclosures set out qualitative and quantitative elements for which more frequent disclosure is appropriate in accordance with the PRA Rulebook.

<sup>1</sup> In this document, the term ‘CRR’ refers to the onshored version of Regulation (E.U.) No 575/2013 of the European Parliament and of the Council of 26 June 2013, as amended by UK authorities including by way of PRA CRR rule instruments.

**Pillar 3 Disclosures**

The Pillar 3 disclosures are published in conjunction with consolidated financial information for GSGUK for December 31, 2022. The latest annual consolidated financial information for GSGUK, prepared in line with the recognition and measurement requirements of E.U.-adopted International Financial Reporting Standards (IFRS), can be accessed via the following link:

<https://www.goldmansachs.com/disclosures/gsgukl-consolidated-financials-2022.pdf>

Measures of exposures and other metrics disclosed in this report may not be based on IFRS, may not be directly comparable to measures reported in financial statements, and may not be comparable to similar measures used by other companies. These disclosures are not required to be, and have not been, audited by our independent auditors.

**Basis of Consolidation**

GSGUKL is the holding company for a group that provides a wide range of financial services to clients located worldwide. The company's functional currency is US dollars and these disclosures are prepared in that currency.

The following UK-regulated subsidiaries are included in the regulatory consolidation:

- Goldman Sachs International (GSI)
- Goldman Sachs International Bank (GSIB)

The scope of consolidation for regulatory capital purposes is consistent with the IFRS consolidation.

Following the exemption of GSGUKL from the requirement to be an approved parent financial holding company, GSI is the CRR consolidation entity, meaning that GSI is responsible for compliance with requirements applicable to GSGUK on a consolidated basis.

The company is required to make certain capital disclosures on an individual or subconsolidated basis for significant subsidiaries. The significant subsidiaries of GSGUK are GSI and GSIB. GSI is the firm's broker dealer in the Europe, Middle East and Africa (EMEA) region. GSIB is a U.K.-domiciled bank involved in lending and deposit-taking activities, securities lending, and a primary dealer for U.K. government bonds. The risk profile of GSGUK is materially the same as that of GSI and GSIB combined. Risk management policies and procedures are applied consistently to GSI, GSIB and to GSGUK as a whole. The remaining entities have minimal balance sheet activity and have not been determined material subsidiaries for the purposes of

these disclosures.

**Restrictions on the Transfer of Funds or Regulatory Capital within the Firm**

Group Inc. is a holding company and, therefore, utilises dividends, distributions and other payments from its subsidiaries to fund dividend payments and other payments on its obligations, including debt obligations. Regulatory capital requirements, as well as other provisions of applicable law and regulations, restrict Group Inc.'s ability to withdraw capital from its regulated subsidiaries. Within GSGUK, capital is provided by GSGUKL to subsidiary entities. Capital is considered transferable to other entities within the GSGUK Group without any significant restriction except to the extent it is required for regulatory purposes.

For information about restrictions on the transfer of funds within Group Inc. and its subsidiaries, see "Note 20. Regulation and Capital Adequacy" in Part II, Item 8 "Financial Statements and Supplementary Data" and "Risk Management – Liquidity Risk Management" and "Capital Management and Regulatory Capital" in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the firm's 2022 Form 10-K.

**Definition of Risk-Weighted Assets**

The risk weights used in the calculation of RWAs reflect an assessment of the riskiness of our assets and exposures. These risk weights are based on either predetermined levels set by regulators or on internal models which are subject to various qualitative and quantitative parameters that are subject to approval by our regulators. The relationship between available capital and capital requirements can be expressed in the form of a ratio, and capital requirements are arrived at by dividing RWAs by 12.5. In this document, minimum capital ratios set out in Table 1 are expressed including the impact of additional buffers.

**Fair Value**

Trading assets and liabilities, certain investments and loans, and certain other financial assets and liabilities, are included in our consolidated balance sheets at fair value (i.e., marked-to-market), with related gains or losses generally recognised in our consolidated statements of earnings and, therefore, in capital. 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. The use of fair value to measure financial instruments is fundamental to risk management

**Pillar 3 Disclosures**

practices and is our most critical accounting policy. The daily discipline of marking substantially all of our inventory to current market levels is an effective tool for assessing and managing risk and provides transparent and realistic insight into our inventory exposures. The use of fair value is an important aspect to consider when evaluating our capital base and our capital ratios as changes in the fair value of our positions are reflected in the current period's shareholders' equity, and accordingly, regulatory capital; it is also a factor used to determine the classification of positions into the banking book and trading book.

For further information about the determination of fair value under accounting principles generally accepted in the United States (U.S. GAAP) and controls over valuation of financial instruments, see "Note 3. Significant Accounting Policies" in Part II, Item 8 "Financial Statements and Supplementary Data" and "Critical Accounting Policies – Fair Value" in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the firm's 2022 Form 10-K.

**Banking Book / Trading Book Classification**

The firm has a comprehensive framework of policies, controls and reporting arrangements to meet the requirements of the CRR on the classification and treatment of positions in the banking book and trading book. In order to determine the appropriate regulatory capital treatment for our exposures, positions must first be classified into either banking book or trading book. Positions are classified as banking book unless they qualify to be classified as trading book.

Trading book positions generally meet the following criteria: they are assets or liabilities that are accounted for at fair value; they are risk managed using a Value-at-Risk (VaR) internal model; they are held as part of our market-making and underwriting businesses and are intended to be resold in the short term, or positions intended to benefit from actual or expected short-term price differences between buying and selling prices or from other price or interest rate variations<sup>2</sup>. Trading book positions are subject to market risk regulatory capital requirements, as are foreign exchange and commodity positions, whether or not they meet the other criteria for classification as trading book positions. Market risk is the risk of loss in value of these positions due to changes in market conditions. Some trading book positions, such as derivatives, are also subject to counterparty credit risk regulatory capital requirements.

Banking book positions may be accounted for at amortised cost, fair value or in accordance with the equity method. Banking book positions are subject to credit risk regulatory capital requirements. Credit risk represents the potential for loss due to the default or deterioration in credit quality of a counterparty (e.g., an over-the-counter (OTC) derivatives counterparty or a borrower) or an issuer of securities or other instruments we hold.

**Regulatory Developments**

The company's businesses are subject to extensive regulation and supervision worldwide. Regulations have been adopted or are being considered by regulators and policy-makers. Given that many of the new and proposed rules are highly complex, the full impact of regulatory reform will not be known until the rules are implemented and market practices develop under final U.K. regulations.

The U.K. adopted E.U. financial services legislation that was in effect on December 31, 2020. From this date, which marked the end of the transition period after the U.K.'s withdrawal from the E.U, the U.K. has been adopting its own regulations.

**Risk-Based Capital Ratios.** In October 2021, the PRA published CRR rules corresponding to onshored CRR provisions which were revoked by HM Treasury. The purpose of these rules was to implement certain international standards that remained to be implemented in the U.K. The Financial Policy Committee and the PRA also published in October 2021 a revised UK leverage ratio framework<sup>3</sup>.

As a result, new rules introducing the standardised approach to counterparty credit risk (SA-CCR) and changes to rules for the leverage ratio, the net stable funding ratio, requirements for own funds and eligible liabilities (MREL), large exposures and reporting and disclosure requirements became effective from January 1, 2022. In addition, the PRA implemented new rules at this date in respect of the application of consolidated requirements to financial holding companies and mixed financial holding companies.

In December 2017, the Basel Committee published standards that it described as the finalisation of the Basel III post-crisis regulatory reforms (Basel III Revisions). These standards include revisions to the framework relating to the standardised and internal model-based approaches used to calculate market risk requirements and clarifies the scope of positions subject to market risk capital requirements. They

<sup>2</sup> As defined in point (85) of Article 4(1) in CRR

<sup>3</sup> See PRA Policy Statements 21/21 and 22/21, October 2021

**Pillar 3 Disclosures**

also revise the Basel Committee's standardised and internal model-based approaches for credit risk, provide a new standardised approach for operational risk capital and revise the frameworks for credit valuation adjustment (CVA) risk. Finally, the Basel III Revisions set a floor on internally modelled capital requirements at a percentage of the capital requirements under the standardised approach. In July 2020, the Basel Committee finalised further revisions to the framework for CVA risk, which are intended to align that framework with the market risk framework.

In addition, in December 2022, the Basel Committee published a final standard on the prudential treatment of cryptoasset exposures.

In November 2022, the PRA published its consultation paper on rules that implement the Basel III Revisions in the U.K. with effective date January 1, 2025<sup>4</sup>. Under the PRA's draft rules, certain subsidiaries of international groups would not be subject to a U.K. floor on their internally modelled capital requirements. The impact of these draft rules on the firm (including its RWAs and regulatory capital ratios) is subject to uncertainty until the legislation is finalised and implemented.

U.K. authorities have not yet proposed rules implementing the Basel standards on the prudential treatment of cryptoasset exposures.

**Subsequent Noteworthy Events**

On April 1, 2023, GSI transferred its U.K. asset management business to Goldman Sachs Asset Management International (GSAMI), GS Group's primary U.K. asset management entity. This combines GSI's and GSAMI's U.K. asset management businesses in GSAMI, consistent with GS Group's resolution planning and the commercial objectives of its asset management business. This business had average annual net revenues in the last three years of \$436 million, and approximately 300 employees and immaterial assets and liabilities as of March 2023.

As consideration for the transfer, GSI has received a non-controlling interest in a GS Group affiliate. Although GSI will recognise a gain equivalent to the fair value of the business in the second quarter of 2023, GSI is not expecting to recognise a related increase in its regulatory capital based on its current capital planning.

**Business Environment****Impact of Russian Invasion of Ukraine**

The Russian invasion of Ukraine continues to negatively affect the global economy and has resulted in significant disruptions in financial markets and increased macroeconomic uncertainty. Governments around the world have responded to Russia's invasion by imposing economic sanctions and export controls on specific industry sectors, companies and individuals in Russia. Retaliatory restrictions against investors, non-Russian owned businesses and other sovereign states have been implemented by Russia. Businesses globally continue to experience shortages in materials and increased costs for transportation, energy and raw materials due, in part, to the negative effects of the war on the global economy. The escalation or continuation of the war between Russia and Ukraine presents heightened risks relating to cyber attacks, the frequency and volume of failures to settle securities transactions, supply chain disruptions, and inflation, as well as the potential for increased volatility in commodity, currency and other financial markets. Complying with economic sanctions and restrictions imposed by governments has resulted in increased operational risk. The extent and duration of the war, sanctions and resulting market disruptions, as well as the potential adverse consequences for the firm's business, liquidity and results of operations, are difficult to predict.

GSI and GSIB's senior management, risk committees and board of directors receive regular briefings from GSI and GSIB's independent risk oversight and control functions, including the Chief Risk Officer, on Russian and Ukrainian exposures, as well as other relevant risk metrics. GS Group has established a firmwide working group to identify and assess the operational risk associated with complying with economic sanctions and restrictions as a result of this invasion. In addition, to mitigate the risk of increased cyber attacks, GS Group liaises with government agencies in order to update its monitoring processes with the latest information.

GSI and GSIB's total credit exposure to Russian counterparties or borrowers and its total market exposure relating to Russian issuers was not material as of December 2022.

<sup>4</sup>See PRA Consultation paper (CP 16/22), 30 November 2022



### **Attestation**

To the best of our knowledge, we confirm that we have taken all reasonable measures to ensure that the information included in this disclosure complies with Section 4 of the CRR disclosure requirements as set out in the PRA Rulebook and has been prepared in accordance with formal policies and internal processes, systems and controls agreed at the management body level.

Richard Taylor  
Chief Finance Officer

Lesley Steele  
Chief Risk Officer

## Risk Management

### Overview

The firm believes that effective risk management is critical to the success of the firm and of GSGUK. Accordingly, the firm 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 company's business are identified, assessed, monitored and managed.

These risks include liquidity, market, credit, operational, model, legal, compliance, conduct, regulatory and reputational risks. The following section covers the risk management structure which is built around three core components: governance, processes and people.

### Governance

Risk management governance starts with the Board of Directors of the firm (Board), which both directly and through its committees, including its Risk Committee, oversees the risk management policies and practices. The Board is also responsible for the annual review and approval of the firm's risk appetite statement. The risk appetite statement describes the levels and types of risk the firm is willing to accept or to avoid, in order to achieve strategic business objectives included in the strategic business plan, while remaining in compliance with regulatory requirements. The Board reviews the strategic business plan and is ultimately responsible for overseeing and providing direction about strategy and risk appetite.

The implementation of the firm's risk governance structure and core risk management processes are overseen by Enterprise Risk, which reports to the firm's Chief Risk Officer, and is responsible for ensuring that the firm's enterprise risk management framework provides the board of directors of GSI and GSIB, the firm's risk committees and senior management with a consistent and integrated approach to managing the various risks in a manner consistent with the firm's risk appetite.

The firm'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 and are accountable for the outcomes of the risk-generating activities, as well as for assessing and managing those risks within the firm's risk appetite.

The independent risk oversight and control functions are

considered 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, Conflicts Resolution, Controllers, Legal, Risk and Tax.

Internal Audit is considered the third line of defence and reports to the Audit Committee of the Board and administratively to the chief executive officer. 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 Audit Committee of the 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.

The firm maintains strong and proactive communication about risk and it has a culture of collaboration in decision-making among the first and second lines of defence, committees and senior management. While the first line of defence is responsible for management of their risk, the firm dedicates extensive resources to the second line of defence in order to ensure a strong oversight structure and an appropriate segregation of duties. The firm regularly reinforces its strong culture of escalation and accountability across all functions.

### Processes

The firm 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 firm has a comprehensive data collection process, including policies and procedures that require all employees to report and escalate risk events. The firm approach for risk identification and assessment is comprehensive across all risk types, is dynamic and forward-looking to reflect and adapt to the company's changing risk profile and business environment, leverages subject matter expertise, and allows for prioritisation of the firm's most critical risks.

To effectively assess and monitor risks, the firm maintains a

## Pillar 3 Disclosures

daily discipline of marking substantially all of its inventory to current market levels. The firm does so because of its belief that this discipline is one of the most effective tools for assessing and managing risk and that it provides transparent and realistic insight into its inventory exposures. The firm also applies a rigorous framework of limits and thresholds to control and monitor risk across transactions, products, businesses and markets. See “Credit Risk”, “Market Risk” and “Liquidity Risk”, “Operational Risk”, “Model Risk”, and “Climate Risk” for further information.

An important part of the firm’s risk management process is stress testing. It allows the firm 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 firm’s vulnerabilities, and idiosyncratic risks combining financial and non-financial risks, including, but not limited to, credit, market, liquidity and funding, operational and compliance, strategic, systemic and emerging risks. Ad hoc stress tests are also performed in anticipation of market events or conditions. Stress testing is also used to assess capital and liquidity adequacy as part of the firm’s capital and liquidity planning processes.

The firm’s risk reporting and monitoring processes are designed to take into account information about both existing and emerging risks, thereby enabling the firm’s risk committees and senior management to perform their responsibilities with the appropriate level of insight into risk exposures. Furthermore, the firm’s limit and threshold breach processes provide means for timely escalation. The firm 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 firm-wide and entity level.

The firm’s governance and processes, as described above, equally apply to GSGUK and its entities.

### People

Even the best technology serves only as a tool for helping to make informed decisions in real time about the risks the firm is taking. Ultimately, effective risk management requires people to interpret risk data on an ongoing and timely basis and adjust risk positions accordingly. The experience of the company’s professionals, and their understanding of the nuances and limitations of each risk measure, guides the company in assessing exposures and maintaining them within prudent levels.

The firm reinforces a culture of effective risk management, consistent with its risk appetite, in its training and development programmes, as well as in the way it evaluates performance, and recognises and rewards people. The firm’s training and development programmes, including certain sessions led by the most senior leaders, are focused on the importance of risk management, client relationships and reputational excellence. As part of the firm’s annual performance review process, the firm assesses reputational excellence, including how an employee exercises good risk management and reputational judgement, and adheres to the firm’s code of conduct and compliance policies. The firm’s review and reward processes are designed to communicate and reinforce to its professionals the link between behaviour and how people are recognised, the need to focus on clients and reputation, and the need to always act in accordance with the highest standards of the firm.

### Structure

Ultimate oversight of risk in the company is the responsibility of the Board, who oversee risk both directly and through its committees, including its Risk Committee. A series of committees within the significant subsidiaries with specific risk management mandates covering important aspects of each entity’s businesses also have oversight or decision-making responsibilities. The key committees with oversight of our activities are described below.

**European Management Committee (EMC).** The EMC oversees all of our activities in the region. It is chaired by the chief executive officer of GSI and GSIB and its membership includes senior managers from the revenue-producing divisions and independent control and support functions. The EMC reports to GSI and GSIB’s Board of Directors.

**GSI and GSIB Board Audit Committees.** The GSI and GSIB Board Audit Committees assist the GSI and GSIB Boards of Directors in the review of processes for ensuring the suitability and effectiveness of the systems and controls in the region. The committees also have responsibility for overseeing the external audit arrangements and review of internal audit activities. Their membership includes non-executive directors of GSI and GSIB. The Board Audit Committees report to the GSI and GSIB Boards.

**GSI and GSIB Board Risk Committees.** The GSI and GSIB Board Risk Committees are responsible for providing advice to the GSI and GSIB Boards on the overall current and future risk appetite and assisting the Boards in overseeing the implementation of that risk appetite by senior management. This includes reviewing and advising on each entities risk strategy and oversight of the capital, liquidity and funding

## Pillar 3 Disclosures

position. Their membership includes non-executive directors of GSI and GSIB. The Board Risk Committees report to the GSI and GSIB Boards. Each of GSI and GSIB's Board Risk Committees held nine scheduled meetings in 2022.

**GSI and GSIB Risk Committees.** The GSI and GSIB Risk Committees are responsible for the ongoing monitoring and control of all financial and non-financial risks associated with each entity's activities. This includes reviewing key financial and risk metrics, including but not limited to profit and loss, capital (including the Internal Capital Adequacy Assessment Process (ICAAP)), funding, liquidity, credit risk, market risk, compliance and operational risk, strategic and business environment risk, price verification and stress tests. The GSI and GSIB Risk Committees approve risk limits and thresholds through direct or delegated authority. Their membership includes senior managers from the revenue-producing divisions and independent risk oversight and control functions. The Risk Committees report directly to their respective Board Risk Committees which in turn report to their respective Boards.

**EMEA Conduct Committee.** The EMEA Conduct Committee has oversight responsibility for conduct risk, as well as with assisting senior management in overseeing the integrity of firm personnel. Its membership includes senior managers from the revenue-producing divisions and independent risk oversight and control functions. The EMEA Conduct Committee reports to the European Management Committee (EMC), GS Group's Firmwide Conduct Committee, and GSI and GSIB Boards or their committees as appropriate.

### Risk Profile and Strategy

In the normal course of activities in serving clients, we commit capital, engage in derivative and lending transactions, and otherwise incur risk as an inherent part of our business. However, we endeavour not to undertake risk in form or amount that could potentially and materially impair our capital and liquidity position or the ability to generate revenues, even in a stressed environment. Where possible we employ mitigants and hedges, such as collateral, netting arrangements and other controls, in order to manage such risks and risk concentrations within our risk appetite levels.

The companies' overall risk appetite is established through an assessment of opportunities relative to potential loss, and is calibrated to GSI and GSIB's respective capital, liquidity and earnings capability. The primary means of evaluating loss-taking capacity is through the ICAAP. The key aspects of risk management documented through the ICAAP process

also form part of GSGUK's day-to-day decision making culture.

The Risk Appetite Statement (RAS) of GSI and GSIB complements the firm's RAS, and articulates the risk philosophy, the identification of risks generated by its business activities, as well as the appetite limits and thresholds set in order to manage effectively those risks. Consistent with this objective, we pay particular attention to evaluating risks that are concentrated, correlated, illiquid, or have other adverse characteristics. The intention is to mitigate or eliminate these risks, limiting them to such an extent that they could not, individually or collectively, materially and adversely affect the companies. GSI and GSIB, regularly review risk exposure and risk appetite, and take into consideration the key external constituencies, in particular their clients, shareholders, creditors, rating agencies, and regulators. The long-term success of our business model is directly linked to the preservation of strong relationships with each of these key constituents.

The Boards of Directors of both GSI and GSIB, as well as their respective Board Risk Committees, are actively engaged in reviewing and approving our overall risk appetite, as well as in reviewing the risk profile. Risk appetite statements are reviewed in the first instance by the respective Board Risk Committees and subsequently endorsed by the Boards annually. The Board Risk Committees also approve any amendment to the risk appetite statements outside of the annual approval process. The Boards of Directors receive quarterly updates on risk as well as ad-hoc updates, as appropriate.

The consideration of risk appetite and the underlying risk management framework ensures that GSGUK's businesses are congruent with our strategy under both normal and stressed environments. We believe that the risk management framework and the associated risk policies, procedures and systems in place are comprehensive and effective with regard to our profile and strategy. The framework is evaluated on an ongoing basis and subject to independent internal audit assessments to ensure our risk management arrangements remain effective.

### Risk Measurement

On a day-to-day basis risk measurement plays an important role in articulating the risk appetite of the firm and GSGUK and in managing the risk profile as expressed in the risk appetite statements. Risk may be monitored against firmwide, entity level, product, divisional or business level thresholds or against a combination of such attributes. We measure risk using a suite of metrics, as relevant to each type

**Pillar 3 Disclosures**

of risk, including stress metrics to calculate the potential loss from a wide range of scenarios and sensitivity analysis. These risks are tracked systematically and they are monitored and reported to the relevant senior management Committees and Board on a regular basis.

A number of specialist committees and governance bodies sit within the broader risk management framework with responsibilities for the monitoring of specific risks against limits or tolerances and the escalation of any breaches. Specific governance bodies are in place for the management of credit, market, liquidity, model and operational risk.

The firm's risk management framework, which relies on oversight from the Board of Directors, operates independently of revenue producing divisions and other non-revenue producing units such as compliance, finance, legal, internal audit and operations.

GSGUK is fully integrated into the broader firmwide organizational structure and risk governance, and applies a risk philosophy and risk management principles consistent with GS Group. For an overview of the firm's risk management framework, including Board governance, processes and committee structure, see "Risk Management – Overview and Structure of Risk Management" in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the firm's 2022 Form 10-K.

**Adequacy of Risk Management Arrangements**

The Firm is satisfied that the risk management arrangements and systems, as described above, are appropriate given the strategy and risk profile of GSGUK. These elements are reviewed at least annually and, where appropriate, updated to reflect best practice, evolving market conditions and changing regulatory requirements.

## Capital Framework

### Capital Structure

For regulatory capital purposes, the company's total available capital has the following components:

- Common Equity Tier 1 capital (CET1), which is comprised of common shareholders' equity, after giving effect to deductions for disallowed items and other adjustments;
- Tier 1 capital which is comprised of CET1 capital and other qualifying capital instruments; and
- Tier 2 capital which is comprised of long term qualifying subordinated debt and preference shares.

Certain components of our regulatory capital are subject to regulatory limits and restrictions under the rules. In general, to qualify as Tier 1 or Tier 2 capital, an instrument must be fully paid and unsecured. A qualifying Tier 1 or Tier 2 capital instrument must also be subordinated to all senior indebtedness of the organisation.

Under the rules, the minimum CET1, Tier 1 capital and Total capital ratios (collectively the Pillar 1 capital requirements) are supplemented by:

- A capital conservation buffer of 2.5%, consisting entirely of capital that qualifies as CET1 capital.
- A countercyclical capital buffer of up to 2.5% (consisting entirely of CET1) in order to counteract excessive credit growth. The buffer only applies to the company's exposures to certain types of counterparties based in jurisdictions which have announced a countercyclical buffer. The buffer is set to increase from 05 July 2023, as the UK increases the CCYB rate to 2% which is estimated to increase the minimum capital requirement approximately by 23 basis points<sup>5</sup>. The countercyclical capital buffer applicable to the company could change in the future and, as a result, the company's risk-based capital requirements could increase.
- The individual capital requirement under Pillar 2A (an additional amount to cover risks not adequately captured in Pillar 1). The PRA performs a periodic supervisory review of GSI's and GSIB's Internal Capital Adequacy Assessment Process (ICAAP), which leads to a final determination by the PRA of individual capital requirement under Pillar 2A. The sum of Pillar 1 and Pillar 2A requirements is referred to as "Total Capital Requirement" or TCR and represents the minimum

amount of capital the PRA considers that a firm should hold at all times.

The PRA also defines the forward looking capital requirement which represents the PRA's view of the capital that GSGUK would require to absorb losses in stressed market conditions to the extent not covered by the capital conservation buffer. This is known as Pillar 2B or the "PRA buffer" and is not reflected in the Key metrics table shown in Table 1 below.

### Compliance with Capital Requirements

As of December 31, 2022, all of GSGUK's regulated subsidiaries had capital levels in excess of their minimum regulatory capital requirements.

<sup>5</sup> From July 5, 2023, the UK CCYB rate is expected to increase to 2%

## Pillar 3 Disclosures

## Key Metrics

The tables below represent an overview of prudential regulatory positions measured by key regulatory metrics for GSGUK, GSI and GSIB as at December 31, 2022, September 30, 2022, June 30, 2022 and March 31, 2022.

Table 1: Key Metric Template

\$ in millions		As of December 2022			As of September 2022			As of June 2022			As of March 2022		
		GSGUK	GSI	GSIB	GSGUK	GSI	GSIB	GSGUK	GSI	GSIB	GSGUK	GSI	GSIB
<b>Available own funds (amounts)<sup>1</sup></b>													
1	Common Equity Tier 1 (CET1) capital	\$ 36,670	\$ 31,780	\$ 3,409	\$ 36,035	\$ 31,331	\$ 3,080	\$ 35,531	\$ 30,465	\$ 3,272	\$ 34,630	\$ 29,593	\$ 3,344
2	Tier 1 capital	\$ 44,970	\$ 40,080	\$ 3,409	\$ 44,335	\$ 39,631	\$ 3,080	\$ 43,831	\$ 38,765	\$ 3,272	\$ 42,930	\$ 37,893	\$ 3,344
3	Total capital	\$ 51,473	\$ 45,457	\$ 4,237	\$ 50,838	\$ 45,008	\$ 3,906	\$ 50,334	\$ 44,142	\$ 4,098	\$ 49,433	\$ 43,270	\$ 4,170
<b>Risk-weighted exposure amounts<sup>2</sup></b>													
4	Total risk-weighted exposure amount	\$ 267,871	\$ 247,653	\$ 15,674	\$ 288,398	\$ 267,737	\$ 15,542	\$ 296,209	\$ 273,809	\$ 17,135	\$ 298,227	\$ 274,946	\$ 16,693
<b>Capital ratios (as a percentage of risk-weighted exposure amount)<sup>1</sup></b>													
5	Common Equity Tier 1 ratio (%)	13.69%	12.83%	21.75%	12.49%	11.70%	19.81%	12.00%	11.13%	19.09%	11.61%	10.76%	20.03%
6	Tier 1 ratio (%)	16.79%	16.18%	21.75%	15.37%	14.80%	19.81%	14.80%	14.16%	19.09%	14.40%	13.78%	20.03%
7	Total capital ratio (%)	19.22%	18.36%	27.03%	17.63%	16.81%	25.13%	16.99%	16.12%	23.91%	16.58%	15.74%	24.98%
<b>Additional own funds requirements based on SREP (as a percentage of risk-weighted exposure amount)</b>													
UK 7a	Additional CET1 SREP requirements (%)	1.38%	1.38%	2.23%	1.38%	1.37%	2.23%	1.38%	1.37%	2.23%	1.05%	1.03%	1.52%
UK 7b	Additional AT1 SREP requirements (%)	1.84%	1.84%	2.98%	1.84%	1.83%	2.98%	1.83%	1.83%	2.98%	1.40%	1.37%	2.03%
UK 7c	Additional T2 SREP requirements (%)	2.46%	2.45%	3.97%	2.45%	2.44%	3.97%	2.45%	2.43%	3.97%	1.87%	1.83%	2.71%
UK 7d	Total SREP own funds requirements (%)	10.46%	10.45%	11.97%	10.45%	10.44%	11.97%	10.45%	10.43%	11.97%	9.87%	9.83%	10.71%
<b>Combined buffer requirement (as a percentage of risk-weighted exposure amount)</b>													
8	Capital conservation buffer (%)	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
UK 8a	Conservation buffer due to macro-prudential or systemic risk identified at the level of a Member State (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
9	Institution specific countercyclical capital buffer (%)	0.35%	0.34%	0.42%	0.05%	0.05%	0.06%	0.05%	0.04%	0.07%	0.04%	0.04%	0.05%
UK 9a	Systemic risk buffer (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
10	Global Systemically Important Institution buffer (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
UK 10a	Other Systemically Important Institution buffer	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
11	Combined buffer requirement (%)	2.85%	2.84%	2.92%	2.55%	2.55%	2.56%	2.55%	2.54%	2.57%	2.54%	2.54%	2.55%
UK 11a	Overall capital requirements (%)	13.30%	13.28%	14.89%	13.00%	12.99%	14.53%	12.99%	12.98%	14.54%	12.41%	12.37%	13.26%
12	CET1 available after meeting the total SREP own funds requirements (%)	7.81%	6.96%	12.77%	6.62%	5.83%	10.84%	6.12%	5.26%	10.12%	6.15%	5.23%	12.00%
<b>Leverage ratio</b>													
13	Leverage ratio total exposure measure <sup>3</sup>	\$ 714,629	\$ 659,896	\$ 49,383	\$ 786,408	\$ 730,484	\$ 52,023	\$ 814,261	\$ 762,032	\$ 48,851	\$ 832,617	\$ 777,182	\$ 51,482
14	Leverage ratio	6.29%	6.07%	6.87%	5.64%	5.43%	5.92%	5.38%	5.09%	6.70%	5.16%	4.88%	6.49%

## Pillar 3 Disclosures

Additional own funds requirements to address risks of excessive leverage (as a percentage of leverage ratio total exposure amount) <sup>4</sup>													
UK 14a	Additional CET1 leverage ratio requirements (%)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
UK 14b	Additional AT1 leverage ratio requirements (%)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
UK 14c	Additional T2 leverage ratio requirements (%)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
UK 14d	Total SREP leverage ratio requirements (%)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
UK 14e	Applicable leverage buffer*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
UK 14f	Overall leverage ratio requirements (%)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Liquidity Coverage Ratio													
15	Total high-quality liquid assets (HQLA) (Weighted value -average)	\$ 99,518	\$ 79,517	\$ 20,000	\$ 97,783	\$ 78,898	\$ 18,885	\$ 95,696	\$ 76, 927	\$ 18,769	\$ 93,679	\$ 75,191	\$ 18,488
UK 16a	Cash outflows - Total weighted value	\$ 206,809	\$ 193,229	\$ 19,375	\$ 206,874	\$ 193,905	\$ 18,646	\$ 202,182	\$ 188,458	\$ 19,544	\$ 196,752	\$ 182,715	\$ 20,088
UK 16b	Cash inflows - Total weighted value	\$ 156,418	\$ 145,759	\$ 6,867	\$ 159,134	\$ 147,247	\$ 6,925	\$ 159,216	\$ 145, 042	\$ 7,877	\$ 156,299	\$ 141,191	\$ 8,179
16	Total net cash outflows (adjusted value)	\$ 53,892	\$ 49,537	\$ 12,506	\$ 53,093	\$ 49,882	\$ 11,720	\$ 50,805	\$ 47,771	\$ 11,668	\$ 49,339	\$ 46,206	\$ 11,911
17	Liquidity coverage ratio (%)	185%	161%	161%	184%	158%	162%	189%	162%	162%	191%	164%	155%
Net Stable Funding Ratio													
18	Total available stable funding	\$ 204,824	\$ 165,845	\$ 45,775									
19	Total required stable funding	\$ 161,293	\$ 144,394	\$ 30,642									
20	NSFR ratio (%)	127%	115%	151%									

\* Row UK 14a-UK14f are not applicable considering the GSGUK has no binding capital requirements and no leverage ratio buffer requirements until 01 January 2023.

## Notes:

- GSGUK and GSI capital ratios have increased primarily due to the recognition of Q4 earnings from September 2022 to December 2022 and a decrease in credit and market risk RWAs. GSIB's capital ratios have increased due to recognition of annual profits and an increase in other comprehensive income (OCI).
- GSGUK's RWA decreased from \$288bn in September 2022 to \$268bn in December 2022, primarily driven by Credit and Counterparty Credit Risk RWAs. Credit Risk RWA reduction was driven by reduced balance sheet exposures and Counterparty Credit Risk reductions were driven by reduced exposures within energy portfolio and lower activity in interest rate products.
- GSGUK's leverage exposure has decreased from \$786bn in September 2022 to \$715bn in September 2022 primarily driven by reduced on-balance sheet exposures primarily within customer receivables, Securities financing transactions (SFTs) and reduced derivatives exposures.
- The binding leverage ratio requirement at 3.25% plus a countercyclical leverage ratio buffer estimated at c.0.10% based on a 1% UK CCYB rate applied from January 1, 2023. From July 05, 2023, the UK CCYB rate is expected to increase to 2%, adding a further c.0.10% basis points to the requirement.



## Pillar 3 Disclosures

## Minimum Requirement for Own Funds and Eligible Liabilities (MREL)

Material subsidiaries of an overseas banking group at the consolidated level, such as GSGUK, are required to have sufficient own funds and eligible liabilities to meet internal MREL. After an initial phase-in, these rules became effective from January 1, 2022.

As of December 31, 2022, GSGUK had own funds and eligible liabilities in excess of its internal MREL. On 28 July 2022, GSGUK repaid \$1.5bn of excess MREL eligible debt.

GSGUK own funds and eligible liabilities key metrics are provided in Table 2.

Table 2: Own Funds and Eligible Liabilities

<i>\$ in millions</i>	As of December 2022
	GSGUK
<b>Total own funds and eligible liabilities</b>	<b>\$ 68,849</b>
Total RWA	\$ 267,871
Total own funds and eligible liabilities as a percentage of RWA	25.70%
Leverage Exposure	\$ 714,629
Total own funds and eligible liabilities as a percentage of leverage exposure	9.63%
Excluded Liabilities per Article 72a(2) of CRR	<b>\$ 1,015,463</b>

Table 3 provides details of the composition of GSGUK's own funds and eligible liabilities.

Table 3: Own Funds and Eligible Liabilities Composition

<i>\$ in millions</i>	As of December 2022
	GSGUK
<b>Common Equity Tier 1 capital (CET1)</b>	<b>\$ 36,670</b>
Additional Tier 1 capital (AT1) before own funds and eligible liabilities adjustments	8,300
AT1 instruments not eligible to meet internal MREL	(2,800)
AT1 instruments eligible under the own funds and eligible liabilities framework	<b>5,500</b>
Tier 2 capital (T2) before own funds and eligible liabilities adjustments	6,503
Amortised portion of T2 instruments where remaining maturity > 1 year	-
Other adjustments	-
<b>T2 instruments eligible under the own funds and eligible liabilities framework</b>	<b>6,503</b>
<b>Own funds and eligible liabilities arising from regulatory capital</b>	<b>48,673</b>
Eligible liabilities instruments subordinated to excluded liabilities	20,176
<b>Own funds and eligible liabilities instruments arising from non-regulatory capital instruments before adjustments</b>	<b>20,176</b>
<b>Own funds and eligible liabilities instruments before deductions</b>	<b>68,849</b>
Deduction of investments in own other own funds and eligible liabilities	-
Other adjustments to internal own funds and eligible liabilities	-
<b>Own funds and eligible liabilities instruments after deductions</b>	<b>68,849</b>
Total RWAs	267,871
Leverage exposure measure	714,629
<b>Own funds and eligible liabilities as a percentage of total RWAs</b>	<b>25.70%</b>
<b>Own funds and eligible liabilities as a percentage of leverage exposure</b>	<b>9.63%</b>
CET1 (as a percentage of total RWAs) available after meeting minimum capital requirements and MREL	11.30%
Institution-specific combined buffer requirement	2.85%
Of which: capital conservation buffer requirement	2.50%
Of which: bank specific countercyclical buffer requirement	0.35%

**Pillar 3 Disclosures**

Table 4 provides a breakdown of eligible instruments in the creditor hierarchy of GSGUK.

**Table 4: Own Funds and Eligible Liabilities Creditor Ranking**

<i>\$ in millions</i>						As of December 2022
					GSGUK	
	(most junior)				(most senior)	Total
Description of creditor ranking	Ordinary Shares <sup>1</sup>	AT1 Instru- ments	Tier 2 Preference Shares	Tier 2 Sub- ordinated Loans	Senior Sub- ordinated Loans	
<b>Total capital and liabilities net of credit risk mitigation</b>	<b>\$ 2,135</b>	<b>\$ 8,300</b>	<b>\$ 2,300</b>	<b>\$ 4,203</b>	<b>\$ 20,176</b>	<b>\$ 37,114</b>
Subset of row 3 that are excluded liabilities	-	-	-	-	-	-
Total capital and liabilities less excluded liabilities	2,135	8,300	2,300	4,203	20,176	37,114
Eligible as own funds and eligible liabilities	2,135	5,500	2,300	4,203	20,176	34,314
with 1 year ≤ residual maturity < 2 years	-	-	-	-	-	-
with 2 years ≤ residual maturity < 5 years	-	-	-	-	14,576	14,576
with 5 years ≤ residual maturity < 10 years	-	-	2,300	4,203	5,600	12,103
with residual maturity ≥ 10 years	-	-	-	-	-	-
perpetual securities	2,135	5,500	-	-	-	7,635

1. Ordinary shares exclude the value of share premium and reserves

## Pillar 3 Disclosures

## Risk-Weighted Assets

RWAs are calculated based on measures of credit risk, market risk and operational risk. The tables below represent a summary of the RWAs and capital requirements for GSGUK, GSI and GSIB by type as at December 31, 2022 and September 30, 2022.

Table 5: Overview of RWAs

## GSGUK

		RWAs		Minimum capital requirements
		December-2022	September-2022	
<i>\$ in millions</i>				
1	<b>Credit risk (excluding CCR)</b>	<b>\$ 34,774</b>	<b>\$ 44,645</b>	<b>\$ 2,782</b>
2	Of which the standardised approach	6,685	9,621	535
UK 4a	Of which equities under the simple risk weighted approach	2,651	2,150	212
5	Of which the advanced IRB (AIRB) approach	25,438	32,874	2,035
6	<b>Counterparty credit risk - CCR</b>	<b>\$ 102,602</b>	<b>\$ 106,433</b>	<b>\$ 8,209</b>
7	Of which the standardised approach	10,473	10,230	838
8	Of which internal model method (IMM)	65,109	71,226	5,209
UK 8a	Of which exposures to a CCP	893	1,048	71
UK 8b	Of which credit valuation adjustment – CVA	26,127	23,929	2,091
15	<b>Settlement risk</b>	<b>\$ 11,430</b>	<b>\$ 11,986</b>	<b>\$ 914</b>
16	<b>Securitisation exposures in the non-trading book (after the cap)</b>	<b>\$ 480</b>	<b>\$ 406</b>	<b>\$ 38</b>
18	Of which SEC-ERBA (including IAA)	92	57	7
19	Of which SEC-SA approach	223	197	18
UK 19a	Of which 1250%/deduction	165	152	13
20	<b>Position, foreign exchange and commodities risks (Market risk)</b>	<b>\$ 93,519</b>	<b>\$ 101,204</b>	<b>\$ 7,482</b>
21	Of which the standardised approach	54,894	56,107	4,392
22	Of which IMA	38,625	45,097	3,090
UK 22a	<b>Large exposures</b>	-	-	-
23	<b>Operational risk</b>	<b>\$ 25,066</b>	<b>\$ 23,724</b>	<b>\$ 2,005</b>
UK 23b	Of which standardised approach	25,066	23,724	2,005
24	<b>Amounts below the thresholds for deduction (subject to 250% risk weight)</b>	-	-	-
29	<b>Total</b>	<b>\$ 267,871</b>	<b>\$ 288,398</b>	<b>\$ 21,430</b>

GSGUK risk weighted assets decreased from \$288bn in September 2022 to \$268bn in December 2022 primarily due to the following movements:

- GSGUK's Credit Risk RWA decreased from \$45bn in September 2022 to \$35bn in December 2022 driven by reduced balance sheet exposures.
- GSGUK's Counterparty Credit Risk RWA decreased from \$106bn in September 2022 to \$103bn in December 2022 driven by reduced exposures within energy portfolio and lower activity in interest rate products.
- GSGUK's Market Risk RWA under the Internal Model Approach ("IMA") decreased from \$45bn in September 2022 to \$39bn in December 2022 driven by reduced currency and equity exposures and by the inclusion of CVA hedge positions in IMA.

## Pillar 3 Disclosures

## GSI

		RWAs		Minimum capital requirements
		December-2022	September-2022	
<i>\$ in millions</i>				
<b>1</b>	<b>Credit risk (excluding CCR)</b>	<b>\$ 22,599</b>	<b>\$ 31,103</b>	<b>\$ 1,808</b>
2	Of which the standardised approach	3,451	6,199	276
UK 4a	Of which equities under the simple risk weighted approach	2,651	2,150	212
5	Of which the advanced IRB (AIRB) approach	16,497	22,754	1,320
<b>6</b>	<b>Counterparty credit risk - CCR</b>	<b>\$ 100,163</b>	<b>\$ 105,537</b>	<b>\$ 8,013</b>
7	Of which the standardised approach	10,243	9,910	819
8	Of which internal model method (IMM)	63,004	70,773	5,041
UK 8a	Of which exposures to a CCP	893	1,048	71
UK 8b	Of which credit valuation adjustment – CVA	26,023	23,806	2,082
<b>15</b>	<b>Settlement risk</b>	<b>\$ 11,430</b>	<b>\$ 11,985</b>	<b>\$ 914</b>
<b>16</b>	<b>Securitisation exposures in the non-trading book (after the cap)</b>	-	-	-
18	Of which SEC-ERBA (including IAA)	-	-	-
19	Of which SEC-SA approach	-	-	-
UK 19a	Of which 1250% deduction	-	-	-
<b>20</b>	<b>Position, foreign exchange and commodities risks (Market risk)</b>	<b>\$ 90,488</b>	<b>\$ 98,272</b>	<b>\$ 7,239</b>
21	Of which the standardised approach	51,863	53,175	4,149
22	Of which IMA	38,625	45,097	3,090
<b>UK 22a</b>	<b>Large exposures</b>	-	-	-
<b>23</b>	<b>Operational risk</b>	<b>\$ 22,973</b>	<b>\$ 20,840</b>	<b>\$ 1,838</b>
UK 23b	Of which standardised approach	22,973	20,840	1,838
<b>24</b>	<b>Amounts below the thresholds for deduction (subject to 250% risk weight)</b>	-	-	-
<b>29</b>	<b>Total</b>	<b>\$ 247,653</b>	<b>\$ 267,737</b>	<b>\$ 19,812</b>

## GSIB

		RWAs		Minimum capital requirements
		December-2022	September-2022	
<i>\$ in millions</i>				
<b>1</b>	<b>Credit risk (excluding CCR)</b>	<b>\$ 11,869</b>	<b>\$ 11,593</b>	<b>\$ 950</b>
2	Of which the standardised approach	421	450	34
UK 4a	Of which equities under the simple risk weighted approach	0	0	0
5	Of which the advanced IRB (AIRB) approach	11,448	11,143	916
<b>6</b>	<b>Counterparty credit risk - CCR</b>	<b>\$ 494</b>	<b>\$ 704</b>	<b>\$ 40</b>
7	Of which the standardised approach	129	220	10
8	Of which internal model method (IMM)	344	453	28
UK 8a	Of which exposures to a CCP	0	0	0
UK 8b	Of which credit valuation adjustment – CVA	21	31	2
<b>15</b>	<b>Settlement risk</b>	<b>\$ 0</b>	<b>\$ 1</b>	<b>\$ 0</b>
<b>16</b>	<b>Securitisation exposures in the non-trading book (after the cap)</b>	<b>\$ 415</b>	<b>\$ 406</b>	<b>\$ 33</b>
18	Of which SEC-ERBA (including IAA)	88	57	7
19	Of which SEC-SA approach	200	197	16
UK 19a	Of which 1250% deduction	127	152	10
<b>20</b>	<b>Position, foreign exchange and commodities risks (Market risk)</b>	<b>\$ 2,058</b>	<b>\$ 2,013</b>	<b>\$ 165</b>
21	Of which the standardised approach	2,058	2,013	165
22	Of which IMA	-	-	-
<b>UK 22a</b>	<b>Large exposures</b>	-	-	-
<b>23</b>	<b>Operational risk</b>	<b>\$ 838</b>	<b>\$ 825</b>	<b>\$ 67</b>
UK 23b	Of which standardised approach	838	825	67
<b>24</b>	<b>Amounts below the thresholds for deduction (subject to 250% risk weight)</b>	-	-	-
<b>29</b>	<b>Total</b>	<b>\$ 15,674</b>	<b>\$ 15,542</b>	<b>\$ 1,255</b>

## Credit Risk

### 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 we hold. Our exposure to credit risk comes mostly from client transactions in OTC derivatives and loans and lending commitments. Credit risk also comes from cash placed with banks, securities financing transactions (i.e., resale and repurchase agreements and securities borrowing and lending activities) and customer and other receivables.

Credit Risk, which is independent of the revenue-producing units and reports to the firm's Chief Risk Officer, has primary responsibility for assessing, monitoring and managing credit risk through firmwide oversight across the firm's global businesses. In addition, we hold other positions that give rise to credit risk (e.g., bonds and secondary bank loans). These credit risks are captured as a component of market risk measures, which are monitored and managed by Market Risk. We also enter into derivatives to manage market risk exposures. Such derivatives also give rise to credit risk, which is monitored and managed by Credit Risk.

### Credit Risk Management Process

The firm's process for managing credit risk includes the critical components of the risk management framework described in "Risk Management – Overview and Structure of Risk Management" in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the firm's 2022 Form 10-K as well as the following:

- Monitoring compliance with established credit risk limits and reporting our credit exposures and credit concentrations;
- Establishing or approving underwriting standards;
- Assessing and determining internal credit ratings for counterparties and the associated likelihood that a counterparty will default on its payment obligations;
- Measuring our current and potential credit exposure and losses resulting from a counterparty default;
- Using credit risk mitigants, including netting, collateral and hedging; and
- Maximizing recovery through active workout and restructuring of claims.

Credit Risk performs credit analysis, which include initial and ongoing evaluations of our counterparties. For substantially all credit exposures, the core of the process is an annual counterparty credit review or more frequently if deemed necessary as a result of events or changes in circumstances. 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 firm's risk assessment process may also include, where applicable, reviewing certain key metrics, including, but not limited to, delinquency status, collateral values, credit scores and other risk factors.

The firm's 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 on the firm's aggregate credit risk by product, internal credit rating, industry, country and region.

### Risk Measures

The firm measures credit risk based on the potential loss in the event of non-payment by a counterparty using current and potential exposure. For derivatives and securities financing transactions, current exposure represents the amount presently owed after taking into account applicable netting and collateral arrangements, while potential exposure represents the firm's estimate of the future exposure that could arise over the life of a transaction based on market movements within a specified confidence level. Potential exposure also takes into account netting and collateral arrangements. For loans and lending commitments, the primary measure is a function of the notional amount of the position.

### Limits

Credit limits are used at various levels, as well as underwriting standards, to manage the size and nature of credit exposures. For GS Group, the Risk Committee of the Board and the Firmwide Risk Appetite Committee approve credit risk limits at GS Group, business and product levels, consistent with the risk appetite statement. Credit Risk (through delegated authority from the Firmwide Risk

## Pillar 3 Disclosures

Appetite Committee) sets credit limits for individual counterparties, economic groups, industries and countries. Limits for counterparties and economic groups are assigned based on multiple factors mainly internal credit rating, size of counterparty and tenor profile of the credit exposure, and reviewed regularly and revised to reflect changing risk appetites for a given counterparty or group of counterparties. Limits for industries and countries are based on our risk appetite and are designed to allow for regular monitoring, review, escalation and management of credit risk concentrations. For information on the limit approval process, see “Risk Management – Overview and Structure of Risk Management” in Part II, Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the firm’s 2022 Form 10-K.

Policies authorised by GS Group’s Enterprise Risk Committee and the Firmwide Risk Appetite Committee prescribe the level of formal approval required for GS Group to assume credit exposure to a counterparty across all product areas, taking into account any applicable netting provisions, collateral or other credit risk mitigants.

The GSI and GSIB Risk Committees approve the framework that governs the setting of credit risk limits at the entity level, and delegate responsibility for the ongoing execution and monitoring to the GSI and GSIB Chief Credit Officers respectively.

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.

### Credit Exposures

For information on the firm’s credit exposures, including the gross fair value, netting benefits and current exposure of the firm’s derivative exposures and securities financing transactions, see “Note 7. Derivatives and Hedging Activities” and “Note 11. Collateralized Agreements and Financings” in Part II, Item 8 “Financial Statements and Supplementary Data” and “Risk Management – Credit Risk Management” in Part II, Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the firm’s 2022 Form 10-K.

### Credit Risk and Counterparty Credit Risk RWA

Credit RWA are calculated based on measures of credit exposure, which are then risk weighted. Wholesale exposures generally include credit exposures to corporates, institutions, sovereigns or government entities (other than Securitisation,

Retail or Equity exposures). Within GSGUK, GSI and GSIB have permission at the solo and consolidated levels to compute risk weights for certain exposures in accordance with the Advanced Internal Ratings Based (AIRB) approach which utilises internal assessments of each counterparty’s creditworthiness. The internal credit rating is assigned to each exposure class based on a credit-worthiness review methodology determined by the Credit Risk department.

The Credit Risk exposure that does not qualify for the AIRB approach but is instead calculated under the standardised approach, for which nominated external credit assessment institutions (ECAI) ratings are potentially eligible to be used, is immaterial. Exposure classes under the standardised approach include sovereigns or government entities, corporates, retail and private equity. These exposures represent less than 5% of the total Credit Risk exposures.

**Exposure at Default (EAD).** The exposure amount that is risk weighted for regulatory capital calculations. For on-balance-sheet Wholesale exposures, such as receivables and cash, EAD is generally based on the carrying value. For the calculation of EAD for off-balance-sheet exposures, including commitments and guarantees, a credit equivalent exposure amount is calculated based on the notional amount of each transaction multiplied by a credit conversion factor in accordance with Article 166 of the CRR.

For the measurement of substantially all counterparty credit exposure on OTC, cleared and listed derivative and securities financing transactions, GSGUK, GSI and GSIB have permission at the solo and consolidated levels to use the Internal Model Method (IMM). The models estimate Expected Exposures (EE) at various points in the future using risk factor simulations. The model parameters are derived from historical and implied market data using the most recent three-year period as well as a stressed three-year period. The models also estimate the Effective Expected Positive Exposure (EEPE) over the first year of the portfolio, which is the time-weighted average of non-declining positive credit exposure over the EE simulation. EAD is calculated by multiplying the EEPE by a standard regulatory factor of 1.4.

As GSGUK calculates the majority of its counterparty credit exposure under the IMM, the impacts of netting and collateral are integral to the calculation of the exposure. The exposures disclosed below are presented on a net and collateralised basis where there is a legally enforceable netting and collateral opinion. They do not include the effect of any credit protection purchased on counterparties.

## Pillar 3 Disclosures

**Advanced IRB Approach.** RWA are calculated by multiplying EAD by the counterparty's risk weight. In accordance with the AIRB approach, risk weights are a function of the counterparty's Probability of Default (PD), Loss Given Default (LGD) and the maturity of the trade or portfolio of trades. We also use internal ratings for risk management purposes.

- PD is an estimate of the probability that an obligor will default over a one-year horizon. For the majority of Wholesale exposures, the PD is assigned using an approach where quantitative factors are combined with a qualitative assessment to determine internal credit rating grades. For each internal credit rating grade, over 5 years of historical empirical data is used to calculate a long run average annual PD which is assigned to each counterparty with that credit rating grade.

Internal credit rating grades each have external public rating agency equivalents. The scale that is employed for internal credit ratings corresponds to that used by the major rating agencies and the internal credit ratings, while arrived at independently of public ratings, are assigned using definitions of each internal credit rating grade that are consistent with the definitions used by the major rating agencies for their equivalent credit rating grades. As a result, default data published by the major rating agencies for obligors with public ratings can be mapped to counterparties with equivalent internal credit ratings for use in quantification and validation of risk parameters.

- LGD is an estimate of the economic loss rate if a default occurs during economic downturn conditions. For Wholesale exposures, the LGD is determined using data from a recognised vendor model, from a downturn period, and are mapped to obligors based on attributes identified as being statistically significant to the ultimate recovery. LGD estimates for low default portfolios are calibrated using the same data, i.e. from corporate portfolios, which is deemed to be a conservative approach.
- The definition of maturity depends on the nature of the exposure. For OTC derivatives, maturity is an average time measure weighted by credit exposure (based on EE and EEPE) as required by the applicable capital regulation. For securities financing transactions, maturity represents the notional weighted average number of days to maturity. Maturity is floored at one year and capped at five years except where the rules allow a maturity of less than one year to be used as long as certain criteria are met.

## Governance and Validation of Risk Parameters

Approaches and methodologies for quantifying PD, LGD, and EAD are monitored and managed by Risk Engineering. Models used for regulatory capital are independently reviewed, validated and approved by Model Risk Management.

To assess the performance of the PD parameters used, on a quarterly basis the firm performs a backtesting exercise which includes comparisons of realised annual default rates to the expected annual default rates modelled for each credit rating band. Additional backtesting analysis is conducted to compare realised default rate and modelled PD at segmented level.

For 2022 (and 2023 year to date), as well as in previous annual periods, the PDs used for regulatory capital calculations were, on average, higher (i.e., more conservative) than the firm's actual internal realised default rate.

During the period, the total number of counterparty defaults was immaterial as a percentage of total population of counterparties and such defaults primarily occurred within loans and lending commitments. Estimated losses associated with counterparty defaults were not material.

To assess the performance of LGD parameters used, on an annual basis the firm compares recovery rates following counterparty defaults to the recovery rates based on LGD parameters assigned to the corresponding exposures prior to default. While the actual realised recovery on each defaulted exposure varies due to transaction and other situation-specific factors, on average, recovery rates continue to be higher than those implied by the LGD parameters used in regulatory capital calculations.

The performance of each IMM model used to quantify EAD is assessed quarterly via ongoing monitoring, where the IMM modelling assumptions, limitations and uncertainties are assessed, and via backtesting which compares the predicted and realised exposure of a set of representative trades and portfolios at certain horizons. The firm's models are monitored and enhanced in response to the outcome of these processes.

## Pillar 3 Disclosures

The following three tables present the methods used to calculate Counterparty Credit Risk RWAs and main parameters used within each method for GSGUK, GSI and GSIB as of December 31, 2022.

Table 6: Analysis of CCR Exposure by Approach

## GSGUK

\$ in millions		As of December 2022							
		Replacement cost (RC)	Potential future exposure (PFE)	EEPE	Alpha used for computing regulatory exposure value	Exposure value pre-CRM	Exposure value post-CRM	Exposure value	RWAs
1	SA-CCR (for derivatives)	\$ 5,620	\$ 5,061		1.4	\$ 16,329	\$ 12,262	\$ 12,262	\$ 10,473
2	IMM (for derivatives and SFTs)			\$ 80,590	1.4	\$ 2,036,173	\$ 122,212	\$ 122,212	\$ 65,109
2a	<i>Of which securities financing transactions netting sets</i>			38,221		1,945,514	53,113	53,113	16,645
2b	<i>Of which derivatives and long settlement transactions netting sets</i>			42,369		90,659	69,099	69,099	48,464
6	<b>Total</b>					\$ 2,052,502	\$ 134,474	\$ 134,474	\$ 75,582

## GSI

\$ in millions		As of December 2022							
		Replacement cost (RC)	Potential future exposure (PFE)	EEPE	Alpha used for computing regulatory exposure value	Exposure value pre-CRM	Exposure value post-CRM	Exposure value	RWAs
1	SA-CCR (for derivatives)	\$ 5,596	\$ 4,953		1.4	\$ 16,119	\$ 12,053	\$ 12,053	\$ 10,244
2	IMM (for derivatives and SFTs)			\$ 82,465	1.4	\$ 2,071,917	\$ 122,558	\$ 122,558	\$ 63,003
2a	<i>Of which securities financing transactions netting sets</i>			38,050		1,979,165	53,315	53,315	14,806
2b	<i>Of which derivatives and long settlement transactions netting sets</i>			44,415		92,752	69,243	69,243	48,197
6	<b>Total</b>					\$ 2,088,036	\$ 134,611	\$ 134,611	\$ 73,247

## GSIB

\$ in millions		As of December 2022							
		Replacement cost (RC)	Potential future exposure (PFE)	EEPE	Alpha used for computing regulatory exposure value	Exposure value pre-CRM	Exposure value post-CRM	Exposure value	RWAs
1	SA-CCR (for derivatives)	\$ 80	\$ 82		1.4	\$ 252	\$ 252	\$ 252	\$ 129
2	IMM (for derivatives and SFTs)			\$ 1,818	1.4	\$ 74,963	\$ 2,140	\$ 2,140	\$ 344
2a	<i>Of which securities financing transactions netting sets</i>			1,352		73,407	1,518	1,518	75
2b	<i>Of which derivatives and long settlement transactions netting sets</i>			466		1,556	622	622	269
6	<b>Total</b>					\$ 75,215	\$ 2,392	\$ 2,392	\$ 473



## Pillar 3 Disclosures

The following table presents GSGUK, GSI and GSIB's EAD after credit risk mitigation and RWAs on exposures to CCPs as of December 31, 2022.

Table 7: Exposures to CCPs

\$ in millions		Exposure value			As of December 2022		
		GSGUK	GSI	GSIB	RWA		
					GSGUK	GSI	GSIB
<b>1</b>	<b>Exposures to QCCPs (total)</b>				<b>\$ 786</b>	<b>\$ 786</b>	<b>\$ 0</b>
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	<b>\$ 10,999</b>	<b>\$ 10,999</b>	-	<b>\$ 220</b>	<b>\$ 220</b>	-
3	(i) OTC derivatives	7,864	7,864	-	157	157	-
4	(ii) Exchange-traded derivatives	2,390	2,390	-	48	48	-
5	(iii) SFTs	745	745	-	15	15	-
6	(iv) Netting sets where cross-product netting has been approved	-	-	-	-	-	-
7	Segregated initial margin	-	-	-			
8	Non-segregated initial margin	16,915	16,915	-	<b>\$ 338</b>	<b>\$ 338</b>	-
9	Prefunded default fund contributions	1,711	1,709	2	<b>\$ 228</b>	<b>\$ 228</b>	<b>\$ 0</b>
10	Unfunded default fund contributions	-	-	-	-	-	-
<b>11</b>	<b>Exposures to non-QCCPs (total)</b>				<b>\$ 107</b>	<b>\$ 107</b>	-
12	Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions); of which	-	-	-	-	-	-
13	(i) OTC derivatives	-	-	-	-	-	-
14	(ii) Exchange-traded derivatives	-	-	-	-	-	-
15	(iii) SFTs	-	-	-	-	-	-
16	(iv) Netting sets where cross-product netting has been approved	-	-	-	-	-	-
17	Segregated initial margin	-	-	-			
18	Non-segregated initial margin	107	107	-	107	107	-
19	Prefunded default fund contributions	-	-	-	-	-	-
20	Unfunded default fund contributions	-	-	-	-	-	-

The following table presents GSGUK, GSI and GSIB's exposures subject to CVA capital charges and corresponding RWAs as of December 31, 2022.

Table 8: Transactions subject to own funds requirements for CVA risk

\$ in millions		Exposure value			As of December 2022		
		GSGUK	GSI	GSIB	RWAs		
					GSGUK	GSI	GSIB
1	Total transactions subject to the Advanced method	<b>\$ 45,676</b>	<b>\$ 45,676</b>	-	<b>\$ 13,903</b>	<b>\$ 13,903</b>	-
2	(i) VaR component (including the 3x multiplier)				4,398	4,398	-
3	(ii) stressed VaR component (including the 3x multiplier)				9,505	9,505	-
4	Transactions subject to the Standardised method	<b>\$ 6,688</b>	<b>\$ 6,456</b>	<b>\$ 33</b>	<b>\$ 12,224</b>	<b>\$ 12,120</b>	<b>\$ 21</b>
UK4	Transactions subject to the Alternative approach (Based on the Original Exposure Method)	-	-	-	-	-	-
5	<b>Total transactions subject to own funds requirements for CVA risk</b>	<b>\$ 52,364</b>	<b>\$ 52,132</b>	<b>\$ 33</b>	<b>\$ 26,127</b>	<b>\$ 26,023</b>	<b>\$ 21</b>

**Pillar 3 Disclosures**

The following table presents a quarterly flow statement of the RWAs and Capital requirements under the IMM for GSGUK, GSI and GSIB as of December 31, 2022 and September 30, 2022.

**Table 9: RWA Flow Statements of CCR Exposures under the IMM\***

<i>\$ in millions</i>	<b>As of December 2022</b>		
	<b>RWA amounts</b>		
	<b>GSGUK</b>	<b>GSI</b>	<b>GSIB</b>
<b>1 RWA as at the end of the previous reporting period</b>	<b>\$ 71,226</b>	<b>\$ 70,774</b>	<b>\$ 453</b>
2 Asset size	(5,382)	(6,964)	(181)
3 Credit quality of counterparties	129	54	76
7 Foreign exchange movements	(866)	(863)	(3)
8 Other	2	3	(1)
<b>9 RWA as at the end of the current reporting period</b>	<b>\$ 65,109</b>	<b>\$ 63,004</b>	<b>\$ 344</b>

The following table presents a quarterly flow statement of the RWAs and Capital requirements under the IRB approach for GSGUK, GSI and GSIB as of December 31, 2022 and September 30, 2022.

**Table 10: RWA Flow Statements of Credit Risk Exposures under the IRB Approach\***

<i>\$ in millions</i>	<b>As of December 2022</b>		
	<b>RWA amounts</b>		
	<b>GSGUK</b>	<b>GSI</b>	<b>GSIB</b>
<b>1 Risk weighted exposure amount as at the end of the previous reporting period</b>	<b>\$ 32,874</b>	<b>\$ 22,754</b>	<b>\$ 11,143</b>
2 Asset size (+/-)	(7,328)	(6,038)	170
3 Asset quality (+/-)	146	10	137
7 Foreign exchange movements (+/-)	(185)	(185)	(1)
8 Other (+/-)	(69)	(44)	(1)
<b>9 Risk weighted exposure amount as at the end of the reporting period</b>	<b>\$ 25,438</b>	<b>\$ 16,497</b>	<b>\$ 11,448</b>

\* Refer Table 5 "Overview of RWAs" for the commentary between September 30, 2022 to December 31, 2022

**Pillar 3 Disclosures****Credit Risk Mitigation**

To reduce credit exposures on derivatives and securities financing transactions, we may enter into netting agreements with counterparties that permit the firm to offset receivables and payables with such counterparties. A netting agreement is a contract with a counterparty that permits net settlement of multiple transactions with that counterparty, including upon the exercise of termination rights by a non-defaulting party. Upon exercise of such termination rights, all transactions governed by the netting agreement are terminated and a net settlement amount is calculated.

We may also reduce credit risk with counterparties by entering into agreements that enable us to receive and post cash and securities collateral with respect to our derivatives and securities financing transactions, subject to the terms of the related credit support agreements or similar arrangements (collectively, credit support agreements). An enforceable credit support agreement grants the non-defaulting party exercising termination provisions the right to liquidate collateral and apply the proceeds to any amounts owed. In order to assess enforceability of our right to setoff under netting and credit support agreements, we evaluate various factors, including applicable bankruptcy laws, local statutes and regulatory provisions in the jurisdiction of the parties to the agreement. The collateral we hold consists primarily of cash and securities of high quality government bonds (mainly US and EU), subject to haircuts as deemed appropriate by the Credit Risk function. Credit Risk performs ongoing collateral monitoring, to ensure the firm maintains an appropriate quality and level of diversification of collateral, of collateral quality.

Our collateral is managed by certain functions within the firm which review exposure calculations, make margin calls with relevant counterparties, and ensure subsequent settlement of collateral movements. We monitor the fair value of the collateral on a daily basis to ensure that our credit exposures are appropriately collateralised.

As of December 2022, the aggregate amounts of additional collateral or termination payments related to our net derivative liabilities under bilateral agreements that could have been called by our counterparties in the event of a one- and two-notch downgrade of our credit ratings are \$132 million and \$568 million respectively for GSI, and immaterial for GSIB.

For additional information about the firm's derivatives (including collateral and the impact of the amount of collateral required in the event of a ratings downgrade), see

“Note 7. Derivatives and Hedging Activities” in Part II, Item 8 “Financial Statements and Supplementary Data” in the firm's 2022 Form 10-K. See “Note 11. Collateralized Agreements and Financings” in Part II, Item 8 “Financial Statements and Supplementary Data” in the firm's 2022 Form 10-K for further information about collateralised agreements and financings.

For loans and lending commitments, depending on the credit quality of the borrower and other characteristics of the transaction, we employ a variety of potential risk mitigants. Risk mitigants include collateral provisions, guarantees, covenants, structural seniority of the bank loan claims and, for certain lending commitments, provisions in the legal documentation that allow us to adjust loan amounts, pricing, structure and other terms as market conditions change. The type and structure of risk mitigants employed can significantly influence the degree of credit risk involved in a loan or lending commitment.

When we do not have sufficient visibility into a counterparty's financial strength or when we believe a counterparty requires support from its parent, we may obtain third-party guarantees of the counterparty's obligations. The main types of guarantors are sovereigns, certain supranational and multilateral development banks, banks and other financial institutions. We may also mitigate our credit risk using credit derivatives or participation agreements.

## Pillar 3 Disclosures

The following three tables presents the GSGUK, GSI and GSIB net carrying values secured by different CRM techniques as of December 31, 2022.

**Table 11: CRM techniques overview: Disclosure of the use of credit risk mitigation techniques**

**GSGUK**

\$ in millions						As of December 2022
		Unsecured carrying amount	Secured carrying amount			
				Of which secured by collateral	Of which secured by financial guarantees	
						Of which secured by credit derivatives
1	Loans and advances	\$ 106,022	\$ 266,559	\$ 266,559	-	-
2	Debt securities	\$ 2,574	-	-	-	-
<b>3</b>	<b>Total</b>	<b>\$ 108,596</b>	<b>\$ 266,559</b>	<b>\$ 266,559</b>	-	-
4	Of which non-performing exposures	87	34	34	-	-
5	Of which defaulted	87	34			

**GSI**

\$ in millions						As of December 2022
		Unsecured carrying amount	Secured carrying amount			
				Of which secured by collateral	Of which secured by financial guarantees	
						Of which secured by credit derivatives
1	Loans and advances	\$ 82,692	\$ 245,979	\$ 245,979	-	-
2	Debt securities	\$ 45	-	-	-	-
<b>3</b>	<b>Total</b>	<b>\$ 82,737</b>	<b>\$ 245,979</b>	<b>\$ 245,979</b>	-	-
4	Of which non-performing exposures	42	-	-	-	-
5	Of which defaulted	42	-			

**GSIB**

\$ in millions						As of December 2022
		Unsecured carrying amount	Secured carrying amount			
				Of which secured by collateral	Of which secured by financial guarantees	
						Of which secured by credit derivatives
1	Loans and advances	\$ 22,772	\$ 44,689	\$ 44,689	-	-
2	Debt securities	\$ 2,621	\$ 1,457	\$ 1,457	-	-
<b>3</b>	<b>Total</b>	<b>\$ 25,393</b>	<b>\$ 46,146</b>	<b>\$ 46,146</b>	-	-
4	Of which non-performing exposures	46	34	34	-	-
5	Of which defaulted	46	34			

## Pillar 3 Disclosures

The following table presents the impact of credit derivatives on the RWAs under the IRB approach for GSGUK, GSI and GSIB based on exposure class as of December 31, 2022.

**Table 12: IRB approach- Effect on the RWAs of credit derivatives used as CRM techniques**

\$ in millions	As of December 2022					
	Pre-credit derivatives RWAs			Actual RWAs		
	GSGUK	GSI	GSIB	GSGUK	GSI	GSIB
<b>Exposures under AIRB</b>	<b>\$ 25,438</b>	<b>\$ 16,497</b>	<b>\$ 11,794</b>	<b>\$ 25,438</b>	<b>\$ 16,497</b>	<b>\$ 11,448</b>
Central governments and central banks	1,411	630	782	1,411	630	782
Institutions	3,413	2,541	925	3,413	2,541	925
Corporates	20,614	13,326	10,087	20,614	13,326	9,741
<i>of Corporates - which SMEs</i>	-	-	-	-	-	-
<i>of which Corporates - Specialised lending</i>	-	-	-	-	-	-
<i>of which Corporates - Others</i>	20,614	13,326	10,087	20,614	13,326	9,741
Retail	-	-	-	-	-	-
<i>of which Retail - SMEs - Secured by immovable property collateral</i>	-	-	-	-	-	-
<i>of which Retail - non-SMEs - Secured by immovable property collateral</i>	-	-	-	-	-	-
<i>of which Retail - Qualifying revolving</i>	-	-	-	-	-	-
<i>of which Retail - SMEs - Other</i>	-	-	-	-	-	-
<i>of which Retail - Non-SMEs - Other</i>	-	-	-	-	-	-
<b>Total</b>	-	-	-	-	-	-

### Credit Derivatives

We enter into credit derivative transactions primarily to facilitate client activity and to manage the credit risk associated with market-making.

We also use credit derivatives to hedge counterparty exposure associated with investing and financing activities and to a lesser extent derivative exposure. Some of these hedges qualify as credit risk mitigants for regulatory capital purposes using the PD and LGD substitution approach (and subject to the regulatory haircuts for maturity and currency mismatch where applicable).

Where the aggregate notional of credit derivatives hedging

The following table presents GSGUK, GSI and GSIB exposure to credit derivatives based on notional and fair values as of December 31, 2022.

**Table 13: Credit Derivatives Exposures**

\$ in millions		As of December 2022					
		Protection bought			Protection sold		
		GSGUK	GSI	GSIB	GSGUK	GSI	GSIB
<b>Notionals</b>							
1	Single-name credit default swaps	\$ 339,398	\$ 337,601	\$ 3,023	\$ 326,397	\$ 327,348	\$ 21
2	Index credit default swaps	433,785	435,241	1,954	440,798	442,627	16
3	Total return swaps	4,496	4,496	-	248	248	-
4	Credit options	-	-	-	-	-	-
5	Other credit derivatives	125,191	124,145	1,525	106,600	106,653	86
6	<b>Total notionals</b>	<b>\$ 902,870</b>	<b>\$ 901,483</b>	<b>\$ 6,502</b>	<b>\$ 874,043</b>	<b>\$ 876,876</b>	<b>\$ 123</b>
<b>Fair values</b>							
7	Positive fair value (asset)	\$ 12,341	\$ 12,213	\$ 166	\$ 10,524	\$ 10,580	\$ 23
8	Negative fair value (liability)	\$ (11,302)	\$ (11,306)	\$ (76)	\$ (9,161)	\$ (9,182)	\$ (16)

**Pillar 3 Disclosures****Wrong-way Risk**

Wrong Way Risk arises when there is a significant positive correlation between the probability of default of a counterparty and our exposure to that counterparty (net of the market value of any collateral we receive). Wrong-way risk is commonly categorised into two types: specific wrong-way risk and general wrong-way risk. We categorise exposure as specific wrong-way risk when the counterparty and the issuer of the reference asset of the transaction are the same entity or are affiliates, or if the collateral supporting a transaction is issued by the counterparty or its affiliates. General wrong-way risk arises when there is a significant positive correlation between the probability of default of a counterparty and general market risk factors affecting the exposure to that counterparty. We have procedures in place to actively identify, monitor and control specific and general wrong-way risk, beginning at the inception of a transaction and continuing through its life, including assessing the level of risk through stress tests. We ensure that material wrong-way risk is mitigated using collateral agreements or increases to initial margin, where appropriate.

**Credit Valuation Adjustment Risk-Weighted Assets**

RWAs for CVA address the risk of losses related to changes in counterparty credit risk arising from OTC derivatives. We calculate RWAs for CVA primarily using the Advanced CVA approach set out in CRR, which permits the use of regulator approved VaR models. Consistent with our Regulatory VaR calculation (see “Market Risk” for further details), the CVA RWAs are calculated at a 99% confidence level over a 10-day time horizon.

The CVA RWAs also include a stressed CVA component, which is also calculated at a 99% confidence level over a 10-day horizon using both a Stressed VaR period and stressed EEs. The CVA VaR model estimates the impact on our credit valuation adjustments of changes to our counterparties’ credit spreads. It reflects eligible CVA hedges (as defined in CRR), but it excludes those hedges that, although used for risk-management purposes, are ineligible for inclusion in the regulatory CVA VaR model. Examples of such hedges are interest rate hedges, or those that do not reference the specific exposures they are intended to mitigate, but are nevertheless highly correlated to the underlying credit risk.

**Other Credit Risk-Weighted Assets**

Credit RWAs also include the following components:

**Cleared Transactions**

RWAs for cleared transactions and default fund contributions (defined as payments made by clearing members to central clearing agencies pursuant to mutualised loss arrangements) are calculated based on specific rules within CRR. A majority of our exposures on centrally cleared transactions are to counterparties that are considered to be Qualifying Central Counterparties (QCCPs) in accordance with the United Kingdom European Market Infrastructure Regulation (UK EMIR). Such exposures arise from OTC derivatives, exchange-traded derivatives, and securities financing transactions, which are required to be risk weighted at either 2% or 4% based on the specified criteria.

**Retail Exposures**

As of December 31, 2022, we have immaterial retail exposures (defined as residential mortgage exposures, qualifying revolving exposures, or other retail exposures that are managed as part of a segment of exposures with homogeneous risk characteristics, not on an individual exposure basis) subject to standardised risk weights.

**Other Assets**

Other assets primarily include property, leasehold improvements and equipment, deferred tax assets, and assets for which there is no defined capital methodology or that are not material. RWAs for other assets are generally based on the carrying value and are typically risk weighted at 100%.

**Equity Exposures in the Banking Book**

The firm makes investments, both directly and indirectly through funds that it manages, in public and private equity securities, as well as in debt securities and loans and real estate entities. The firm also enters into commitments to make such investments. These investments are typically longer-term in nature and are primarily held for capital appreciation purposes. Equity investments that are not consolidated are classified for regulatory capital purposes as banking book equity exposures. Equity exposures held in GSGUK’s banking book are included in the Credit RWAs within row 4a of Table 5 and were not material as of December 31, 2022.

**Pillar 3 Disclosures****Past due exposures, impaired exposures and impairment provisions**

Payments aged more than a threshold of 90 days on any material credit obligation to the company, 180 days on residential mortgage obligations or 120 days on other retail obligations are considered past due.

An exposure is considered impaired when it is probable that the borrower will be unable to pay all amounts due according to the contractual terms of the loan agreement. The firm's definition of unlikeliness to pay includes the distressed restructuring of an obligation, including bank loan obligations, that results in deferred or reduced payment to GS, whether or not counterparty is in bankruptcy, insolvency or local jurisdictional equivalent. It also includes situations where GS places an obligation on non-accrual or marks down a facility as a result of significant perceived decline in credit quality.

There are no instances for GSGUK, GSI or GSIB where past-due exposures are not considered to be impaired.

The allowance for impairment is determined using various risk factors, including industry default and loss data, current

macroeconomic indicators, borrower's capacity to meet its financial obligations, borrower's country of risk, loan seniority and collateral type. In addition, for loans backed by real estate, risk factors include loan to value ratio, debt service ratio and home price index. The firm also records an allowance for losses on lending commitments that are held for investment and accounted for on an accrual basis. Such allowance is determined using the same methodology as the allowance for impairment, while also taking into consideration the probability of drawdowns or funding, and is included in other liabilities and accrued expenses. Additionally, loans are charged off against the impairment provision when deemed to be uncollectible.

For information on GSGUK's methodology for calculating expected credit losses measured in accordance with the provisions of IFRS 9, see "Impairment" in "Notes to the Consolidated Financial Information" in GSGUK's 2022 Consolidated Financial Information.

## Securitisations

### Overview

CRR defines certain activities as securitisation transactions which attract capital requirements under the “Securitisation Framework.” A securitisation is defined as a transaction or scheme, whereby the credit risk associated with an exposure or pool of exposures is tranching, having both of the following characteristics:

- Payments in the transaction or scheme are dependent upon the performance of the exposure or pool of exposures; and
- The subordination of tranches determines the distribution of losses during the ongoing life of the transaction or scheme.

The rules also distinguish between traditional and synthetic securitisations, the primary difference being that a traditional securitisation involves the transfer of assets from a bank’s balance sheet into a securitisation vehicle, whereas a synthetic securitisation involves the transfer of credit risk through credit derivatives or guarantees.

Within the GSGUK group, we securitise commercial mortgages, loans and other types of financial assets by selling these assets to securitisation vehicles (e.g., trusts and special purpose vehicles). GSGUK acts as underwriter of the beneficial interests that are sold to investors.

Beneficial interests issued by securitisation entities are debt or equity securities that give the investors rights to receive all or portions of specified cash inflows to a securitisation vehicle and include senior and subordinated interests in principal, interest and/or other cash inflows. The proceeds from the sale of beneficial interests are used to pay the transferor for the financial assets sold to the securitisation vehicle or to purchase securities which serve as collateral.

A portion of our positions that meet the regulatory definition of a securitisation are classified in our trading book, and capital requirements for these positions are calculated under the market risk capital rules. However, we also have certain banking book positions that meet the regulatory definition of a securitisation.

We account for a securitisation as a sale when we have relinquished control over the transferred financial assets. Prior to securitisation, we account for assets pending transfer at fair value and therefore do not typically recognise significant gains or losses upon the transfer of assets. GSGUK did not, as of December 31, 2022 have material assets held with the intent

to securitise.

Liquidity risk associated with securitisations is consistently managed as part of the firm’s overall liquidity risk management framework.

### Banking Book Activity

Securitisation exposures in the banking book within the GSGUK group that meet the regulatory definition of a securitisation fall into the following categories:

- **Warehouse Financing and Lending.** We provide financing to clients who warehouse financial assets. These arrangements are secured by the warehoused assets, primarily consisting of corporate loans and asset-backed and other loans.
- **Other.** We have certain other banking book securitisation activities such as holding securities issued by securitisation vehicles.

By engaging in the banking book securitisation activities noted above, we are primarily exposed to credit risk and to the performance of the underlying assets.

### Trading Book Activity

Our securitisation exposures classified as trading book comprise mortgage-backed securities (MBS) and other asset-backed securities (ABS), derivatives referencing MBS or ABS, or derivatives referencing indices of MBS or ABS, which are held in inventory. The population also includes credit correlation positions, which are discussed in the “Comprehensive Risk” section of the “Market Risk Management” chapter.

The primary risks included in beneficial interests and other interests from our involvement with securitisation vehicles are the performance of the underlying collateral, the position of our investment in the capital structure of the securitisation vehicle and the market yield for the security. These interests are accounted for at fair value and are incorporated into the overall risk management approach for financial instruments. For a detailed discussion of the firm’s risk management process and practices, see “Risk Management – Market Risk Management” and “Risk Management – Credit Risk Management” in Part II, Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the firm’s 2022 Form 10-K.



**Calculation of Risk-Weighted Assets**

The securitisation framework operates under a hierarchy of approaches which consists of three primary methods, the SEC-IRBA (Internal Ratings Based Approach), SEC-SA (Standardised Approach), and SEC-ERBA (External Ratings Based Approach). The External Credit Assessment Institutions (ECAIs) used for the SEC-ERBA are Standard & Poor's Ratings Services (S&P), Moody's Investors Service (Moody's) and Fitch, Inc. (Fitch) for all types of exposures. For trading and banking book positions we follow the hierarchy of RWA approaches. In the trading book only the correlation trading portfolio has approval to use SEC-IRBA.

The RWAs for securitisation positions are calculated by multiplying the exposure amount by the specific risk-weighting factors assigned. The exposure amount is defined as the carrying value for securities, or the market value of the effective notional of the instrument or indices underlying derivative positions. The securitisation capital requirements are capped at the maximum loss that could be incurred on any given transaction.

## Pillar 3 Disclosures

The following tables shows our securitisation exposures in the non-trading book by type of exposure for GSGUK and GSIB as of December 31, 2022.

**Table 14: Securitisation exposures in the non-trading book**

**GSGUK**

\$ in millions		Institution acts as originator						Institution acts as sponsor				As of December 2022			
		Traditional			Synthetic			Traditional		Synthetic	Sub-total	Traditional		Synthetic	Sub-total
		STS	Non-STS		of which SRT	Sub-total	STS	Non-STS	STS			Non-STS	STS		
		of which SRT	of which SRT												
1	<b>Total exposures</b>	-	\$ 113	\$ 113	-	\$ 113	-	-	-	-	-	\$ 762	-	\$ 762	
2	<b>Retail (total)</b>	-	\$ 109	\$ 109	-	\$ 109	-	-	-	-	\$ 543	-	\$ 543		
3	residential mortgage	-	109	109	-	109	-	-	-	-	146	-	146		
4	credit card	-	-	-	-	-	-	-	-	-	-	-	-		
5	other retail exposures	-	-	-	-	-	-	-	-	-	397	-	397		
6	re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-		
7	<b>Wholesale (total)</b>	-	\$ 4	\$ 4	-	\$ 4	-	-	-	-	\$ 219	-	\$ 219		
8	loans to corporates	-	-	-	-	-	-	-	-	-	89	-	89		
9	commercial mortgage	-	4	4	-	4	-	-	-	-	60	-	60		
10	lease and receivables	-	-	-	-	-	-	-	-	-	70	-	70		
11	other wholesale	-	-	-	-	-	-	-	-	-	-	-	-		
12	re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-		

**GSIB**

\$ in millions		Institution acts as originator						Institution acts as sponsor				As of December 2022			
		Traditional			Synthetic			Traditional		Synthetic	Sub-total	Traditional		Synthetic	Sub-total
		STS	Non-STS		of which SRT	Sub-total	STS	Non-STS	STS			Non-STS	STS		
		of which SRT	of which SRT												
1	<b>Total exposures</b>	-	\$ 47	\$ 47	-	\$ 47	-	-	-	-	-	\$ 762	-	\$ 762	
2	<b>Retail (total)</b>	-	\$ 43	\$ 43	-	\$ 43	-	-	-	-	\$ 543	-	\$ 543		
3	residential mortgage	-	43	43	-	43	-	-	-	-	146	-	146		
4	credit card	-	-	-	-	-	-	-	-	-	-	-	-		
5	other retail exposures	-	-	-	-	-	-	-	-	-	397	-	397		
6	re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-		
7	<b>Wholesale (total)</b>	-	\$ 4	\$ 4	-	\$ 4	-	-	-	-	\$ 219	-	\$ 219		
8	loans to corporates	-	-	-	-	-	-	-	-	-	89	-	89		
9	commercial mortgage	-	4	4	-	4	-	-	-	-	60	-	60		
10	lease and receivables	-	-	-	-	-	-	-	-	-	70	-	70		
11	other wholesale	-	-	-	-	-	-	-	-	-	-	-	-		
12	re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-		

## Pillar 3 Disclosures

The following tables show our securitisation exposures in the trading book by type of exposure for GSGUK and GSI as of December 31, 2022.

**Table 15: Securitisation exposures in the trading book**

**GSGUK**

\$ in millions		Institution acts as originator							Institution acts as sponsor				As of December 2022			
		Traditional			Synthetic		Sub-total	Traditional		Synthetic	Sub-total	Traditional		Synthetic	Sub-total	
		STS of which SRT	Non-STS of which SRT		of which SRT	STS		Non-STS	STS			Non-STS	STS			Non-STS
1	<b>Total exposures</b>	-	-	-	-	-	-	-	-	-	-	-	\$ 1,228	\$ 19,702	\$ 20,930	
2	<b>Retail (total)</b>	-	-	-	-	-	-	-	-	-	-	-	\$ 108	-	\$ 108	
3	residential mortgage	-	-	-	-	-	-	-	-	-	-	-	108	-	108	
4	credit card	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5	other retail exposures	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6	re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7	<b>Wholesale (total)</b>	-	-	-	-	-	-	-	-	-	-	-	\$ 1,120	\$ 19,702	\$ 20,822	
8	loans to corporates	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9	commercial mortgage	-	-	-	-	-	-	-	-	-	-	-	290	-	290	
10	lease and receivables	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11	other wholesale	-	-	-	-	-	-	-	-	-	-	-	830	19,702	20,532	
12	re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**GSI**

\$ in millions		Institution acts as originator							Institution acts as sponsor				As of December 2022			
		Traditional			Synthetic		Sub-total	Traditional		Synthetic	Sub-total	Traditional		Synthetic	Sub-total	
		STS of which SRT	Non-STS of which SRT		of which SRT	STS		Non-STS	STS			Non-STS	STS			Non-STS
1	<b>Total exposures</b>	-	-	-	-	-	-	-	-	-	-	-	\$ 1,228	\$ 19,702	\$ 20,930	
2	<b>Retail (total)</b>	-	-	-	-	-	-	-	-	-	-	-	\$ 108	-	\$ 108	
3	residential mortgage	-	-	-	-	-	-	-	-	-	-	-	108	-	108	
4	credit card	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5	other retail exposures	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6	re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7	<b>Wholesale (total)</b>	-	-	-	-	-	-	-	-	-	-	-	\$ 1,120	\$ 19,702	\$ 20,822	
8	loans to corporates	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
9	commercial mortgage	-	-	-	-	-	-	-	-	-	-	-	290	-	290	
10	lease and receivables	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11	other wholesale	-	-	-	-	-	-	-	-	-	-	-	830	19,702	20,532	
12	re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

## Market Risk

### Overview

Market risk is the risk of loss in the value of inventory, investments, loans and other financial assets and liabilities accounted for at fair value, due to changes in market conditions. 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, petroleum products, natural gas, electricity, and precious and base metals.

Market Risk, which is independent of the revenue-producing units and reports to the firm's Chief Risk Officer, has primary responsibility for assessing, monitoring and managing market risk through firmwide oversight across global businesses. GSGUK's framework for managing market risk is consistent with and part of GS Group's framework

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 limits. These managers have in-depth knowledge of their positions, markets and the instruments available to hedge their exposures.

### Market Risk Management Process

The firm's process for managing market risk includes the critical components of the risk management framework described in the "Risk Management – Overview and Structure of Risk Management" in Part I, Item 2 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the firm's 2022 Form 10-K, as well as the following:

- Monitoring compliance with established market risk limits and reporting our exposures;
- Diversifying exposures;

- Controlling position sizes; and
- Evaluating mitigants, such as economic hedges in related securities or derivatives.

Market Risk 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 product, business and firmwide levels. For further information about the firm's market risk measures and risk limits, see "Risk Management – Market Risk Management" in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the firm's 2022 Form 10-K.

### Market Risk-Weighted Assets

Trading book positions are subject to market risk capital requirements which are designed to cover the risk of loss in value of these positions due to changes in market conditions. These capital requirements are determined either by applying prescribed risk weighting factors, in accordance with the standardised approach, or they are based on internal models which are subject to various qualitative and quantitative parameters. The CRR of the PRA Rulebook requires that the company obtains prior written permission from its regulators before using any internal model to calculate its risk-based capital requirement. GSI has permission to calculate capital requirements using internal models, while GSIB and other entities within the U.K. group calculate capital requirements using the standardised approach. GSGUK consolidated requirements are calculated based on the requirements and the approach used within each subsidiary.

For positions captured by GSI's model permission, the capital requirements for market risk are calculated using the following internal models: Value-at-Risk (VaR), Stressed VaR (SVaR), Incremental Risk Charge (IRC), and Comprehensive Risk Measure (CRM), which for PRA purposes is called the All Price Risk Measure (APRM) and is subject to a floor. In addition, Standardised Rules, in accordance with Title IV of Part Three of CRR, are used to calculate capital requirements for market risk for certain securitised and non-securitised positions by applying risk-weighting factors predetermined by regulators, to positions after applicable netting is performed. RWA for market risk are the sum of each of these measures multiplied by 12.5. An overview of each of these measures is provided below.

**Pillar 3 Disclosures****Regulatory VaR**

VaR is the potential loss in value of trading assets and liabilities, as well as certain investments, loans, and other financial assets and liabilities accounted for at fair value, due to adverse market movements over a defined time horizon with a specified confidence level. For both risk management purposes (positions subject to VaR limits) and regulatory capital calculations, the firm uses a single VaR model which captures risks, including those related to interest rates, equity prices, currency rates and commodity prices. As such, VaR facilitates comparison across portfolios of different risk characteristics. VaR also captures the diversification of aggregated risk at the firmwide level.

VaR used for risk management purposes differs from VaR used for regulatory capital requirements (Regulatory VaR) due to differences in time horizons, confidence levels and the scope of positions on which VaR is calculated. For risk management purposes, a 95% one-day VaR is used, whereas for regulatory capital requirements, a 99% 10-day VaR is used to determine Market RWAs and a 99% one-day VaR is used to determine Regulatory VaR exceptions. The 10-day VaR is based on scaling the 1-day VaR by the square root of 10. Moreover, Regulatory VaR is multiplied by a scaler to obtain an effective observation period of at least one year as per CRR market risk regulatory capital requirements.

VaR is calculated daily using historical simulations with full valuation of market factors, capturing both general and specific market risk. VaR is calculated at a positional level based on simultaneously shocking the relevant market risk factors for that position, using a mix of absolute and relative returns. We sample from five years of historical data to generate the scenarios for our VaR calculation. The historical data is weighted so that the relative importance of data reduces over time. This gives greater importance to more recent observations and reflects current asset volatilities.

In accordance with the CRR market risk regulatory capital requirements, we evaluate the accuracy of our Regulatory VaR model through daily backtesting. The results of the backtesting determine the size of the Regulatory VaR multiplier used to compute RWAs.

Table 16 presents our period end, maximum, minimum and average daily GSGUK and GSI 99% 10-day Regulatory VaR over the six-month period ended December 2022.

**Stressed VaR**

SVaR is the potential loss in value of trading assets and liabilities, as well as certain investments, loans, and other

financial assets and liabilities accounted for at fair value, during a period of significant market stress. SVaR is based on a full valuation at a 99% confidence level over a 10-day horizon using market data inputs from a continuous 12-month period of stress. The 10-day SVaR is calculated as the 1-day SVaR scaled by the square root of 10. We identify the stressed period by comparing VaR using market data inputs from different historical periods.

Table 16 presents our period end, maximum, minimum and average weekly GSGUK and GSI 99% 10-day SVaR over the six-month period ended December 2022.

**Incremental Risk**

Incremental risk is the potential loss in value of non-securitised positions due to the default or credit migration of issuers of financial instruments over a one-year time horizon. As required by the CRR market risk regulatory capital rules, this measure is calculated at a 99.9% confidence level over a one-year time horizon. The model is based on the assumption of a constant level of risk. The model uses a multifactor approach to simulate correlated rating migration and default events, and takes into account various characteristics, including region, industry, basis between different products, credit quality and maturity of the debt. The liquidity horizons are determined based on the speed at which issuer exposures can be reduced by hedging or unwinding, given our experience during a historical stress period, and the prescribed regulatory minimum. The average liquidity horizon for GSI as of December 2022 was 3 months.

Table 16 presents our period end, maximum, minimum and average of the weekly GSGUK and GSI Incremental Risk measure over the six-month period ended December 2022.

**Comprehensive Risk**

Comprehensive risk is the potential loss in value, due to price risk and defaults, within credit correlation positions. A credit correlation position is defined as a securitisation position for which all or substantially all of the value of the underlying exposure is based on the credit quality of the issuer for which a two-way market exists, or indices based on such exposures for which a two-way market exists, or hedges of these positions.

As required under the CRR market risk capital rules, the Comprehensive Risk Measure comprises a model-based measure, which is subject to a floor based on the minimum capital requirement of 8% of RWA calculated under the standard rules for the portfolio. The model-based measure is calculated at a 99.9% confidence level over a one-year time

## Pillar 3 Disclosures

horizon applying a constant level of risk. The model comprehensively covers price risks including nonlinear price effects and takes into account contractual structure of cash flows, the effect of multiple defaults, credit spread risk, volatility of implied correlation, recovery rate volatility and basis risk. The liquidity horizon is based upon our experience during a historical stress period, subject to the prescribed regulatory minimum.

Table 16 presents the period end, maximum, minimum and average of the GSGUK and GSI Comprehensive Risk Measure for the over the six-month period ended December 2022.

Table 16: IMA Values for Trading Portfolios

\$ in millions		As of December 2022	
		GSGUK	GSI
<b>VaR (10 day 99%)</b>			
1	Maximum value	372	372
2	Average value	214	214
3	Minimum value	158	158
4	Period end	200	200
<b>SVaR (10 day 99%)</b>			
5	Maximum value	494	494
6	Average value	391	391
7	Minimum value	323	323
8	Period end	323	323
<b>IRC (99.9%)</b>			
9	Maximum value	527	527
10	Average value	371	371
11	Minimum value	236	236
12	Period end	236	236
<b>Comprehensive risk measure (99.9%)</b>			
13	Maximum value	357	357
14	Average value	263	263
15	Minimum value	178	178
16	Period end	234	234

Table 17: Market Risk under the internal Model Approach (IMA)

The table below presents the capital requirements and RWA under the IMA for Market Risk as of December 31, 2022.

\$ in millions		As of December 2022			
		RWAs		Capital requirements	
		GSGUK	GSI	GSGUK	GSI
<b>1</b>	<b>VaR (higher of values a and b)</b>	<b>7,248</b>	<b>7,248</b>	<b>580</b>	<b>580</b>
(a)	Previous day's VaR (VaRt-1)			200	200
(b)	Multiplication factor (mc) x average of previous 60 working days (VaRavg)			580	580
<b>2</b>	<b>SVaR (higher of values a and b)</b>	<b>14,165</b>	<b>14,165</b>	<b>1,133</b>	<b>1,133</b>
(a)	Latest available SVaR (SVaRt-1)			323	323
(b)	Multiplication factor (ms) x average of previous 60 working days (sVaRavg)			1,133	1,133
<b>3</b>	<b>IRC (higher of values a and b)</b>	<b>3,709</b>	<b>3,709</b>	<b>297</b>	<b>297</b>
(a)	Most recent IRC measure			236	236
(b)	12 weeks average IRC measure			297	297
<b>4</b>	<b>Comprehensive risk measure (higher of values a, b and c)</b>	<b>3,213</b>	<b>3,213</b>	<b>257</b>	<b>257</b>
(a)	Most recent risk measure of comprehensive risk measure			234	234
(b)	12 weeks average of comprehensive risk measure			257	257
(c)	Comprehensive risk measure Floor			99	99
<b>5</b>	<b>Other</b>	<b>10,290</b>	<b>10,290</b>	<b>823</b>	<b>823</b>
<b>6</b>	<b>Total</b>	<b>\$ 38,625</b>	<b>\$ 38,625</b>	<b>\$ 3,090</b>	<b>\$ 3,090</b>

## Pillar 3 Disclosures

Table 18: RWA Flow Statements of Market Risk Exposures under the IMA

## GSGUK

<i>\$ in millions</i>		As of December 2022						
		VaR	SVaR	IRC	Comprehensive risk measure	Other	Total RWAs	Total capital requirements
<b>1</b>	<b>RWAs at previous quarter end</b>	<b>\$ 8,592</b>	<b>\$ 15,225</b>	<b>\$ 5,421</b>	<b>\$ 3,583</b>	<b>\$ 12,277</b>	<b>\$ 45,097</b>	<b>\$ 3,608</b>
<i>1a</i>	<i>Regulatory adjustment</i>	(6,040)	(9,605)	(292)	-	(6,006)	(21,941)	(1,755)
<b>1b</b>	<b>RWAs at the previous quarter-end</b>	<b>2,552</b>	<b>5,620</b>	<b>5,129</b>	<b>3,583</b>	<b>6,271</b>	<b>23,156</b>	<b>1,853</b>
<b>2</b>	<b>Movement in risk levels</b>	<b>(55)</b>	<b>(1,599)</b>	<b>(2,174)</b>	<b>(653)</b>	<b>245</b>	<b>(4,240)</b>	<b>(340)</b>
<b>3</b>	<b>Model updates/changes</b>	<b>1</b>	<b>21</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>23</b>	<b>2</b>
<b>8a</b>	<b>RWAs at the end of the reporting period</b>	<b>2,498</b>	<b>4,042</b>	<b>2,955</b>	<b>2,930</b>	<b>6,516</b>	<b>18,939</b>	<b>1,515</b>
<i>8b</i>	<i>Regulatory adjustment</i>	4,750	10,123	754	283	3,774	19,686	1,575
<b>8</b>	<b>RWAs at the end of the reporting period</b>	<b>\$ 7,248</b>	<b>\$ 14,165</b>	<b>\$ 3,709</b>	<b>\$ 3,213</b>	<b>\$ 10,290</b>	<b>\$ 38,625</b>	<b>\$ 3,090</b>

## GSI

<i>\$ in millions</i>		As of December 2022						
		VaR	SVaR	IRC	Comprehensive risk measure	Other	Total RWAs	Total capital requirements
<b>1</b>	<b>RWAs at previous quarter end</b>	<b>\$ 8,592</b>	<b>\$ 15,225</b>	<b>\$ 5,421</b>	<b>\$ 3,583</b>	<b>\$ 12,277</b>	<b>\$ 45,097</b>	<b>\$ 3,608</b>
<i>1a</i>	<i>Regulatory adjustment</i>	(6,040)	(9,605)	(292)	-	(6,006)	(21,941)	(1,755)
<b>1b</b>	<b>RWAs at the previous quarter-end</b>	<b>2,552</b>	<b>5,620</b>	<b>5,129</b>	<b>3,583</b>	<b>6,271</b>	<b>23,156</b>	<b>1,853</b>
<b>2</b>	<b>Movement in risk levels</b>	<b>(55)</b>	<b>(1,599)</b>	<b>(2,174)</b>	<b>(653)</b>	<b>245</b>	<b>(4,240)</b>	<b>(340)</b>
<b>3</b>	<b>Model updates/changes</b>	<b>1</b>	<b>21</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>23</b>	<b>2</b>
<b>8a</b>	<b>RWAs at the end of the reporting period</b>	<b>2,498</b>	<b>4,042</b>	<b>2,955</b>	<b>2,930</b>	<b>6,516</b>	<b>18,939</b>	<b>1,515</b>
<i>8b</i>	<i>Regulatory adjustment</i>	4,750	10,123	754	283	3,774	19,686	1,575
<b>8</b>	<b>RWAs at the end of the reporting period</b>	<b>\$ 7,248</b>	<b>\$ 14,165</b>	<b>\$ 3,709</b>	<b>\$ 3,213</b>	<b>\$ 10,290</b>	<b>\$ 38,625</b>	<b>\$ 3,090</b>

Movement in risk levels (line 2 in the Table 18) decreased by \$4.2bn comprising exposure changes impacting IRC (-\$2.2bn) driven by decreased exposure to sovereigns and equities and SVaR (-\$1.6bn) driven by decreased exposure to currencies and equities.

**Model Review and Validation**

The models discussed above, which are used to determine Regulatory VaR, SVaR, Incremental risk and Comprehensive risk, are independently reviewed, validated and approved by Model Risk Management.

These models are regularly reviewed and enhanced in order to incorporate changes in the composition of positions included in market risk measures, as well as variations in market conditions. Prior to implementation in production, any changes to those models are subject to validation and approval by Model Risk Management.

**Regulatory VaR Backtesting Results**

As required by the CRR market risk capital rules, we validate the accuracy of our Regulatory VaR models by backtesting the output of such models against daily loss results. The number of exceptions (that is, the higher of the number of overshootings based on comparing the positional or actual losses to the corresponding 99% one-day Regulatory VaR) over the most recent 250 business days is used to determine the size of the VaR multiplier, which could increase from a minimum of three to a maximum of four, depending on the number of exceptions.

As defined in the CRR market risk capital rules, hypothetical net revenues for any given day represent the impact of that day’s price variation on the value of positions held at the close of business the previous day. As a consequence, these results exclude certain revenues associated with market-making businesses, such as bid/offer net revenues, which are more likely than not to be positive by their nature. In addition, hypothetical net revenues used in our Regulatory VaR backtesting relate only to positions which are included in Regulatory VaR and, as noted above, differ from positions included in our risk management VaR. This measure of hypothetical net revenues is used to evaluate the performance of the Regulatory VaR model and is not comparable to our actual daily net revenues. See “Risk Management — Market Risk Management” in Part II, Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the firm’s 2022 Form 10-K.

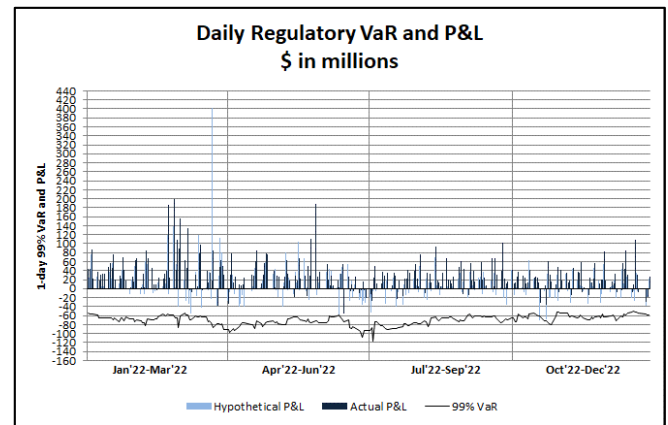
GSI hypothetical losses observed on a single day exceeded our 99% one-day Regulatory VaR once during the twelve months preceding December 2022. The exceedance occurred in Oct’22 driven by large interest rates moves. GSI actual losses observed on a single day did not exceed our 99% one-day Regulatory VaR during the twelve months preceding December 2022. Note that, although a one-day time horizon is used for backtesting purposes, a 10-day time horizon is

used, as described earlier, to determine RWAs associated with Regulatory VaR.

The tables below present our 99% one-day Regulatory VaR and hypothetical and actual PnL during the previous twelve months.

**Table 19: Comparison of VaR estimates with gains/losses**

GSI



The table below summarizes the number of reported excesses for GSI for the previous twelve months.

	Number of reported excesses		
	Multiplier	Hypothetical	Actual
<b>Entity Level</b>			
Goldman Sachs International	3.00	1.00	0.00



**Pillar 3 Disclosures****Stress Testing**

Stress testing is a method of determining the effect of various hypothetical stress scenarios on the firm and GSI and GSIB individually. Stress testing is used to examine risks of specific portfolios as well as the potential impact of significant risk exposures across GSI and GSIB. A variety of stress testing techniques is used to calculate the potential loss from a wide range of market moves on portfolios, including firmwide stress tests, sensitivity analysis and scenario analysis.

For a detailed description of the firm's stress testing practices, see "Risk Management – Market Risk Management – Risk Measures – Stress Testing" in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the firm's 2022 10-K.

The table below presents the components of own funds requirements under the standardised approach as of December 31, 2022.

**Table 20: Market Risk under the Standardised Approach**

<i>\$ in millions</i>		<b>As of December 2022</b>		
		<b>RWAs</b>		
		<b>GSGUK</b>	<b>GSI</b>	<b>GSIB</b>
<b>Outright products</b>				
1	Interest rate risk (general and specific)	\$ 35,604	\$ 34,018	\$ 1,586
2	Equity risk (general and specific)	5,684	5,621	63
3	Foreign exchange risk	4,928	4,487	378
4	Commodity risk	1,945	1,035	-
<b>Options</b>				
5	Simplified Approach	-	-	-
6	Delta-plus method	9	9	-
7	Scenario approach	1,504	1,473	31
8	Securitisation (specific risk)	5,220	5,220	-
<b>9</b>	<b>Total</b>	<b>\$ 54,894</b>	<b>\$ 51,863</b>	<b>\$ 2,058</b>

## Pillar 3 Disclosures

## Interest Rate Sensitivity

GSGUK's exposure to interest rate risk in the banking book (IRRBB) arises from changes in the present value of assets and liabilities as interest rates change, as well as differences in interest earned or paid due to the reset characteristics of our assets and liabilities. Changes in market interest rates on banking book assets and liabilities can have an adverse effect on our earnings and economic value.

GSGUK periodically evaluate the sensitivity to changes in interest rates across a range of interest rate scenarios, including parallel rally and sell-off scenarios, using different methodologies such as Net Interest Income (NII) and Economic Value of Equity (EVE) sensitivity analysis. NII sensitivity measures the impacts of changes in rates on the accrued interest of assets and liabilities over a defined time horizon, including hedges. EVE sensitivity measures the impacts of changes in rates on the change in the present value of banking book assets and liabilities, including hedges.

The GSI and GSIB Asset and Liability Committee and GSI and GSIB Risk Committees are the primary oversight bodies

responsible for reviewing and managing IRRBB and overseeing the strategic implementation of risk management activities.

The tables below show the changes in GSGUK, GSI, and GSIB's EVE and NII sensitivities under the supervisory scenarios and guidance defined by the PRA. The down shocks incorporate the post shock floors specified by the PRA guidance and EVE shocks incorporate the currency specific haircuts on net gains. In GSIB, the EVE sensitivity maximum loss has remained largely flat compared to the prior period. GSIB NII sensitivity is more symmetric across parallel up and down shocks as of December 2022, compared to the sensitivity as of June 2022 primarily as a result of the higher level of interest rates. As of December 2022, we assume non-maturing deposits balances have a weighted-average repricing duration of less than 1 year. Additionally, we assume balances attrite over a term of 7 years for EVE sensitivities.

**Table 21: Interest Rate Risks of non-trading book activities**

## GSGUK

<i>\$ in millions</i>			As of December 2022
In reporting currency	Change in economic value of equity	Change in net interest income*	Tier 1 capital
Parallel shock up	115	514	
Parallel shock down	(325)	(546)	
Steeper shock	(140)		
Flattener shock	58		
Shock rates shock up	119		
Shock rates shock down	(285)		
<b>Maximum</b>	<b>\$ (325)</b>	<b>\$ (546)</b>	
<b>Tier 1 Capital</b>			<b>\$ 44,970</b>

## GSI

<i>\$ in millions</i>			As of December 2022
In reporting currency	Change in economic value of equity	Change in net interest income*	Tier 1 capital
Parallel shock up	17	487	
Parallel shock down	(77)	(521)	
Steeper shock	(116)		
Flattener shock	67		
Shock rates shock up	76		
Shock rates shock down	(152)		
<b>Maximum</b>	<b>\$ (152)</b>	<b>\$ (521)</b>	
<b>Tier 1 Capital</b>			<b>\$ 40,080</b>

**Pillar 3 Disclosures****GSIB**

<i>\$ in millions</i>						
<b>In reporting currency</b>	<b>Change in economic value of equity</b>		<b>Change in net interest income*</b>		<b>Tier 1 capital</b>	
<b>Period</b>	<b>Dec-2022</b>	<b>Jun-2022</b>	<b>Dec-2022</b>	<b>Jun-2022</b>	<b>Dec-2022</b>	<b>Jun-2022</b>
Parallel shock up	96	19	75	67		
Parallel shock down	(246)	(260)	(63)	30		
Steeper shock	(28)	(46)				
Flattener shock	(12)	(76)				
Short rates shock up	43	4				
Short rates shock down	(132)	(150)				
<b>Maximum</b>	<b>\$ (246)</b>	<b>\$ (260)</b>	(63)	N/A		
<b>Tier 1 capital</b>					<b>\$ 3,409</b>	<b>\$ 3,272</b>

\*Projected NII sensitivity over the next 12 months uses a static(constant) balance sheet assumption

## Operational Risk

### Overview

Operational risk is the risk of an adverse outcome resulting from inadequate or failed internal processes, people, systems or from external events. The firm's 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 the firm's revenue-producing units and reports to the firm'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 firm's exposure to operational risk at levels that are within its risk appetite. GSGUK's framework for managing operational risk is consistent with and part of GS Group's framework

### Operational Risk Management Process

The firm's process for managing operational risk includes the critical components of the risk management framework described in "Risk Management – Overview and Structure of Risk Management" in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the firm's 2022 Form 10-K, including a comprehensive data collection process, as well as firmwide policies and procedures, for operational risk events.

The firm combines top-down and bottom-up approaches to manage and measure operational risk. From a top-down perspective, senior management assesses firmwide as well as entity and business-level operational risk profiles, as appropriate. 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 firm maintains a comprehensive control framework designed to provide a well-controlled environment to minimise operational risks. The EMEA Operational Risk and Resilience Committee is responsible for overseeing the company's operational risk, and for ensuring the operational resilience of the company's business.

The firm's operational risk management framework is designed to comply with the operational risk measurement rules under the Capital Framework and has evolved based on the changing needs of the firm's businesses and regulatory guidance.

The firm has established policies that require all employees to report and escalate operational risk events. When operational risk events are identified, the policies require 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.

The firm uses operational risk management applications to capture, analyse, aggregate and report operational risk event data and key metrics. One of the key risk identification and assessment tools is an operational risk and control self-assessment process, which is performed by the firm's managers. This process consists of the identification and rating of operational risks, on a forward-looking basis, and the related controls. The results from this process are analysed to evaluate operational risk exposures and identify businesses, activities or products with heightened levels of operational risk.

**Pillar 3 Disclosures****Risk Measurement**

The firm measures operational risk exposure using both statistical modelling and scenario analyses, which involves qualitative and quantitative assessments of internal and external operational risk event data and internal control factors for each of our businesses. Operational risk measurement also incorporates an assessment of business environment factors, including:

- Evaluations of the complexity of business activities;
- The degree of automation in our processes;
- New activity information;
- The legal and regulatory environment; and
- Changes in the markets for our products and services, including the diversity and sophistication of our customers and counterparties.

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.

**Model Review and Validation**

The models used to measure operational risk exposure are independently reviewed, validated and approved by Model Risk. See “Model Risk” for further informations.

**Capital Requirements**

The consolidated operational risk capital requirements for GSGUK, GSI and GSIB are calculated under the Standardised Approach in accordance with the CRR.

**Table 22: Operational Risk Capital Requirement**

\$ in millions	As of December 2022		
	GSGUK	GSI	GSIB
<b>Standardised Approach</b>	<b>\$ 2,005</b>	<b>\$ 1,838</b>	<b>\$ 67</b>

**Table 23: Operational Risk own funds requirements and risk weighted amounts****GSGUK**

	Banking activities	Relevant indicator			Own funds requirements	Risk weighted amount
		Year-3	Year-2	Last year		
		\$ in millions				
1	Banking activities subject to basic indicator approach (BIA)	-	-	-	-	-
2	Banking activities subject to standardised (TSA) / alternative standardised (ASA) approaches	\$ 11,710	\$ 12,330	\$ 11,152	\$ 2,005	\$ 25,066
3	<u>Subject to TSA:</u>	11,710	12,330	11,152		
4	<u>Subject to ASA:</u>	-	-	-		
5	Banking activities subject to advanced measurement approaches AMA	-	-	-	-	-

## Pillar 3 Disclosures

## GSI

<i>\$ in millions</i>		<b>As of December 2022</b>				
Banking activities	Relevant indicator			Own funds requirements	Risk weighted amount	
	Year-3	Year-2	Last year			
1	Banking activities subject to basic indicator approach (BIA)	-	-	-	-	-
2	Banking activities subject to standardised (TSA) / alternative standardised (ASA) approaches	\$ 9,582	\$ 10,918	\$ 10,810	\$ 1,838	\$ 22,973
3	<u>Subject to TSA:</u>	9,582	10,918	10,810		
4	<u>Subject to ASA:</u>	-	-	-		
5	Banking activities subject to advanced measurement approaches AMA	-	-	-	-	-

## GSIB

<i>\$ in millions</i>		<b>As of December 2022</b>				
Banking activities	Relevant indicator			Own funds requirements	Risk weighted amount	
	Year-3	Year-2	Last year			
1	Banking activities subject to basic indicator approach (BIA)	-	-	-	-	-
2	Banking activities subject to standardised (TSA) / alternative standardised (ASA) approaches	\$ 481	\$ 401	\$ 545	\$ 67	\$ 838
3	<u>Subject to TSA:</u>	481	401	545		
4	<u>Subject to ASA:</u>	-	-	-		
5	Banking activities subject to advanced measurement approaches AMA	-	-	-	-	-

**Pillar 3 Disclosures****Model Risk****Overview**

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

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

The firm's model risk management framework is managed through a governance structure and risk management controls, which encompass standards designed to ensure we maintain a comprehensive model inventory, including risk assessment and classification, sound model development practices, independent review and model-specific usage controls. The Firmwide Model Risk Control Committee oversees the model risk management framework.

**Model Review and Validation Process**

Model Risk consists of quantitative professionals who perform an independent review, validation and approval of the firm's 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, verification of compliance with model development and implementation standards, and assessment of adequacy of the ongoing monitoring plan.

The firm regularly refines and enhances models to reflect changes in market or economic conditions and its business mix. 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 their assumptions 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 "Credit Risk", "Market Risk", "Operational Risk" and "Liquidity Risk" for further information about the use of models within these areas.

## Pillar 3 Disclosures

## Asset Encumbrance

## Overview

Asset encumbrance refers to the pledging or use of an asset as a means to secure, collateralise or credit-enhance any on-balance-sheet or off-balance-sheet transaction from which it cannot be freely withdrawn. The majority of our encumbrance is driven by secured financing activities, which include transactions in repo, securities lending, facilitation of short positions (customer and GSGUK) and collateral swaps. The remaining encumbrance is driven by derivatives trading. A portion of GSGUK's assets are encumbered in currencies other than US Dollars. Asset encumbrance is an integral part of GSGUK's liquidity, funding and collateral management process.

The tables in this section identify components of our encumbered and unencumbered assets for the period ended December 31, 2022. All numbers in the tables are based on the applicable accounting standards and median values are computed over the preceding 4 quarterly data points<sup>1</sup>.

Table 24: Encumbered and Unencumbered Assets<sup>1</sup>

## GSGUK

\$ in millions	Carrying Amount of Encumbered Assets		Fair Value of Encumbered Assets		Carrying Amount of Unencumbered Assets		Fair Value of Unencumbered Assets	
		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA
<b>Assets of the Reporting Institution<sup>2</sup></b>	133,546	23,284	N/a	N/a	1,131,830	57,294	N/a	N/a

1. The figures in Table 25 are a subset of Assets of the Reporting Institution in Table 24

2. Cells are marked N/a to indicate those components which are not reportable

## GSI

\$ in millions	Carrying Amount of Encumbered Assets		Fair Value of Encumbered Assets		Carrying Amount of Unencumbered Assets		Fair Value of Unencumbered Assets	
		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA
<b>Assets of the Reporting Institution<sup>2</sup></b>	145,694	20,998	N/a	N/a	1,067,719	42,867	N/a	N/a

1. The figures in Table 25 are a subset of Assets of the Reporting Institution in Table 24

2. Cells are marked N/a to indicate those components which are not reportable

<sup>1</sup> Median values are calculated using the following 4 month-end values – March 2022, June 2022, September 2022 and December 2022



## Pillar 3 Disclosures

## GSIB

\$ in millions	Carrying Amount of Encumbered Assets		Fair Value of Encumbered Assets		Carrying Amount of Unencumbered Assets		Fair Value of Unencumbered Assets	
		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA
Assets of the Reporting Institution <sup>2</sup>	738	116	N/a	N/a	80,020	13,652	N/a	N/a

1. The figures in Table 25 are a subset of Assets of the Reporting Institution in Table 24

2. Cells are marked N/a to indicate those components which are not reportable

Table 25: Components of Encumbered and Unencumbered Assets<sup>1</sup>

## GSGUK

\$ in millions	Carrying Amount of Encumbered Assets		Fair Value of Encumbered Assets		Carrying Amount of Unencumbered assets		Fair Value of Unencumbered Assets	
		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA
Equity Instruments <sup>3</sup>	35,148	1,247	35,148	1,247	7,766	97	7,766	97
Debt Securities <sup>3</sup>	31,100	22,037	31,100	22,037	9,918	5,739	9,918	5,739
of which: covered bonds	328	320	328	320	3	3	3	3
of which: asset-backed securities	0	0	0	0	0	0	0	0
of which: issued by general governments	20,603	18,846	20,603	18,846	8,523	5,511	8,523	5,511
of which: issued by financial corporations <sup>6</sup>	4,614	363	4,614	363	752	9	752	9
of which: issued by non-financial corporations	5,486	2,425	5,486	2,425	621	214	621	214
Other Assets	64,324 <sup>4</sup>	0	N/a <sup>2</sup>	N/a <sup>2</sup>	1,113,618 <sup>5</sup>	50,971	N/a <sup>2</sup>	N/a <sup>2</sup>

1. The figures in Table 26 are a subset of Assets of the Reporting Institution in Table 25

2. Cells are marked N/a to indicate those components which are not reportable

3. Fair value is the same as carrying value for Debt Securities

4. Encumbered Other Assets includes cash encumbered for derivatives margin and on-balance-sheet cash that has been segregated under the FCA's Client Assets Sourcebook (CASS)

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

6. HQLA balances reported in this row mainly comprise of securities issued by Multinational Development Banks and Public Sector Enterprises

## Pillar 3 Disclosures

## GSI

\$ in millions	Carrying Amount of Encumbered Assets		Fair Value of Encumbered Assets		Carrying Amount of Unencumbered assets		Fair Value of Unencumbered Assets	
		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA
<b>Equity Instruments<sup>3</sup></b>	36,925	1,247	36,925	1,247	7,766	97	7,766	97
<b>Debt Securities<sup>3</sup></b>	32,406	19,750	32,406	19,750	4,856	2,643	4,856	2,643
of which: covered bonds	349	0	349	0	3	0	3	0
of which: asset-backed securities	0	0	0	0	0	0	0	0
of which: issued by general governments	20,980	16,692	20,980	16,692	3,566	2,452	3,566	2,452
of which: issued by financial corporations <sup>6</sup>	5,014	366	5,014	366	695	9	695	9
of which: issued by non-financial corporations	5,618	2,475	5,618	2,475	568	164	568	164
<b>Other Assets</b>	72,281 <sup>4</sup>	0	N/a <sup>2</sup>	N/a <sup>2</sup>	1,055,789 <sup>5</sup>	39,654	N/a <sup>2</sup>	N/a <sup>2</sup>

1 The figures in Table 26 are a subset of Assets of the Reporting Institution in Table 25

2 Cells are marked N/a to indicate those components which are not reportable

3 Fair value is the same as carrying value for Debt Securities

4 Encumbered Other Assets includes cash encumbered for derivatives margin and on-balance-sheet cash that has been segregated under the FCA's Client Assets Sourcebook (CASS)

5 The majority of unencumbered Other Assets relate to derivative instruments

6 HQLA balances reported in this row mainly comprise of securities issued by Multinational Development Banks and Public Sector Enterprises

## GSIB

\$ in millions	Carrying Amount of Encumbered Assets		Fair Value of Encumbered Assets		Carrying Amount of Unencumbered assets		Fair Value of Unencumbered Assets	
		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA
<b>Equity Instruments<sup>3</sup></b>	0	0	0	0	0	0	0	0
<b>Debt Securities<sup>3</sup></b>	128	116	128	116	5,144	2,306	5,144	2,306
of which: covered bonds	0	0	0	0	0	0	0	0
of which: asset-backed securities	0	0	0	0	0	0	0	0
of which: issued by general governments	3	0	3	0	4,900	2,273	4,900	2,273
of which: issued by financial corporations <sup>6</sup>	5	0	5	0	66	0	66	0
of which: issued by non-financial corporations	79	75	79	75	39	34	39	34
<b>Other Assets</b>	581 <sup>4</sup>	0	N/a <sup>2</sup>	N/a <sup>2</sup>	74,603 <sup>5</sup>	11,318	N/a <sup>2</sup>	N/a <sup>2</sup>

1 The figures in Table 26 are a subset of Assets of the Reporting Institution in Table 25

2 Cells are marked N/a to indicate those components which are not reportable

3 Fair value is the same as carrying value for Debt Securities

4 Encumbered Other Assets includes cash encumbered for derivatives margin and on-balance-sheet cash that has been segregated under the FCA's Client Assets Sourcebook (CASS)

5 The majority of unencumbered Other Assets relate to derivative instruments

6 HQLA balances reported in this row mainly comprise of securities issued by Multinational Development Banks and Public Sector Enterprises

**Pillar 3 Disclosures**

The firm receives securities collateral in respect of securities purchased under agreement to resell, secured borrowings, margin loans and derivatives. The tables below break down securities collateral received into the portion which has been treated as encumbered and the portion which is available for encumbrance.

**Table 26: Collateral Received****GSGUK**

<i>\$ in millions</i>	Fair Value of Encumbered Collateral Received or Own Debt Securities Issued	Fair Value of Collateral Received or Own Debt Securities Issued Available for Encumbrance
	Of which notionally eligible EHQLA and HQLA	Of which notionally eligible EHQLA and HQLA
<b>Collateral Received by the Reporting Institution<sup>1,2</sup></b>	652,145	78,336
	412,844	44,412

1. The figures shown in Table 27 are a subset of Collateral Received by the Reporting Institution in Table 26

2. Collateral Received by the Reporting Institution does not include cash collateral which is included as an on-balance-sheet asset in Tables 24 and 25

**GSI**

<i>\$ in millions</i>	Fair Value of Encumbered Collateral Received or Own Debt Securities Issued	Fair Value of Collateral Received or Own Debt Securities Issued Available for Encumbrance
	Of which notionally eligible EHQLA and HQLA	Of which notionally eligible EHQLA and HQLA
<b>Collateral Received by the Reporting Institution<sup>1,2</sup></b>	663,855	48,861
	426,359	38,305

1. The figures shown in Table 27 are a subset of Collateral Received by the Reporting Institution in Table 26

2. Collateral Received by the Reporting Institution does not include cash collateral which is included as an on-balance-sheet asset in Tables 24 and 25

**GSIB**

<i>\$ in millions</i>	Fair Value of Encumbered Collateral Received or Own Debt Securities Issued	Fair Value of Collateral Received or Own Debt Securities Issued Available for Encumbrance
	Of which notionally eligible EHQLA and HQLA	Of which notionally eligible EHQLA and HQLA
<b>Collateral Received by the Reporting Institution<sup>1,2</sup></b>	25,025	32,179
	4,336	7,461

1. The figures shown in Table 27 are a subset of Collateral Received by the Reporting Institution in Table 26

2. Collateral Received by the Reporting Institution does not include cash collateral which is included as an on-balance-sheet asset in Tables 24 and 25

## Pillar 3 Disclosures

Table 27: Components of Collateral Received<sup>1</sup>

## GSGUK

	Fair Value of Encumbered Collateral Received or Own Debt Securities Issued		Fair Value of Collateral Received or Own Debt Securities Issued Available for Encumbrance	
		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA
<i>\$ in millions</i>				
<b>Loans on Demand</b>	0	0	0	0
<b>Equity Instruments</b>	237,151	41,806	11,105	569
<b>Debt Securities</b>	417,293	372,658	62,582	43,570
of which: covered bonds	338	289	52	48
of which: asset-backed securities	9	0	230	0
of which: issued by general governments	376,124	365,161	44,487	43,083
of which: issued by financial corporations <sup>3</sup>	15,362	1,562	7,264	11
of which: issued by non-financial corporations	25,325	5,520	13,318	555
<b>Loans and advances other than loans on demand</b>	0	0	505	0
<b>Other Collateral Received</b>	2,795	0	0	0
<b>Own Debt Securities Issued other than Own Covered Bonds or ABSs</b>	0	0	0	0
<b>Own Covered Bonds and Asset-Backed Securities issued and not yet pledged</b>	N/a <sup>2</sup>	N/a <sup>2</sup>	0	0
<b>Total Assets, Collateral received and Own Debt Securities Issued</b>	756,513	409,157	N/a <sup>2</sup>	N/a <sup>2</sup>

1. The figures shown in Table 27 are a subset of Collateral Received by the Reporting Institution in Table 26

2. Cells are marked N/a to indicate those components which are not reportable

3. HQLA balances reported in this row mainly comprise of securities issued by Multinational Development Banks and Public Sector Enterprises

## GSI

	Fair Value of Encumbered Collateral Received or Own Debt Securities Issued		Fair Value of Collateral Received or Own Debt Securities Issued Available for Encumbrance	
		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA
<i>\$ in millions</i>				
<b>Loans on Demand</b>	0	0	0	0
<b>Equity Instruments</b>	226,345	40,217	6,129	494
<b>Debt Securities</b>	433,652	386,787	39,449	37,464
of which: covered bonds	393	0	1	0
of which: asset-backed securities	7	0	1	0
of which: issued by general governments	391,838	379,944	37,723	37,306
of which: issued by financial corporations <sup>3</sup>	14,271	1,561	636	3
of which: issued by non-financial corporations	26,435	5,660	991	117
<b>Loans and advances other than loans on demand</b>	0	0	12	0
<b>Other Collateral Received</b>	4,713	0	0	0
<b>Own Debt Securities Issued other than Own Covered Bonds or ABSs</b>	0	0	0	0
<b>Own Covered Bonds and Asset-Backed Securities issued and not yet pledged</b>	N/a <sup>2</sup>	N/a <sup>2</sup>	0	0
<b>Total Assets, Collateral received and Own Debt Securities Issued</b>	795,660	442,542	N/a <sup>2</sup>	N/a <sup>2</sup>

1. The figures shown in Table 27 are a subset of Collateral Received by the Reporting Institution in Table 26

2. Cells are marked N/a to indicate those components which are not reportable

3. HQLA balances reported in this row mainly comprise of securities issued by Multinational Development Banks and Public Sector Enterprises

## Pillar 3 Disclosures

## GSIB

\$ in millions	Fair Value of Encumbered Collateral Received or Own Debt Securities Issued		Fair Value of Collateral Received or Own Debt Securities Issued Available for Encumbrance	
		Of which notionally eligible EHQLA and HQLA		Of which notionally eligible EHQLA and HQLA
<b>Loans on Demand</b>	0	0	0	0
<b>Equity Instruments</b>	14,983	1,654	4,822	0
<b>Debt Securities</b>	4,550	947	26,980	7,461
of which: covered bonds	0	0	50	0
of which: asset-backed securities	2	0	229	0
of which: issued by general governments	2,031	947	8,158	6,914
of which: issued by financial corporations <sup>3</sup>	1,974	0	6,633	4
of which: issued by non-financial corporations	241	0	12,409	466
<b>Loans and advances other than loans on demand</b>	0	0	492	0
<b>Other Collateral Received</b>	933	0	0	0
<b>Own Debt Securities Issued other than Own Covered Bonds or ABSs</b>	0	0	0	0
<b>Own Covered Bonds and Asset-Backed Securities issued and not yet pledged</b>	N/a <sup>2</sup>	N/a <sup>2</sup>	0	0
<b>Total Assets, Collateral received and Own Debt Securities Issued</b>	26,060	4,437	N/a <sup>2</sup>	N/a <sup>2</sup>

1. The figures shown in Table 27 are a subset of Collateral Received by the Reporting Institution in Table 26

2. Cells are marked N/a to indicate those components which are not reportable

3. HQLA balances reported in this row mainly comprise of securities issued by Multinational Development Banks and Public Sector Enterprises

The table below shows the extent to which liabilities have been matched to encumbered assets.

**Table 28: Sources of Encumbrance**

## GSGUK

\$ in millions	Matching Liabilities, Contingent Liabilities or Securities Lent	Assets, Collateral Received and Own Debt Securities Issued other than Covered Bonds and ABSs Encumbered
Carrying amount of selected financial liabilities <sup>1</sup>	864,941	339,276

## GSI

\$ in millions	Matching Liabilities, Contingent Liabilities or Securities Lent	Assets, Collateral Received and Own Debt Securities Issued other than Covered Bonds and ABSs Encumbered
Carrying amount of selected financial liabilities <sup>1</sup>	889,689	375,118

## GSIB

\$ in millions	Matching Liabilities, Contingent Liabilities or Securities Lent	Assets, Collateral Received and Own Debt Securities Issued other than Covered Bonds and ABSs Encumbered
Carrying amount of selected financial liabilities <sup>1</sup>	2,084	1,679

1. There may be a mismatch between liabilities and encumbered assets and collateral received driven by the accounting standards presentation of derivatives

## **Pillar 3 Disclosures**

### **Commentary**

In this disclosure, derivative instruments are reported in accordance with the applicable accounting standards. In addition, total assets include collateralised lending where the receivable is reported as a balance sheet assets in Table 24 and 25 and the underlying collateral received is reported in Tables 26 and 27 resulting in double counting of these assets.

GSGUK primarily adopts standard collateral agreements and collateralises based on industry standard contractual agreements (mostly Credit Support Annexes (CSA) and Global Master Repurchase Agreements (GMRAs)). The rights and obligations on collateral posted to counterparties for derivatives are dependent on the counterparty and the nature and jurisdiction of the CSA. Derivative liabilities are collateralised primarily using G10 currencies and government bonds.

## Liquidity Risk

### Overview

GSGUK is subject to the liquidity requirements as set out in the CRR with regard to liquidity coverage requirement for credit institutions and other applicable guidelines as set by the PRA. When we use the term “liquidity standards”, we refer to the aforementioned regulations. The liquidity standards set forth minimum liquidity levels designed to ensure that credit institutions and investment firms maintain adequate amount of liquid assets to withstand a 30 calendar-day stress scenario. This information should be read in conjunction with Group Inc.’s most recent Annual Report on Form 10-K for the year ended December 31, 2022.

### Liquidity Risk Management

Liquidity risk is the risk that we will be unable to fund GSGUK or meet our liquidity needs in the event of firm-specific, broader industry or market liquidity stress events. We have in place a comprehensive and conservative set of liquidity and funding policies. Our principal objective is to be able to fund GSGUK and to enable our core businesses to continue to serve clients and generate revenues, even under adverse circumstances.

We manage liquidity risk according to three principles: (i) hold sufficient excess liquidity in the form of Global Core Liquid Assets (GCLA) to cover outflows during a stressed period, (ii) maintain appropriate Asset-Liability Management, and (iii) maintain a viable Contingency Funding Plan.

For information about Group Inc.’s internal Liquidity Risk Management framework, see “Risk Management – Liquidity Risk Management” in Part I, Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the firm’s Annual Report on Form 10-K.

Corporate Treasury, which reports to our Chief Financial Officer, has primary responsibility for developing, managing and executing our liquidity and funding strategy within our risk appetite.

Liquidity Risk, which is independent of our revenue-producing units and Treasury, and reports to our Chief Risk Officer, has primary responsibility for identifying, monitoring and managing our liquidity risk through firmwide oversight and the establishment of stress testing and limits frameworks.

The company’s framework for managing liquidity risk is consistent with, and part of, the GS Group framework.

We use liquidity limits at various levels and across liquidity risk types to manage the size of our liquidity exposures. Limits are measured relative to acceptable levels of risk given our

liquidity risk tolerance. The purpose of these limits is to assist senior management in monitoring and controlling our overall liquidity profile.

Based on the results of our internal liquidity risk models, as well as consideration of other factors including, but not limited to, an assessment of our potential intraday liquidity needs and a qualitative assessment of the condition of the financial markets and GSGUK, we believe that our liquidity position as of December 31, 2022 was appropriate.

For information about Group Inc.’s internal Liquidity Risk Management framework, see “Risk Management – Liquidity Risk Management” in Part I, Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the firm’s Annual Report on Form 10-K.

### Compliance with Liquidity Requirements

The PRA Rulebook requires that a firm maintains a LCR that is no less than 100%. In addition, the PRA may require a firm to hold additional liquidity for risks not covered in the LCR, referred to as Pillar 2 risks. A firm’s HQLA is expected to be available for use to address liquidity needs in a time of stress, which could result in a firm’s LCR dropping below the applicable requirement. The liquidity standards also set forth a supervisory framework for addressing LCR shortfalls that is intended to enable supervisors to monitor and respond appropriately to the unique circumstances that give rise to a firm’s LCR shortfall.

This information is based on our current interpretation and understanding of the regulatory requirements and may evolve as we discuss the interpretation and application of these rules with our regulators. Table 35 (lines 1 through 23) presents GSGUK’s, LCR in the format provided in the PRA guidelines on LCR Disclosure. Tables 29 through 34 present a supplemental breakdown of GSGUK’s LCR components. Tables 36 and 37 present the disclosure template for GSI and GSIB, respectively.

### Liquidity Coverage Ratio

The liquidity standards require a firm to maintain an amount of high-quality liquid assets (HQLA) sufficient to meet stressed net cash outflows (NCOs) over a prospective 30 calendar-day period. The LCR is calculated as the ratio of HQLA to NCOs.

The table below presents a summary of our trailing twelve month average monthly LCR for the period ended December 31, 2022.

**Pillar 3 Disclosures****Table 29: Liquidity Coverage Ratio**

<i>\$ in millions</i>	<b>Twelve Months Ended December 2022</b>
	<b>Average Weighted</b>
Total high-quality liquid assets	99,518
Net cash outflows	53,892
Liquidity coverage ratio <sup>1</sup>	185%

1. The ratio reported in this row is calculated as average of the monthly LCRs for the trailing twelve months and may not equal the calculation of ratio using component amounts reported in “Total high-quality liquid assets” and “Net cash outflows”.

In the table above, the average weighted Total HQLA balance reflects the application of haircuts prescribed in the liquidity standards as described in the HQLA section.

The average weighted Total HQLA held by GSGUK is expected to meet the liquidity requirements set out in the Liquidity Coverage Ratio (CRR) Chapter of the PRA Rulebook as well as the additional requirements set by the PRA to cover Pillar 2 risks.

GSGUK’s average monthly LCR for the trailing twelve-month period ended December 2022 was 185%. The NCOs largely consist of prospective outflows related to GSGUK’s secured and unsecured funding, derivative positions and unfunded commitments. We expect business-as-usual fluctuations in our client activity, business mix and overall market environment to affect our average LCR on an ongoing basis.

See “High-Quality Liquid Assets” and “Net Cash Outflows” for further information about GSGUK’s LCR.

**High-Quality Liquid Assets**

Total HQLA represents unencumbered, high-quality liquid assets held by a firm. The liquidity standards define HQLA in three asset categories: Level 1, Level 2A and Level 2B, and applies haircuts and limits to certain asset categories.

Level 1 assets are considered the most liquid and are eligible for inclusion in a firm’s HQLA amount without a haircut or limit. Level 2A and 2B assets are considered less liquid than Level 1 assets and are subject to additional adjustments as prescribed in the liquidity standards. In addition, the sum of Level 2A and 2B assets cannot comprise more than 40% of a firm’s HQLA amount, and Level 2B assets cannot comprise more than 15% of a firm’s HQLA amount.

Table 29 presents a summary of the weighted average Total HQLA held by GSGUK, calculated in accordance with the liquidity standards.

Our HQLA substantially consists of Level 1 assets and is diversified across our major operating currencies. Our HQLA is also substantially similar in composition to our GCLA.

For information about Group Inc.’s GCLA, see “Risk Management – Liquidity Risk Management” in Part I, Item 7 “Management’s Discussion and Analysis of Financial

Condition and Results of Operations” in the firm’s Annual Report on Form 10-K.

**Net Cash Outflows****Overview**

The liquidity standards define NCOs as the net of cash outflows and inflows during a prospective stress period of 30 calendar days. NCOs are calculated by applying prescribed outflow and inflow rates to certain assets, liabilities and off-balance-sheet arrangements. These outflow and inflow rates reflect a specific standardised stress scenario to a firm’s funding sources, contractual obligations and assets over the prospective stress period, as prescribed by the liquidity standards. Due to the inherently uncertain and variable nature of stress events, a firm’s actual cash outflows and inflows in a realised liquidity stress event may differ, possibly materially, from those reflected in a firm’s NCOs.

To capture outflows and inflows that would occur within a 30 calendar-day period, the liquidity standards require that a firm’s NCOs calculation reflects outflows and inflows based on the contractual maturity of certain assets, liabilities and off-balance-sheet arrangements. To determine the maturity date of outflows, the liquidity standards account for any option that could accelerate the maturity date of an instrument or the date of a transaction. Where contractual maturity is not applicable, the liquidity standards also set forth stressed outflow assumptions. In addition, the liquidity standards require a firm to recognise contractual outflows within a 30 calendar-day period that are not otherwise described in the liquidity standards and to not recognise inflows not specified in the liquidity standards. The inflows included in the NCOs calculation are subject to a cap of 75% of a firm’s calculated outflows.

Table 29 above presents a summary of GSGUK’s NCOs, calculated in accordance with the liquidity standards.

More details on each of the material components of our NCOs, including a description of the applicable sections of the liquidity standards, are described below.

In the tables referenced in the remainder of this section, unweighted balances reflect certain GSGUK’s assets, liabilities and off-balance-sheet arrangements captured in the liquidity standards. Weighted balances reflect the application of prescribed outflow and inflow rates to these unweighted balances.

**Unsecured and Secured Financing****Overview**

Our primary sources of funding are deposits, collateralised financings, unsecured short-term and long-term borrowings (including funding from Group Inc. and affiliates), and shareholders’ equity. We seek to maintain broad and diversified funding sources globally across products, programs, markets,



**Pillar 3 Disclosures**

currencies and creditors to avoid funding concentrations.

For information about Group Inc.'s funding sources, see "Balance Sheet and Funding Sources" in Part I, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the firm's Annual Report on Form 10-K.

**Unsecured Net Cash Outflows**

GSGUK's unsecured funding consists of a number of different products, including:

- Debt securities issued, which includes notes, certificates, commercial paper and warrants; and
- Savings, demand and time deposits from consumers and institutional clients, and through internal and third-party broker-dealers; and
- Funding from Group Inc and affiliates

GSGUK's unsecured debt and deposits are a source of funding for inventory, lending activity and other assets, including a portion of our liquid assets.

The liquidity standards require that the NCOs calculation reflects a firm's upcoming maturities of unsecured long-term debt and other unsecured funding products during a 30 calendar-day period, assuming no roll over of debt that matures.

The liquidity standards also prescribe outflows related to a partial loss of retail, small business, and wholesale deposits.

Inflows from deposits placed with agent banks and lending activity are included as part of "Inflows from fully performing exposures" (see Table 30).

The table below presents a summary of GSGUK's NCOs related to our unsecured borrowing and lending activity, calculated in accordance with the liquidity standards.

**Table 30: Unsecured Net Cash Outflows**

\$ in millions	Twelve Months Ended December 2022	
	Average Unweighted	Average Weighted
<b>Outflows</b>		
Retail deposits and deposits from small business customers, of which:	31,352	4,646
Stable deposits	0	0
Less stable deposits	30,416	4,646
Unsecured wholesale funding, of which:	38,246	33,672
Non-operational deposits	33,162	28,588
Unsecured debt	5,085	5,085
<b>Inflows</b>		
Inflows from fully performing exposures	2,990	694
<b>Net unsecured cash outflows/(inflows)<sup>1</sup></b>	<b>66,608</b>	<b>37,624</b>

1. Net unsecured cash outflows/(inflows) reflects the subtraction of the inflow amounts from the outflow amounts shown in the table above and is included for illustrative purposes.

**Secured Net Cash Outflows**

GSGUK funds a significant amount of inventory on a secured basis, including repurchase agreements, securities loaned and other secured financings. In addition, we provide financing to our clients for their securities trading activities, as well as securities lending and other prime brokerage services.

The liquidity standards consider outflows and inflows related to secured funding and securities services together as part of "Secured wholesale funding" and "Secured lending" (see Table 31).

Specifically, under the liquidity standards, secured funding transactions include repurchase agreements, collateralised deposits, securities lending transactions and other secured wholesale funding arrangements. Secured lending transactions, as defined under the liquidity standards, include reverse repurchase transactions, margin loans, securities borrowing transactions and secured loans.

The standardised stress scenario prescribed in the liquidity standards applies outflow and inflow rates between 0-100% to secured funding and lending transactions. Specific outflow and inflow rates are based on factors such as the quality of the underlying collateral, as well as the type, tenor, and counterparty of a transaction.

The table below presents a summary of GSGUK's NCOs related to our secured funding and lending activity, calculated in accordance with the liquidity standards.

**Table 31: Secured Net Cash Outflows**

\$ in millions	Twelve Months Ended December 2022	
	Average Unweighted	Average Weighted
<b>Outflows</b>		
Secured wholesale funding		52,107
<b>Inflows</b>		
Secured lending	422,743	119,236
<b>Net secured cash outflows/(inflows)<sup>1</sup></b>		<b>(67,129)</b>

1. Net secured cash outflows/(inflows) reflects the subtraction of the inflow amounts from the outflow amount shown in the table above and is included for illustrative purposes.

**Derivatives****Overview**

Derivatives are instruments that derive their value from underlying asset prices, indices, reference rates and other inputs, or a combination of these factors. Derivatives may be traded on an exchange or they may be privately negotiated contracts, which are usually referred to as OTC derivatives. Certain OTC derivatives are cleared and settled through central

**Pillar 3 Disclosures**

clearing counterparties, while others are bilateral contracts between two counterparties.

GSGUK is exposed to derivative risk through:

- **Market-Making.** As a market maker, GSGUK enters into derivative transactions to provide liquidity to clients and to facilitate the transfer and hedging of their risks. In this role, we typically act as principal and are required to commit capital to provide execution, and maintain inventory in response to, or in anticipation of, client demand.
- **Risk Management.** GSGUK also enters into derivatives to actively manage risk exposures that arise from its market-making and investing and lending activities in derivative and cash instruments. Our holdings and exposures are hedged, in many cases, on either a portfolio or risk-specific basis, as opposed to an instrument-by-instrument basis. In addition, the firm may enter into derivatives that are used to manage interest rate exposure in certain fixed-rate unsecured long-term and short-term borrowings, and deposits.

We enter into various types of derivatives, including futures, forwards, swaps and options.

For information about Group Inc.'s derivative exposures and hedging activities, see Note 7 "Derivatives and Hedging Activities" in Part II, Item 8 "Financial Statements and Supplementary Data" in the firm's Annual Report on Form 10-K.

**Derivative Net Cash Outflows**

The liquidity standards require that derivative NCOs reflect outflows and inflows resulting from contractual settlements related to derivative transactions occurring over a 30 calendar-day period. These outflows and inflows can generally be netted at a counterparty level if subject to a valid qualifying master netting agreement. In addition, the liquidity standards require that NCOs reflect certain contingent outflows related to a firm's derivative positions that may arise during a 30 calendar-day stress scenario, including:

- Incremental collateral required as a result of a change in a firm's financial condition;
- Legal right of substitution of collateral posted to a firm for less liquid or non-HQLA collateral;
- Collateral required as a result of market movements. The liquidity standards require that a firm reflects in its NCOs calculation the absolute value of the largest net cumulative

collateral outflow or inflow in a 30 calendar-day period over the last two years; and

- Excess collateral greater than the current collateral requirement under the governing contract that a firm may be contractually required to return to counterparty.

In the table below, "Outflows related to derivative exposures and other collateral requirements" reflects contractual derivative settlements, as well as contingent derivative outflows, calculated in accordance with the liquidity standards. Inflows from contractual derivative settlements are reflected in "Other cash inflows" (see Table 34). The liquidity standards do not recognise contingent derivative inflows.

The table below presents a summary of the GSGUK's derivative NCOs, calculated in accordance with the liquidity standards.

**Table 32: Derivative Net Cash Outflows**

\$ in millions	Twelve Months Ended December 2022	
	Average Unweighted	Average Weighted
Outflows related to derivative exposures and other collateral requirements	27,166	23,764

**Unfunded Commitments****Overview**

GSGUK's commercial lending activities include lending to investment-grade and non-investment-grade corporate borrowers. Such commitments include commitments related to relationship lending activities (principally used for operating and general corporate purposes) and related to other investment banking activities (generally extended for contingent acquisition financing and are often intended to be short-term in nature, as borrowers often seek to replace them with other funding sources). The firm also extends lending commitments in connection with other types of corporate lending, commercial real estate financing, retail lending and other collateralized lending.

In addition, the firm provides financing to clients who warehouse financial assets. These arrangements are secured by the warehoused assets, primarily consisting of residential real estate, consumer and corporate loans.

**Unfunded Commitments Net Cash Outflows**

The liquidity standards apply outflow rates to the undrawn portion of committed credit and liquidity facilities that a firm has extended based on counterparty type and purpose. The undrawn portion is defined as the amount of the facility that could be drawn upon within 30 calendar days under the governing agreement, less the fair value of any liquid assets that

**Pillar 3 Disclosures**

serve as collateral, after recognising the applicable haircut for those assets. Commitments extended to non-financial sector corporates are prescribed an outflow rate of 10-30%, insurance sector entities an outflow rate of 40-100%, credit institutions an outflow rate of 40% and all others an outflow rate of 100%.

The table below presents a summary of GSGUK's NCOs related to our unfunded commitments, calculated in accordance with the liquidity standards.

**Table 33: Unfunded Commitments Net Cash Outflows**

<i>\$ in millions</i>	Twelve Months Ended December 2022	
	Average Unweighted	Average Weighted
Credit and liquidity facilities	5,656	2,862

**Other Net Cash Outflows**

The table below presents a summary of GSGUK's other cash outflows and inflows, including, but not limited to, overnight and term funding from Group Inc. and affiliates, derivative inflows, unsettled inventory balances, loans of collateral to effect customer short sales and other prime brokerage services.

**Table 34: Other Net Cash Outflows**

<i>\$ in millions</i>	Twelve Months Ended December 2022	
	Average Unweighted	Average Weighted
<b>Outflows</b>		
Other contractual obligations	104,894	21,312
Other contingent funding obligations	102,332	68,447
<b>Inflows</b>		
Other cash inflows	36,488	36,488
<b>Net other cash outflows/(inflows)<sup>1</sup></b>	<b>170,738</b>	<b>53,271</b>

<sup>1</sup>.Net other cash outflows/(inflows) reflects the subtraction of the inflow amounts from the outflow amounts shown in the table above and is included for illustrative purposes.

## Pillar 3 Disclosures

Table 35: GSGUK Liquidity Coverage Ratio Summary

Scope of consolidation (Consolidated)		Total Unweighted Value (average)				Total Weighted Value (average)			
Currency and units (\$ in millions)									
Period ended		March 2022	June 2022	September 2022	December 2022	March 2022	June 2022	September 2022	December 2022
Number of data points used in the calculation of averages		12	12	12	12	12	12	12	12
<b>HIGH-QUALITY LIQUID ASSETS</b>									
1	Total high-quality liquid assets (HQLA)					93,679	95,696	97,783	99,518
<b>CASH – OUTFLOWS</b>									
2	Retail deposits and deposits from small business customers, of which:	32,467	32,154	31,619	31,352	4,908	4,838	4,721	4,646
3	Stable deposits	0	0	0	0	0	0	0	0
4	Less stable deposits	32,253	31,768	30,970	30,416	4,908	4,838	4,721	4,646
5	Unsecured wholesale funding	38,121	38,488	37,893	38,246	33,652	34,087	33,505	33,672
6	Operational deposits (all counterparties) and deposits in networks of cooperative banks	0	0	0	0	0	0	0	0
7	Non-operational deposits (all counterparties)	32,530	33,368	32,955	33,162	28,061	28,967	28,568	28,588
8	Unsecured debt	5,591	5,120	4,937	5,085	5,591	5,120	4,937	5,085
9	Secured wholesale funding					44,704	47,039	50,312	52,107
10	Additional requirements	32,343	32,746	32,794	32,822	26,417	26,671	26,733	26,625
11	Outflows related to derivative exposures and other collateral requirements	24,765	25,910	26,653	27,166	22,301	23,038	23,629	23,764
12	Outflows related to loss of funding on debt products	0	0	0	0	0	0	0	0
13	Credit and liquidity facilities	7,578	6,836	6,141	5,656	4,116	3,633	3,104	2,862
14	Other contractual funding obligations	111,979	114,109	111,705	104,894	22,939	22,874	22,732	21,312
15	Other contingent funding obligations	93,199	97,399	101,686	102,332	64,132	66,673	68,871	68,447
16	<b>TOTAL CASH OUTFLOWS</b>					<b>196,752</b>	<b>202,182</b>	<b>206,874</b>	<b>206,809</b>
<b>CASH – INFLOWS</b>									
17	Secured lending (e.g. reverse repos)	400,127	416,203	425,027	422,743	112,721	116,203	118,636	119,236
18	Inflows from fully performing exposures	2,979	2,826	2,778	2,990	496	422	604	694
19	Other cash inflows	43,082	42,590	39,894	36,488	43,082	42,590	39,894	36,488
UK-19a	(Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies)					0	0	0	0
UK-19b	(Excess inflows from a related specialised credit institution)					0	0	0	0
20	<b>TOTAL CASH INFLOWS</b>	<b>446,188</b>	<b>461,619</b>	<b>467,699</b>	<b>462,221</b>	<b>156,299</b>	<b>159,216</b>	<b>159,134</b>	<b>156,418</b>
UK-20a	Fully exempt inflows	0	0	0	0	0	0	0	0
UK-20b	Inflows Subject to 90% Cap	0	0	0	0	0	0	0	0
UK-20c	Inflows Subject to 75% Cap	375,263	387,423	387,446	375,945	156,300	159,216	159,134	156,419
<b>TOTAL ADJUSTED VALUE</b>									
UK-21	<b>LIQUIDITY BUFFER<sup>1</sup></b>					<b>93,679</b>	<b>95,696</b>	<b>97,783</b>	<b>99,518</b>
22	<b>TOTAL NET CASH OUTFLOWS<sup>1</sup></b>					<b>49,339</b>	<b>50,805</b>	<b>53,093</b>	<b>53,892</b>
23	<b>LIQUIDITY COVERAGE RATIO (%)<sup>2</sup></b>					<b>191%</b>	<b>189%</b>	<b>184%</b>	<b>185%</b>

<sup>1</sup> The amounts reported in these rows may not equal the calculation of those amounts using component amounts reported in rows 1-20 due to technical factors such as the application of the Level 2 liquid asset caps and the total inflow cap.

<sup>2</sup> The ratios reported in this row are calculated as average of the monthly LCR's for the trailing twelve months and may not equal the calculation of ratios using component amounts reported in rows 21 and 22.

## Pillar 3 Disclosures

Table 36: GSI Liquidity Coverage Ratio Summary

Scope of consolidation (Consolidated)		Total Unweighted Value (average)				Total Weighted Value (average)			
Currency and units (\$ in millions)									
Period ended		March 2022	June 2022	September 2022	December 2022	March 2022	June 2022	September 2022	December 2022
Number of data points used in the calculation of averages		12	12	12	12	12	12	12	12
<b>HIGH-QUALITY LIQUID ASSETS</b>									
1	Total high-quality liquid assets (HQLA)					75,191	76,927	78,898	79,517
<b>CASH – OUTFLOWS</b>									
2	Retail deposits and deposits from small business customers, of which:	0	0	0	0	0	0	0	0
3	Stable deposits	0	0	0	0	0	0	0	0
4	Less stable deposits	0	0	0	0	0	0	0	0
5	Unsecured wholesale funding	24,500	24,974	24,625	24,164	24,500	24,974	24,625	24,164
6	Operational deposits (all counterparties) and deposits in networks of cooperative banks	0	0	0	0	0	0	0	0
7	Non-operational deposits (all counterparties)	20,670	21,501	21,275	20,802	20,670	21,501	21,275	20,802
8	Unsecured debt	3,830	3,473	3,350	3,362	3,830	3,473	3,350	3,362
9	Secured wholesale funding					45,087	47,333	50,626	52,421
10	Additional requirements	28,895	29,873	30,473	30,700	26,404	26,981	27,433	27,293
11	Outflows related to derivative exposures and other collateral requirements	27,692	28,753	29,417	29,747	25,227	25,882	26,393	26,345
12	Outflows related to loss of funding on debt products	0	0	0	0	0	0	0	0
13	Credit and liquidity facilities	1,203	1,120	1,056	954	1,177	1,099	1,041	949
14	Other contractual funding obligations	120,649	122,180	118,036	109,887	22,834	22,750	22,622	21,171
15	Other contingent funding obligations	80,499	83,850	86,843	86,357	63,890	66,420	68,599	68,180
16	<b>TOTAL CASH OUTFLOWS</b>					<b>182,715</b>	<b>188,458</b>	<b>193,905</b>	<b>193,229</b>
<b>CASH – INFLOWS</b>									
17	Secured lending (e.g. reverse repos)	392,314	408,643	418,386	418,097	100,395	104,529	108,613	109,980
18	Inflows from fully performing exposures	2,625	2,422	2,415	2,584	391	305	504	580
19	Other cash inflows	40,405	40,208	38,130	35,199	40,405	40,208	38,130	35,199
UK-19a	(Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies)					0	0	0	0
UK-19b	(Excess inflows from a related specialised credit institution)					0	0	0	0
20	<b>TOTAL CASH INFLOWS</b>	<b>435,344</b>	<b>451,273</b>	<b>458,931</b>	<b>455,880</b>	<b>141,191</b>	<b>145,042</b>	<b>147,247</b>	<b>145,759</b>
UK-20a	Fully exempt inflows	0	0	0	0	0	0	0	0
UK-20b	Inflows Subject to 90% Cap	0	0	0	0	0	0	0	0
UK-20c	Inflows Subject to 75% Cap	366,611	379,243	380,480	371,159	141,191	145,042	147,247	145,758
<b>TOTAL ADJUSTED VALUE</b>									
UK-21	<b>LIQUIDITY BUFFER<sup>1</sup></b>					<b>75,191</b>	<b>76,927</b>	<b>78,898</b>	<b>79,517</b>
22	<b>TOTAL NET CASH OUTFLOWS<sup>1</sup></b>					<b>46,206</b>	<b>47,771</b>	<b>49,882</b>	<b>49,537</b>
23	<b>LIQUIDITY COVERAGE RATIO (%)<sup>2</sup></b>					<b>164%</b>	<b>162%</b>	<b>158%</b>	<b>161%</b>

<sup>1</sup> The amounts reported in these rows may not equal the calculation of those amounts using component amounts reported in rows 1-20 due to technical factors such as the application of the Level 2 liquid asset caps and the total inflow cap.

<sup>2</sup> The ratios reported in this row are calculated as average of the monthly LCR's for the trailing twelve months and may not equal the calculation of ratios using component amounts reported in rows 21 and 22.

## Pillar 3 Disclosures

Table 37: GSIB Liquidity Coverage Ratio Summary

Scope of consolidation (Consolidated)		Total Unweighted Value (average)				Total Weighted Value (average)			
Currency and units (\$ in millions)									
Period ended		March 2022	June 2022	September 2022	December 2022	March 2022	June 2022	September 2022	December 2022
Number of data points used in the calculation of averages		12	12	12	12	12	12	12	12
<b>HIGH-QUALITY LIQUID ASSETS</b>									
1	Total high-quality liquid assets (HQLA)					18,488	18,769	18,885	20,000
<b>CASH – OUTFLOWS</b>									
2	Retail deposits and deposits from small business customers, of which:	32,467	32,154	31,619	31,352	4,908	4,838	4,721	4,646
3	Stable deposits	0	0	0	0	0	0	0	0
4	Less stable deposits	32,253	31,768	30,970	30,416	4,908	4,838	4,721	4,646
5	Unsecured wholesale funding	13,620	13,514	13,268	14,270	9,151	9,113	8,881	9,696
6	Operational deposits (all counterparties) and deposits in networks of cooperative banks	0	0	0	0	0	0	0	0
7	Non-operational deposits (all counterparties)	11,860	11,867	11,680	12,547	7,391	7,466	7,293	7,973
8	Unsecured debt	1,760	1,647	1,587	1,723	1,760	1,647	1,587	1,723
9	Secured wholesale funding					247	208	76	56
10	Additional requirements	8,891	8,232	7,633	7,398	5,455	5,050	4,612	4,608
11	Outflows related to derivative exposures and other collateral requirements	2,517	2,516	2,549	2,695	2,517	2,516	2,549	2,695
12	Outflows related to loss of funding on debt products	0	0	0	0	0	0	0	0
13	Credit and liquidity facilities	6,374	5,716	5,085	4,703	2,939	2,534	2,063	1,913
14	Other contractual funding obligations	381	263	266	289	85	82	84	102
15	Other contingent funding obligations	12,699	13,548	14,843	15,976	242	253	272	267
16	<b>TOTAL CASH OUTFLOWS</b>					<b>20,088</b>	<b>19,544</b>	<b>18,646</b>	<b>19,375</b>
<b>CASH – INFLOWS</b>									
17	Secured lending (e.g. reverse repos)	11,893	11,616	11,088	11,943	7,589	7,212	6,394	6,328
18	Inflows from fully performing exposures	249	287	248	261	87	83	56	55
19	Other cash inflows	503	582	475	484	503	582	475	484
UK-19a	(Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies)					0	0	0	0
UK-19b	(Excess inflows from a related specialised credit institution)					0	0	0	0
20	<b>TOTAL CASH INFLOWS</b>	<b>12,645</b>	<b>12,484</b>	<b>11,811</b>	<b>12,688</b>	<b>8,179</b>	<b>7,877</b>	<b>6,925</b>	<b>6,867</b>
UK-20a	Fully exempt inflows	0	0	0	0	0	0	0	0
UK-20b	Inflows Subject to 90% Cap	0	0	0	0	0	0	0	0
UK-20c	Inflows Subject to 75% Cap	12,645	12,484	11,811	12,688	8,178	7,877	6,925	6,868
<b>TOTAL ADJUSTED VALUE</b>									
UK-21	<b>LIQUIDITY BUFFER<sup>1</sup></b>					<b>18,488</b>	<b>18,769</b>	<b>18,885</b>	<b>20,000</b>
22	<b>TOTAL NET CASH OUTFLOWS<sup>1</sup></b>					<b>11,911</b>	<b>11,668</b>	<b>11,720</b>	<b>12,506</b>
23	<b>LIQUIDITY COVERAGE RATIO (%)<sup>2</sup></b>					<b>155%</b>	<b>162%</b>	<b>162%</b>	<b>161%</b>

<sup>1</sup> The amounts reported in these rows may not equal the calculation of those amounts using component amounts reported in rows 1-20 due to technical factors such as the application of the Level 2 liquid asset caps and the total inflow cap.

<sup>2</sup> The ratios reported in this row are calculated as average of the monthly LCR's for the trailing twelve months and may not equal the calculation of ratios using component amounts reported in rows 21 and 22.

## **Net Stable Funding Ratio**

The Net Stable Funding Ratio (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.

The NSFR is defined as the regulatory measurement of the firm's available stable funding ("ASF") against its asset funding needs, or required stable funding ("RSF"), over a one-year time horizon.

The Liquidity Parts (CRR) of the PRA Rulebook requires that a firm maintains NSFR that is no less than 100 percent. The company has been subject to the applicable PRA NSFR requirement in the UK, which became effective in January 2022. The firm is required to disclose an NSFR ratio that is calculated as an average of four quarter end values. See table 38 for more detail.

## Pillar 3 Disclosures

Table 38: GSGUK Net Stable Funding Ratio Summary

\$ in millions		As of December 2022				
(in currency amount)		Unweighted value by residual maturity				Weighted value
		No maturity	< 6 months	6 months to < 1yr	≥ 1yr	
<b>Available stable funding (ASF) Items</b>						
1	Capital items and instruments	45,251	0	0	6,503	51,754
2	Own funds	45,251	0	0	6,503	51,754
3	Other capital instruments		0	0	0	0
4	Retail deposits		30,488	862	3	28,219
5	Stable deposits		0	0	0	0
6	Less stable deposits		30,488	862	3	28,219
7	Wholesale funding:		165,100	26,519	95,194	124,852
8	Operational deposits		0	0	0	0
9	Other wholesale funding		165,100	26,519	95,194	124,852
10	Interdependent liabilities		0	0	0	0
11	Other liabilities:	0	178,658	0	0	0
12	NSFR derivative liabilities	0				
13	All other liabilities and capital instruments not included in the above categories		178,658	0	0	0
14	<b>Total available stable funding (ASF)</b>					<b>204,824</b>
<b>Required stable funding (RSF) Items</b>						
15	Total high-quality liquid assets (HQLA)					1,572
UK-15a	Assets encumbered for more than 12m in cover pool		0	0	0	0
16	Deposits held at other financial institutions for operational purposes		2,090	0	0	1,045
17	Performing loans and securities:		271,637	14,162	69,358	92,432
18	Performing securities financing transactions with financial customers collateralised by Level 1 HQLA subject to 0% haircut		64,612	893	138	1,784
19	Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions		195,066	8,192	11,840	30,264
20	Performing loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of which:		9,102	1,277	3,173	7,899
21	With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk		0	0	113	74
22	Performing residential mortgages, of which:		18	12	199	185
23	With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk		0	0	0	0
24	Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products		2,838	3,788	54,007	52,301
25	Interdependent assets		0	0	0	0
26	Other assets:		75,410	4	61,325	62,166
27	Physical traded commodities				675	573
28	Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs		2,131	0	45,386	40,390
29	NSFR derivative assets		2,513			2,513
30	NSFR derivative liabilities before deduction of variation margin posted		67,412			3,371
31	All other assets not included in the above categories		3,354	4	15,264	15,319
32	Off-balance sheet items		86,182	2,553	2,226	4,078
33	<b>Total RSF</b>					<b>161,293</b>
34	<b>Net Stable Funding Ratio (%)</b>					<b>127%</b>



## Pillar 3 Disclosures

Table 39: GSI Net Stable Funding Ratio Summary

\$ in millions  (in currency amount)		As of December 2022				Weighted value
		Unweighted value by residual maturity				
		No maturity	< 6 months	6 months to < 1yr	≥ 1yr	
<b>Available stable funding (ASF) Items</b>						
1	Capital items and instruments	40,304	0	0	5,377	45,681
2	Own funds	40,304	0	0	5,377	45,681
3	Other capital instruments		0	0	0	0
4	Retail deposits		0	0	0	0
5	Stable deposits		0	0	0	0
6	Less stable deposits		0	0	0	0
7	Wholesale funding:		147,969	21,790	99,249	120,164
8	Operational deposits		0	0	0	0
9	Other wholesale funding		147,969	21,790	99,249	120,164
10	Interdependent liabilities		0	0	0	0
11	Other liabilities:	0	177,559	0	0	0
12	NSFR derivative liabilities	0				
13	All other liabilities and capital instruments not included in the above categories		177,559	0	0	0
14	<b>Total available stable funding (ASF)</b>					<b>165,845</b>
<b>Required stable funding (RSF) Items</b>						
15	Total high-quality liquid assets (HQLA)					3,286
UK-15a	Assets encumbered for more than 12m in cover pool		0	0	0	0
16	Deposits held at other financial institutions for operational purposes		1,724	0	0	862
17	Performing loans and securities:		246,931	6,965	58,782	76,310
18	Performing securities financing transactions with financial customers collateralised by Level 1 HQLA subject to 0% haircut		64,376	893	138	1,996
19	Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions		175,353	3,229	8,382	23,672
20	Performing loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of which:		5,585	588	400	3,461
21	With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk		0	0	0	0
22	Performing residential mortgages, of which:		0	0	0	0
23	With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk		0	0	0	0
24	Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products		1,616	2,256	49,861	47,180
25	Interdependent assets		0	0	0	0
26	Other assets:		75,049	0	58,900	59,590
27	Physical traded commodities				248	211
28	Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs		2,131	0	45,705	40,661
29	NSFR derivative assets		2,363			2,363
30	NSFR derivative liabilities before deduction of variation margin posted		67,205			3,360
31	All other assets not included in the above categories		3,349	0	12,947	12,995
32	Off-balance sheet items		78,390	3,184	2,443	4,346
33	<b>Total RSF</b>					<b>144,394</b>
34	<b>Net Stable Funding Ratio (%)</b>					<b>115%</b>

## Pillar 3 Disclosures

Table 40: GSIB Net Stable Funding Ratio Summary

\$ in millions  (in currency amount)		As of December 2022				Weighted value
		Unweighted value by residual maturity				
		No maturity	< 6 months	6 months to < 1yr	≥ 1yr	
<b>Available stable funding (ASF) Items</b>						
1	Capital items and instruments	3,321	0	0	826	4,147
2	Own funds	3,321	0	0	826	4,147
3	Other capital instruments		0	0	0	0
4	Retail deposits		30,488	862	3	28,219
5	Stable deposits		0	0	0	0
6	Less stable deposits		30,488	862	3	28,219
7	Wholesale funding:		30,905	6,944	3,560	13,409
8	Operational deposits		0	0	0	0
9	Other wholesale funding		30,905	6,944	3,560	13,409
10	Interdependent liabilities		0	0	0	0
11	Other liabilities:	0	1,909	0	0	0
12	NSFR derivative liabilities	0				
13	All other liabilities and capital instruments not included in the above categories		1,909	0	0	0
14	<b>Total available stable funding (ASF)</b>					<b>45,775</b>
<b>Required stable funding (RSF) Items</b>						
15	Total high-quality liquid assets (HQLA)					0
UK-15a	Assets encumbered for more than 12m in cover pool		0	0	0	0
16	Deposits held at other financial institutions for operational purposes		212	0	0	106
17	Performing loans and securities:		31,929	9,363	21,187	28,889
18	Performing securities financing transactions with financial customers collateralised by Level 1 HQLA subject to 0% haircut		5,587	52	1,946	1,972
19	Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions		21,586	7,141	15,818	20,508
20	Performing loans to non-financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of which:		3,517	689	2,686	4,363
21	With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk		0	0	113	74
22	Performing residential mortgages, of which:		18	12	194	180
23	With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk		0	0	0	0
24	Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products		1,221	1,469	543	1,865
25	Interdependent assets		0	0	0	0
26	Other assets:		838	4	1,232	1,411
27	Physical traded commodities				0	0
28	Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs		0	0	0	0
29	NSFR derivative assets		146			146
30	NSFR derivative liabilities before deduction of variation margin posted		552			28
31	All other assets not included in the above categories		141	4	1,232	1,238
32	Off-balance sheet items		9,397	0	0	236
33	<b>Total RSF</b>					<b>30,642</b>
34	<b>Net Stable Funding Ratio (%)</b>					<b>151%</b>

## Pillar 3 Disclosures

## Leverage Ratio

The company is subject to the leverage ratio framework established by the PRA. The leverage ratio compares Tier 1 capital to a measure of leverage exposure, defined as the sum of certain assets plus certain off-balance-sheet exposures (which include a measure of derivatives, securities financing transactions, commitments and guarantees), less Tier 1 capital deductions.

In Oct 2021, the framework was revised to set a minimum leverage ratio requirement at 3.25% and leverage ratio buffers that apply from January 1, 2023.

The table below presents a breakdown of the leverage ratio for GSGUK and its significant subsidiaries, GSI and GSIB as of December 31, 2022 as per the current framework

**Table 41: Leverage Ratio**

\$ in millions	As of December 2022		
	GSGUK	GSI	GSIB
Tier 1 Capital	\$ 44,970	\$ 40,080	\$ 3,409
Leverage Ratio Exposure	\$ 714,629	\$ 659,896	\$ 49,383
<b>Leverage Ratio</b>	<b>6.29%</b>	<b>6.07%</b>	<b>6.87%</b>

The following tables present further information on the leverage ratio. Table 42 reconciles the exposure measure to the balance sheets of GSGUK, GSI and GSIB. Table 43 breaks down the exposures from on-balance sheet assets by trading and banking book. Table 44 gives further details on the adjustments and drivers of the leverage ratio.

**Table 42: Summary Reconciliation of Accounting Assets and Leverage Ratio Exposures**

\$ in millions		As of December 2022		
		GSGUK	GSI	GSIB
1	Total assets as per published financial statements	\$ 1,253,722	\$ 1,202,978	\$ 76,982
4	(Adjustment for exemption of exposures to central banks)	(10,763)	(6,120)	(4,644)
8	Adjustment for derivative financial instruments	(519,674)	(518,104)	1,229
9	Adjustment for securities financing transactions (SFTs)	21,051	22,785	6,566
10	Adjustment for off-balance sheet items (i.e. conversion to credit equivalent amounts of off-balance sheet exposures)	6,769	1,761	5,008
11	(Adjustment for prudent valuation adjustments and specific and general provisions which have reduced tier 1 capital (leverage))	(68)	-	(68)
UK-11a	(Adjustment for exposures excluded from the total exposure measure in accordance with point (c) of Article 429a(1) of the CRR)	-	(7,317)	(35,622)
12	Other adjustments	(36,408)	(36,087)	(68)
13	<b>Total exposure measure</b>	<b>\$ 714,629</b>	<b>\$ 659,896</b>	<b>\$ 49,383</b>

**Table 43: Split-up of on balance sheet exposures (excluding derivatives, SFTs and exempted exposures)**

\$ in millions		As of December 2022		
		Leverage ratio exposures		
		GSGUK	GSI	GSIB
<b>UK-1</b>	<b>Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:</b>	<b>\$ 159,021</b>	<b>\$ 112,551</b>	<b>\$ 35,110</b>
UK-2	Trading book exposures	\$ 107,132	\$ 92,092	\$ 6,204
UK-3	Banking book exposures, of which:	\$ 51,889	\$ 20,459	\$ 28,906
UK-5	Exposures treated as sovereigns	28,412	7,739	20,673
UK-6	Exposures to regional governments, MDB, international organisations and PSE not treated as sovereigns	-	-	-
UK-7	Institutions	8,857	5,608	1,297
UK-8	Secured by mortgages of immovable properties	70	-	37
UK-9	Retail exposures	52	-	7
UK-10	Corporates	11,451	6,156	5,927
UK-11	Exposures in default	242	97	111
UK-12	Other exposures (e.g. equity, securitisations, and other non-credit obligation assets)	2,805	859	854

## Pillar 3 Disclosures

Table 44: Leverage Ratio Common Disclosure

\$ in millions		Leverage ratio exposures					
		GSGUK	GSI	GSIB	GSGUK	GSI	GSIB
		As of December 2022			As of June 2022		
<b>On-balance sheet exposures (excluding derivatives and SFTs)</b>							
1	On-balance sheet items (excluding derivatives, SFTs, but including collateral)	\$ 196,498	\$ 156,706	\$ 46,753	\$ 277,570	\$ 245,511	\$ 39,809
2	Gross-up for derivatives collateral provided, where deducted from the balance sheet assets pursuant to the applicable accounting framework	-	-	-	-	-	-
3	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	(34,442)	(34,401)	(3)	(30,940)	(30,306)	(632)
5	(General credit risk adjustments to on-balance sheet items)	(68)	-	(68)	(74)	-	(74)
6	(Asset amounts deducted in determining tier 1 capital (leverage))	(1,966)	(1,684)	(64)	(1,938)	(1,879)	(49)
7	<b>Total on-balance sheet exposures (excluding derivatives and SFTs)</b>	<b>\$ 160,022</b>	<b>\$ 120,621</b>	<b>\$ 46,618</b>	<b>\$ 244,618</b>	<b>\$ 213,326</b>	<b>\$ 39,054</b>
<b>Derivative exposures</b>							
8	Replacement cost associated with SA-CCR derivatives transactions (i.e. net of eligible cash variation margin)	91,298	91,057	340	110,305	110,338	291
9	Add-on amounts for potential future exposure associated with SA-CCR derivatives transactions	144,594	146,693	2,933	152,007	152,364	1,203
10	(Exempted CCP leg of client-cleared trade exposures) (SA-CCR)	(10,936)	(10,936)	-	(9,278)	(9,278)	-
11	Adjusted effective notional amount of written credit derivatives	914,672	912,488	2,185	878,090	876,260	1,830
12	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	(859,111)	(856,983)	(2,128)	(819,957)	(818,131)	(1,826)
13	<b>Total derivatives exposures</b>	<b>\$ 280,517</b>	<b>\$ 282,319</b>	<b>\$ 3,330</b>	<b>\$ 311,167</b>	<b>\$ 311,553</b>	<b>\$ 1,498</b>
<b>Securities financing transaction (SFT) exposures</b>							
14	Gross SFT assets (with no recognition of netting), after adjustment for sales accounting transactions	420,452	392,644	44,749	405,581	382,580	44,306
15	(Netted amounts of cash payables and cash receivables of gross SFT assets)	(161,471)	(145,449)	(16,022)	(113,237)	(112,457)	(781)
16	Counterparty credit risk exposure for SFT assets	21,051	22,785	6,566	22,393	23,126	7,992
18	<b>Total securities financing transaction exposures</b>	<b>\$ 280,032</b>	<b>\$ 269,980</b>	<b>\$ 35,293</b>	<b>\$ 314,737</b>	<b>\$ 293,249</b>	<b>\$ 51,517</b>
<b>Other off-balance sheet exposures</b>							
19	Off-balance sheet exposures at gross notional amount	21,747	2,896	18,852	19,231	1,834	17,397
20	(Adjustments for conversion to credit equivalent amounts)	(16,926)	(2,483)	(14,444)	(14,627)	(1,377)	(13,251)
22	<b>Off-balance sheet exposures</b>	<b>\$ 4,821</b>	<b>\$ 413</b>	<b>\$ 4,408</b>	<b>\$ 4,604</b>	<b>\$ 457</b>	<b>\$ 4,146</b>
<b>Excluded exposures</b>							
UK-22a	(Exposures excluded from the total exposure measure in accordance with point (c) of Article 429a(1) of the CRR)	-	(7,317)	(35,622)	-	(3,129)	(39,923)
UK-22k	<b>(Total exempted exposures)</b>	<b>-</b>	<b>\$ (7,317)</b>	<b>\$ (35,622)</b>	<b>-</b>	<b>\$ (3,129)</b>	<b>\$ (39,923)</b>
<b>Capital and total exposure measure</b>							
23	<b>Tier 1 capital (leverage)</b>	<b>\$ 44,970</b>	<b>\$ 40,080</b>	<b>\$ 3,409</b>	<b>\$ 43,831</b>	<b>\$ 38,765</b>	<b>\$ 3,272</b>
24	Total exposure measure including claims on central banks	725,392	666,016	54,027	875,126	815,456	56,292
UK-24a	(-) Claims on central banks excluded	(10,763)	(6,120)	(4,644)	(60,865)	(53,424)	(7,441)
UK-24b	<b>Total exposure measure excluding claims on central banks</b>	<b>\$ 714,629</b>	<b>\$ 659,896</b>	<b>\$ 49,383</b>	<b>\$ 814,261</b>	<b>\$ 762,032</b>	<b>\$ 48,851</b>
<b>Leverage ratio</b>							
25	Leverage ratio excluding claims on central banks (%)	6.29%	6.07%	6.90%	5.38%	5.09%	6.70%
UK-25a	Fully loaded ECL accounting model leverage ratio excluding claims on central banks (%)	6.29%	6.07%	6.90%	5.38%	5.09%	6.70%
UK-25b	Leverage ratio excluding central bank reserves as if the temporary treatment of unrealised gains and losses measured at fair value through other comprehensive income had not been applied (%)	6.29%	6.07%	6.90%	5.38%	5.09%	6.70%
UK-25c	Leverage ratio including claims on central banks (%)	6.20%	6.02%	6.31%	5.01%	4.75%	5.81%
26	Regulatory minimum leverage ratio requirement (%)*	N/A	N/A	N/A	N/A	N/A	N/A

\* Row 26 "Regulatory minimum leverage ratio requirements (%)" is not applicable considering the GSGUK has no binding minimum leverage ratio requirement until 01 January 2023.

GSGUK Leverage ratio increased from 5.38% in June 2022 to 6.29% in December 2022 driven by leverage exposures due to reduced on-balance-sheet exposures primarily within customer receivables, securities financing transactions (SFTs) and derivative exposures.

**Pillar 3 Disclosures****Risk of Excessive Leverage**

The risk of excessive leverage is the risk resulting from a vulnerability due to leverage or contingent leverage that may require unintended corrective measures to our business plan, including distressed selling of assets which might result in losses or in valuation adjustments to our remaining assets.

The GSI and GSIB Asset and Liability Committees (GSI and GSIB ALCOs) are the primary governance committees for the management of the UK material subsidiaries' balance sheets, and are responsible for maintaining leverage ratios in accordance with the levels expressed in each entity's risk appetite statement.

We monitor the leverage ratio as calculated above and have processes in place to dynamically manage our assets and liabilities. These processes include:

- Monthly leverage ratio monitoring is conducted for GSI and GSIB. Leverage ratio monitoring thresholds have been established for GSI and GSIB and reported to the respective ALCOs, CROs, CFOs, CEOs, Risk Committees and Boards depending on size of movement.
- Quarterly leverage ratio planning which combines our projected leverage ratio assets (on- and off-balance sheet) and Tier 1 capital of GSGUK, GSI and GSIB.
- Potential new transactions which could have a material impact on GSGUK's capital and/or leverage position are escalated to and approved by Corporate Treasury, and by Controllers and other managers from independent control and support functions.

## Capital Adequacy

### Overview

Capital adequacy is of critical importance to us. The firm has in place a comprehensive capital management policy that provides a framework, defines objectives and establishes guidelines to assist us in maintaining the appropriate level and composition of capital in both business-as-usual and stressed conditions.

We determine the appropriate amount and composition of capital by considering multiple factors, including current and future regulatory capital requirements, the results of capital planning and stress testing processes, the results of resolution capital models and other factors, such as rating agency guidelines, subsidiary capital requirements, the business environment and conditions in the financial markets.

### Internal Capital Adequacy Assessment Process

We perform an ICAAP with the objective of ensuring that GSGUK is appropriately capitalised relative to the risks in our business. The ICAAP is a comprehensive assessment of the risks to which we are or may be exposed and covers both the risks for which we consider capital to be an appropriate mitigant, and those for which we consider mitigants other than capital to be appropriate.

As part of our ICAAP, we perform an internal risk-based capital assessment. We evaluate capital adequacy based on the result of our internal risk-based capital assessment, which includes the results of stress tests, and our regulatory capital ratios. Stress testing is an integral component of our ICAAP. It is designed to measure our estimated performance under various stressed market conditions and assists us in analysing whether GSGUK holds an appropriate amount of capital relative to the risks of our businesses. Our goal is to hold sufficient capital to ensure we remain adequately capitalised after experiencing a severe stress event. Our 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.

## Own Funds Template

The table below presents further information on the detailed capital position of GSGUK, GSI and GSIB as at December 31,2022.

**Table 45: Composition of regulatory own funds**

		Amounts			Source based on reference numbers of the balance sheet under the regulatory scope of consolidation		
		GSGUK	GSI	GSIB	GSGUK	GSI	GSIB
		As of December 2022					
		\$ in millions					
<b>Common Equity Tier 1 (CET1) capital: instruments and reserves</b>							
1	Capital instruments and the related share premium accounts	\$ 2,523	\$ 6,166	\$ 2,157			
	of which: Share Capital	2,135	598	63	Row 15 of CC2 "GSGUK"	Row 13 of CC2 "GSI"	Row 14 of CC2 "GSIB"
	of which: Share Premium	388	5,568	2,094	Row 16 of CC2 "GSGUK"	Row 14 of CC2 "GSI"	Row 13 of CC2 "GSIB"
2	Retained earnings	32,307	23,842	1,421	Row 18 of CC2 "GSGUK"	Row 16 of CC2 "GSI"	Row 16 of CC2 "GSIB"
3	Accumulated other comprehensive income (and other reserves)	(12)	(127)	(321)	Row 19 & Row 20 of CC2 "GSGUK"	Row 17 of CC2 "GSI"	Row 17 of CC2 "GSIB"
UK-5a	Independently reviewed interim profits net of any foreseeable charge or dividend	4,117	4,027	217	Row 18 of CC2 "GSGUK"	Row 16 of CC2 "GSI"	Row 16 of CC2 "GSIB"
6	<b>Common Equity Tier 1 (CET1) capital before regulatory adjustments</b>	<b>\$ 38,936</b>	<b>\$ 33,908</b>	<b>\$ 3,474</b>			
<b>Common Equity Tier 1 (CET1) capital: regulatory adjustments</b>							
7	Additional value adjustments (negative amount)	(695)	(663)	(15)			
8	Intangible assets (net of related tax liability) (negative amount)	(419)	(405)	(15)			
10	Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability where the conditions in Article 38 (3) CRR are met) (negative amount)	(29)	-	(29)			
12	Negative amounts resulting from the calculation of expected loss amounts	(779)	(720)	-			
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	(84)	(81)	(6)			
15	Defined-benefit pension fund assets (negative amount)	(29)	(29)	-			
27a	Other regulatory adjustments to CET1 capital (including IFRS 9 transitional adjustments when relevant) <sup>1</sup>	(231)	(231)	-			
28	<b>Total regulatory adjustments to Common Equity Tier 1 (CET1)</b>	<b>(2,266)</b>	<b>(2,128)</b>	<b>(65)</b>			
29	<b>Common Equity Tier 1 (CET1) capital</b>	<b>\$ 36,670</b>	<b>\$ 31,780</b>	<b>\$ 3,409</b>			
<b>Additional Tier 1 (AT1) capital: instruments</b>							
30	Capital instruments and the related share premium accounts	8,300	8,300	-	Row 17 of CC2 "GSGUK"	Row 15 of CC2 "GSI"	
36	<b>Additional Tier 1 (AT1) capital before regulatory adjustments</b>	<b>\$ 8,300</b>	<b>\$ 8,300</b>	<b>-</b>			
<b>Additional Tier 1 (AT1) capital: regulatory adjustments</b>							
44	<b>Additional Tier 1 (AT1) capital</b>	<b>\$ 8,300</b>	<b>8,300</b>	<b>-</b>			
45	<b>Tier 1 capital (T1 = CET1 + AT1)</b>	<b>\$ 44,970</b>	<b>\$ 40,080</b>	<b>\$ 3,409</b>			
<b>Tier 2 (T2) capital: instruments</b>							
46	Capital instruments and the related share premium accounts	6,503	5,377	826			
50	Credit risk adjustments	-	-	2			
51	<b>Tier 2 (T2) capital before regulatory adjustments</b>	<b>\$ 6,503</b>	<b>\$ 5,377</b>	<b>\$ 828</b>			
<b>Tier 2 (T2) capital: regulatory adjustments</b>							
57	<b>Total regulatory adjustments to Tier 2 (T2) capital</b>	<b>-</b>	<b>-</b>	<b>-</b>			
58	<b>Tier 2 (T2) capital</b>	<b>\$ 6,503</b>	<b>\$ 5,377</b>	<b>\$ 828</b>			
59	<b>Total capital (TC = T1 + T2)</b>	<b>\$ 51,473</b>	<b>\$ 45,457</b>	<b>\$ 4,237</b>			
60	<b>Total Risk exposure amount</b>	<b>\$ 267,871</b>	<b>\$ 247,653</b>	<b>\$ 15,674</b>			
<b>Capital ratios and buffers</b>							
61	Common Equity Tier 1 (as a percentage of total risk exposure amount)	13.69%	12.83%	22.16%			
62	Tier 1 (as a percentage of total risk exposure amount)	16.79%	16.18%	22.16%			
63	Total capital (as a percentage of total risk exposure amount)	19.22%	18.36%	27.03%			

## Pillar 3 Disclosures

64	Institution CET1 overall capital requirement (CET1 requirement in accordance with Article 92 (1) CRR, plus additional CET1 requirement which the institution is required to hold in accordance with point (a) of Article 104(1) CRD, plus combined buffer requirement in accordance with Article 128(6) CRD) expressed as a percentage of risk exposure amount)	8.73%	8.71%	14.89%
65	of which: capital conservation buffer requirement	2.50%	2.50%	2.50%
66	of which: countercyclical buffer requirement	0.35%	0.34%	0.42%
68	<b>Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)</b>	7.58%	6.96%	12.72%
<b>Amounts below the thresholds for deduction (before risk weighting)</b>				
72	Direct and indirect holdings of own funds and eligible liabilities of financial sector entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	1,150	1,077	-
75	Deferred tax assets arising from temporary differences (amount below 17.65% threshold, net of related tax liability where the conditions in Article 38 (3) CRR are met)	783	663	121
<b>Applicable caps on the inclusion of provisions in Tier 2</b>				
77	Cap on inclusion of credit risk adjustments in T2 under standardised approach	87	44	5
79	Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	625	558	72
<b>Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2014 and 1 Jan 2022)</b>				
80	Current cap on CET1 instruments subject to phase out arrangements	-	-	-
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	-	-	-
82	Current cap on AT1 instruments subject to phase out arrangements	-	-	-
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	-	-	-
84	Current cap on T2 instruments subject to phase out arrangements	-	-	-
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	-	-	-

- Other Adjustments include regulatory deductions for foreseeable charges applicable to profits recognised as of December 2022.



## Pillar 3 Disclosures

Following table represents balance sheet as in published consolidated IFRS Financial Information prepared in accordance with the applicable accounting framework and under regulatory scope of consolidation. There are no differences in consolidation methodology under the accounting and regulatory frameworks.

**Table 46: Reconciliation of regulatory own funds to balance sheet in the audited financial statements**

## GSGUK

<i>\$ in millions</i>				<b>As of December 2022</b>
		<b>Balance sheet as in published financial statements</b>	<b>Under regulatory scope of consolidation</b>	<b>Reference</b>
		<b>As at period end</b>	<b>As at period end</b>	
<b>Assets - Breakdown by asset class according to the balance sheet in the published financial statements</b>				
1	Cash and cash equivalents	\$ 29,822	\$ 29,822	
2	Collateralised agreements	247,701	247,701	
3	Customer and other receivables	78,944	78,944	
4	Trading assets	876,265	876,265	
5	Investments	3,409	3,409	
6	Loans	9,426	9,426	
7	Other assets	8,023	8,023	
8	Investment property	20	20	
	<b>Total assets</b>	<b>\$ 1,253,610</b>	<b>\$ 1,253,610</b>	
<b>Liabilities - Breakdown by liability class according to the balance sheet in the published financial statements</b>				
9	Collateralised financings	99,775	99,775	
10	Customer and other payables	111,421	111,421	
11	Trading Liabilities	843,676	843,676	
12	Unsecured borrowings	79,517	79,517	
13	Deposits	67,342	67,342	
14	Other liabilities	4,644	4,644	
	<b>Total liabilities</b>	<b>\$ 1,206,375</b>	<b>\$ 1,206,375</b>	
<b>Shareholders' Equity</b>				
15	Share Capital	2,135	2,135	Row 1 of CC1 template "GSGUK"
16	Share premium account	388	388	Row 1 of CC1 template "GSGUK"
17	Other equity instruments	8,300	8,300	Row 30 of CC1 template "GSGUK"
18	Retained earnings	36,424	36,424	Row 2 and Row 5a of CC1 template "GSGUK"
19	Other reserves	425	425	Row 3 of CC1 template "GSGUK"
20	Accumulated other comprehensive income	(437)	(437)	Row 3 of CC1 template "GSGUK"
	<b>Total shareholders' equity</b>	<b>\$ 47,235</b>	<b>\$ 47,235</b>	
	<b>Total liabilities and shareholder's equity</b>	<b>\$ 1,253,610</b>	<b>\$ 1,253,610</b>	

## Pillar 3 Disclosures

## GSI

				As of December 2022
<i>\$ in millions</i>				
		Balance sheet as in published financial statements	Under regulatory scope of consolidation	Reference
		As at period end	As at period end	
<b>Assets - Breakdown by asset class according to the balance sheet in the published financial statements</b>				
1	Cash and cash equivalents	\$ 11,707	\$ 11,707	
2	Collateralised agreements	235,796	235,796	
3	Customer and other receivables	78,967	78,967	
4	Trading assets	872,810	872,810	
5	Investments	280	280	
6	Loans	222	222	
7	Other assets	3,259	3,259	
	<b>Total assets</b>	<b>\$ 1,203,041</b>	<b>\$ 1,203,041</b>	
<b>Liabilities - Breakdown by liability class according to the balance sheet in the published financial statements</b>				
8	Collateralised financings	124,735	124,735	
9	Customer and other payables	110,983	110,983	
10	Trading Liabilities	844,313	844,313	
11	Unsecured borrowings	76,205	76,205	
12	Other liabilities	4,596	4,596	
	<b>Total liabilities</b>	<b>\$ 1,160,832</b>	<b>\$ 1,160,832</b>	
<b>Shareholders' Equity</b>				
13	Share Capital	598	598	Row 1 of CC1 template "GSI"
14	Share premium account	5,568	5,568	Row 1 of CC1 template "GSI"
15	Other equity instruments	8,300	8,300	Row 30 of CC1 template "GSI"
16	Retained earnings	27,870	27,870	Row 2 and Row 5a of CC1 template "GSI"
17	Accumulated other comprehensive income	(127)	(127)	Row 3 of CC1 template "GSI"
	<b>Total shareholders' equity</b>	<b>\$ 42,209</b>	<b>\$ 42,209</b>	
	Total liabilities and shareholder's equity	<b>\$ 1,203,041</b>	<b>\$ 1,203,041</b>	

## Pillar 3 Disclosures

## GSIB

				As of December 2022
		Balance sheet as in published financial statements	Under regulatory scope of consolidation	Reference
		As at period end	As at period end	
<b>Assets - Breakdown by asset class according to the balance sheet in the published financial statements</b>				
1	Cash and cash equivalents	\$ 18,455	\$ 18,455	
2	Collateralised agreements	37,489	37,489	
3	Customer and other receivables	209	209	
4	Trading assets	5,367	5,367	
5	Investment	4,078	4,078	
6	Loans	9,109	9,109	
7	Other assets	2,273	2,273	
	<b>Total assets</b>	<b>\$ 76,980</b>	<b>\$ 76,980</b>	
<b>Liabilities - Breakdown by liability class according to the balance sheet in the published financial statements</b>				
8	Collateralised financings	301	301	
9	Customer and other payables	764	764	
10	Trading Liabilities	1,604	1,604	
11	Deposits	67,841	67,841	
12	Unsecured borrowings	2,827	2,827	
13	Other liabilities	169	169	
	<b>Total liabilities</b>	<b>\$ 73,506</b>	<b>\$ 73,506</b>	
<b>Shareholders' Equity</b>				
14	Share Capital	63	63	Row 1 of CC1 template "GSIB"
15	Share premium account	2,094	2,094	Row 1 of CC1 template "GSIB"
16	Retained earnings	1,638	1,638	Row 2 and UK-5a of CC1 template "GSIB"
17	Accumulated other comprehensive income	(321)	(321)	Row 3 of CC1 template "GSIB"
	<b>Total shareholders' equity</b>	<b>\$ 3,474</b>	<b>\$ 3,474</b>	Row 6 of CC1 template "GSIB"
	Total liabilities and shareholder's equity	<b>\$ 76,980</b>	<b>\$ 76,980</b>	

## Pillar 3 Disclosures

## Countercyclical Capital Buffer Template

The following tables present information on the impact of the countercyclical capital buffer as prescribed under Article 440 of PRA Rulebook which came into force from January 01, 2022.

Table 47: Countercyclical Capital Buffer

\$ in millions	As of December 2022		
	GSGUK	GSI	GSIB
Total risk exposure amount	\$ 267,871	\$ 247,653	\$ 15,674
Countercyclical buffer rate	0.34%	0.34%	0.42%
Countercyclical buffer requirement	910	834	66

As of December 31, 2022 the Financial Policy Committee

The geographical distribution of credit exposures relevant for the calculation of the countercyclical capital buffer is broken down in Table 48.

Table 48: Geographical Distribution of Credit Exposures Relevant for the Calculation of the Buffer

\$ in millions											As of December 2022		
Breakdown by Country	General credit exposures		Trading book exposure <sup>1</sup>		Securitisation exposures Exposure value for non-trading book	Total Exposure	Own funds requirements				Risk-weighted exposure amounts	Own funds requirement weights (%)	Counter-cyclical capital buffer rate (%)
	Exposure value under the standardised approach	Exposure value under the IRB approach	Sum of long and short positions of trading book exposures for SA	Value of trading book exposures for internal models			Relevant credit risk exposures - Credit risk	Relevant credit exposures - Market risk	Relevant credit exposures - Securitisation positions in the non-trading book	Total			
Norway	-	271	179	152	-	602	21	3	-	24	295	0.32%	2.00%
Hong Kong	-	285	71	2,759	-	3,115	27	3	-	30	371	0.40%	1.00%
Czech Republic	-	-	-	178	-	178	-	1	-	1	16	0.02%	1.50%
Slovakia	-	156	-	2	-	158	11	-	-	11	138	0.15%	1.00%
Bulgaria	-	-	-	2	-	2	-	-	-	-	-	0.00%	1.00%
Luxembourg	338	8,993	964	827	-	11,122	515	22	-	537	6,715	7.32%	0.50%
Sweden	-	1,164	1,199	2,745	-	5,108	39	14	-	53	666	0.73%	1.00%
Iceland	-	-	-	11	-	11	-	2	-	2	31	0.03%	2.00%
Romania	-	-	11	37	-	48	0	0	-	0	3	0.00%	0.50%
Denmark	-	451	236	199	-	886	21	5	-	26	331	0.36%	2.00%
United Kingdom	2,313	13,912	35,297	1,560,947	-	1,612,469	1,368	674	-	2,042	25,523	28.11%	1.00%
Other	672	54,120	37,809	596,686	809	690,096	3,543	1,037	33	4,613	57,646	0.00%	0.00%
<b>GSGUK Total</b>	<b>\$ 3,323</b>	<b>\$ 79,352</b>	<b>\$ 75,766</b>	<b>\$ 2,164,545</b>	<b>\$ 809</b>	<b>\$ 2,323,795</b>	<b>\$ 5,545</b>	<b>\$ 1,761</b>	<b>\$ 33</b>	<b>\$ 7,339</b>	<b>\$ 91,735</b>	<b>0.00%</b>	
Norway	-	271	179	152	-	602	20	3	-	24	295	0.37%	2.00%
Hong Kong	-	194	71	2,759	-	3,024	14	3	-	17	211	0.26%	1.00%
Czech Republic	-	-	-	178	-	178	-	1	-	1	16	0.02%	1.50%
Slovakia	-	156	-	2	-	158	11	-	-	11	138	0.17%	1.00%
Bulgaria	-	-	-	2	-	2	-	-	-	-	-	0.00%	1.00%
Luxembourg	-	6,583	963	827	-	8,373	382	22	-	404	5,051	6.31%	0.50%
Sweden	-	1,036	1,198	2,745	-	4,979	37	14	-	51	637	0.80%	1.00%
Iceland	-	-	-	11	-	11	-	2	-	2	31	0.04%	2.00%

(FPC) had recognised exposures of U.K. institutions from Norway, Sweden, Hong Kong, Czech Republic, Iceland, Romania, Denmark, Slovakia, Bulgaria, Luxembourg, in addition to the UK as implemented in the calculation of this buffer. These are shown as separate rows below with their respective contributions to own funds requirements for GSGUK, GSI and GSIB.

On March 11, 2020, the Bank of England announced that it has reduced the UK countercyclical capital buffer from 1% to 0% of banks' exposures to U.K. borrowers and counterparties with effect from March 11, 2020, reducing the company's buffer by approximately 0.20%. The rate reverted to 1% on 13 December 2022 and is expected to further increase to 2% from 05 July 2023.

**Pillar 3 Disclosures**

Romania	-	-	11	37	-	48	-	-	-	-	3	0.00%	0.50%
Denmark	-	451	236	199	-	886	21	5	-	26	330	0.41%	2.00%
United Kingdom	1,783	12,006	34,776	1,560,947	-	1,609,512	1,113	625	-	1,738	21,728	27.14%	1.00%
Other	-	51,642	37,789	596,686	-	686,116	3,097	1,034	-	4,130	51,625	0.00%	0.00%
<b>GSI Total</b>	<b>\$ 1,783</b>	<b>\$ 72,339</b>	<b>\$ 75,223</b>	<b>\$ 2,164,545</b>	<b>-</b>	<b>\$ 2,313,889</b>	<b>\$ 4,695</b>	<b>\$ 1,709</b>	<b>-</b>	<b>\$ 6,404</b>	<b>\$ 80,065</b>	<b>0.00%</b>	
Norway	-	-	-	-	-	-	-	-	-	-	-	0.00%	2.00%
Hong Kong	-	91	-	-	-	91	13	-	-	13	160	1.42%	1.00%
Czech Republic	-	-	-	-	-	-	-	-	-	-	-	0.00%	1.50%
Slovakia	-	-	-	-	-	-	-	-	-	-	-	0.00%	1.00%
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	0.00%	1.00%
Luxembourg	-	2,410	1	-	-	2,411	93	-	-	93	1,157	10.22%	0.50%
Sweden	-	128	1	-	-	129	2	-	-	2	29	0.25%	1.00%
Iceland	-	-	-	-	-	-	-	-	-	-	-	0.00%	2.00%
Romania	-	-	-	-	-	-	-	-	-	-	-	0.00%	0.50%
Denmark	-	-	-	-	-	-	-	-	-	-	-	0.00%	2.00%
United Kingdom	122	2,452	521	-	-	3,095	240	49	-	289	3,616	34.22%	1.00%
Other	50	5,606	20	-	809	6,485	474	1	33	508	6,363	0.00%	0.00%
<b>GSIB Total</b>	<b>\$ 172</b>	<b>\$ 10,687</b>	<b>\$ 543</b>	<b>-</b>	<b>\$ 809</b>	<b>\$ 12,211</b>	<b>\$ 822</b>	<b>\$ 50</b>	<b>\$ 33</b>	<b>\$ 905</b>	<b>\$ 11,325</b>	<b>0.00%</b>	

1. The value of trading book exposures for both internal models and standard approach has been reported on a gross basis in line with the reporting requirements however does not form the basis for the capital calculation.

## Pillar 3 Disclosures

## Capital and MREL Instruments

The following table summarises the main features of capital and MREL instruments for GSGUK as of December 2022.

Table 49: GSGUK Capital and MREL Instruments' Main Features Template

<i>\$ in millions</i>	As of December 2022							
Issuer	GSGUK	GSGUK	GSGUK	GSGUK	GSGUK	GSGUK	GSGUK	GSGUK
Unique Identifier (e.g. CUSIP, ISIN, or Bloomberg identifier for private placement)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Public or private placement	Private placement	Private placement	Private placement	Private placement	Private placement	Private placement	N/A	N/A
Governing law(s) of the instrument	UK	UK	UK	UK	UK	UK	UK	UK
Contractual recognition of write down and conversion powers of resolution authorities	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Transitional CRR rules	CET1	Additional Tier 1	Tier 2	Tier 2	Tier 2	Tier 2	Eligible Liability	Eligible Liability
Post-transitional CRR rules	CET1	Additional Tier 1	Tier 2	Tier 2	Tier 2	Tier 2	Eligible Liability	Eligible Liability
Eligible at solo/(sub-) consolidated/solo&(sub-) consolidated	Consolidated	Consolidated	Consolidated	Consolidated	Consolidated	Consolidated	Consolidated	Consolidated
Instrument type	Ordinary Shares	Deeply Subordinated Undated Additional Tier 1 Notes	Preference Shares	Preference Shares	Subordinated Debt	Subordinated Debt	Senior debt	Senior debt
Amount recognised in regulatory capital	2,135	8,300	300	2,000	3,528	675	0	0
Nominal amount of instrument	2,135	3,000; 2,800; 2,500	300	2,000	3,528	675	14,576	5,600
Issue Price	2,135	\$1,000,000 per Note	\$1.00 per Preference Share	\$1.00 per Preference Share	3,528	675	14,576	5,600
Redemption Price	2,135	\$1,000,000 per Note	\$1.00 per Preference Share	\$1.00 per Preference Share	3,528	675	14,576	5,600
Accounting Classification	Shareholders' Equity	Shareholders' Equity	Amortised Cost	Amortised Cost	Amortised Cost	Amortised Cost	Amortised Cost	Amortised Cost
Original date of issuance <sup>1</sup>	Aug 20, 2013	June 27, 2017; June 28, 2017; November 28, 2018	June 27, 2018	July 11, 2019	Aug 1, 2005	Mar 20, 2013	Mar 6, 2012	Jan 21, 2020
Perpetual or dated	Perpetual	Perpetual	Dated	Dated	Dated	Dated	Dated	Dated
Original maturity date <sup>2</sup>	No maturity	No maturity	July 11, 2029	July 11, 2029	Sep 9, 2030	Dec 26, 2029	Mar 6, 2027	Jan 21, 2030
Issuer call subject to prior supervisory approval	N/A	No	Yes	Yes	No	No	No	No
Option call date, contingent call dates and redemption amount	N/A	N/A	With notice and PRA approval but not earlier than five years from the issue date	With notice and PRA approval but not earlier than five years from the issue date	No	No	N/A	N/A
Subsequent call dates, if applicable	N/A	N/A	Daily	Daily	N/A	N/A	N/A	N/A
Fixed or floating dividend / coupon	N/A	Fixed	Floating	Floating	Floating	Floating	Floating	Floating
Coupon rate and any related index <sup>3</sup>	N/A	8.55 per cent.; 8.55 per cent.; 8.67 per cent.	CoF + LTDS + 65 bps	CoF + LTDS + 65 bps	CoF + LTDS + 100bps	CoF + LTDS + 100bps	CoF + LTDS + 40bps	CoF + LTDS + 40bps
Existence of a dividend stopper	No	No	No	No	No	No	No	No
Fully discretionary, partially discretionary or mandatory (in terms of timing)	Fully Discretionary	Fully Discretionary	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory

## Pillar 3 Disclosures

Fully discretionary, partially discretionary or mandatory (in terms of amount)	Fully Discretionary	Fully Discretionary	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
Existence of step up or other incentive to redeem	N/A	N/A	No	No	N/A	N/A	No	No
Noncumulative or cumulative	Non-cumulative	Non-cumulative	Cumulative	Cumulative	Cumulative	Cumulative	Cumulative	Cumulative
Convertible or non-convertible	N/A	Non-convertible	Convertible	Convertible	Convertible	Convertible	Convertible	Convertible
If convertible, conversion trigger(s)	N/A	N/A	Resolution trigger	Resolution trigger	Resolution trigger	Resolution trigger	Resolution trigger	Resolution trigger
If convertible, fully or partially	N/A	N/A	Fully	Fully	Fully	Fully	Fully	Fully
If convertible, conversion rate	N/A	N/A	Conversion rate to be determined by the BoE	Conversion rate to be determined by the BoE	Conversion rate to be determined by the BoE	Conversion rate to be determined by the BoE	Conversion rate to be determined by the BoE	Conversion rate to be determined by the BoE
If convertible, mandatory or optional conversion	N/A	N/A	Optional	Optional	Optional	Optional	Optional	Optional
If convertible, specify instrument type convertible into	N/A	N/A	Ordinary Shares	Ordinary Shares	Ordinary Shares	Ordinary Shares	Ordinary Shares	Ordinary Shares
If convertible, specify issuer of instrument it converts to	N/A	N/A	GSGUKL	GSGUKL	GSGUKL	GSGUKL	GSGUKL	GSGUKL
Write-down features	N/A	Yes	N/A	N/A	N/A	N/A	N/A	N/A
If write-down, write-down trigger(s)	N/A	Regulatory Trigger Event <sup>4</sup> and Resolution trigger	N/A	N/A	N/A	N/A	N/A	N/A
If write-down, full or partial	N/A	Always fully (to \$0.01 per Note)	N/A	N/A	N/A	N/A	N/A	N/A
If write-down, permanent or temporary	N/A	Permanent	N/A	N/A	N/A	N/A	N/A	N/A
If temporary write-down, description of write-up mechanism	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Type of subordination (only for eligible liabilities)	N/A	N/A	N/A	N/A	N/A	N/A	Contractual	Contractual
Ranking of the instrument in normal insolvency proceedings	Equity	Perpetual unsecured securities	Preference shares	Preference shares	Subordinated loan facility	Subordinated loan facility	Senior loan	Senior loan
Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Preference shares	Preference Shares	Unsecured and subordinated debt	Unsecured and subordinated debt	Unsecured and unsubordinated debt	Unsecured and unsubordinated debt	Unsecured and senior debt	Unsecured and senior debt
Non-compliant transitioned features	No	No	No	No	No	No	No	No
If yes, specify non-compliant features	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Link to the full term and conditions of the instrument (signposting) <sup>5</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

1. First date of ordinary share issuance.

2. The original maturity date has been extended following amendment and the current maturity date is reflected in the table.

3. CoF represents Cost of Funds (the US Federal Reserve Funds Rate) and LTDS represents Long Term Debt Spread (the Goldman Sachs Weighted Average Cost of Debt).

4. Regulatory Trigger Event will be deemed to have occurred at any time where: (i) the CET1 Ratio of the GSGUKL and its consolidated subsidiaries as calculated by GSGUKL or the PRA is less than 7 per cent.; and or (ii) the CET1 Ratio of GSI as calculated by GSGUKL or the PRA is less than 7 per cent.

5. Instruments are internally issued as such no prospectus is available.

### **Key Changes during the Period**

As of December 31, 2022, GSGUK had own funds and eligible liabilities in excess of its internal MREL. On 28 July 2022, GSGUK and GSI repaid \$1.5bn of excess MREL eligible debt.



## Pillar 3 Disclosures

The following table summarises the main features of capital instruments for GSI and GSIB as of December 2022.

**Table 50: GSI and GSIB Capital Instruments' Main Features Template**

<i>\$ in millions</i>						As of December 2022	
Issuer	GSI	GSI	GSI	GSI	GSI	GSIB	GSIB
Unique Identifier (e.g. CUSIP, ISIN, or Bloomberg identifier for private placement)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Public or private placement	Private placement	Private placement	Private placement	Private placement	Private placement	Private placement	Private placement
Governing law(s) of the instrument	UK	UK	UK	UK	UK	UK	UK
Contractual recognition of write down and conversion powers of resolution authorities	No	No	No	No	No	No	No
Transitional CRR rules	CET1	Additional Tier 1	Tier 2	Tier 2	Tier 2	CET1	Tier 2
Post-transitional CRR rules	CET1	Additional Tier 1	Tier 2	Tier 2	Tier 2	CET1	Tier 2
Eligible at solo/(sub-) consolidated/solo&(sub-) consolidated	Consolidated	Consolidated	Consolidated	Consolidated	Consolidated	Consolidated	Consolidated
Instrument type	Ordinary Shares	Deeply Subordinated Undated Additional Tier 1 Notes	Sub-ordinated Debt	Sub-ordinated Debt	Sub-ordinated Debt	Ordinary Shares	Sub-ordinated Debt
Amount recognised in regulatory capital	598	8,300	4,252	675	450	63	826
Nominal amount of instrument	598	3,300; 2,500; 2,500	4,252	675	450	63	826
Issue Price	598	\$1,000,000 per Note	4,252	675	450	63	826
Redemption Price	598	\$1,000,000 per Note	4,252	675	450	63	826
Accounting Classification	Shareholder's Equity	Shareholder's Equity	Amortised Cost	Amortised Cost	Amortised Cost	Shareholder's Equity	Amortised Cost
Original date of issuance <sup>1</sup>	May 18, 1988	June 27, 2017; June 28, 2017; 28 November, 2018	July 31, 2003	June 26, 2012	Mar 20, 2013	Jun 28, 1973	Sep 9, 2015
Perpetual or dated	Perpetual	Perpetual	Dated	Dated	Dated	Perpetual	Dated
Original maturity date <sup>2</sup>	No maturity	No maturity	Sep 9, 2030	Dec 26, 2029	Dec 26, 2029	No maturity	15 years from agreement
Issuer call subject to prior supervisory approval	N/A	No	N/A	N/A	N/A	N/A	N/A
Option call date, contingent call dates and redemption amount	N/A	N/A	No	No	No	N/A	No
Subsequent call dates, if applicable	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fixed or floating dividend / coupon	N/A	Fixed	Floating	Floating	Floating	N/A	Floating
Coupon rate and any related index <sup>3</sup>	N/A	8.55 per cent.; 8.55 per cent.; 8.67 per cent.	CoF + LTDS + 100bps	CoF + LTDS + 100bps	CoF + LTDS + 100bps	N/A	CoF + 341bps
Existence of a dividend stopper	No	No	No	No	No	No	No
Fully discretionary, partially discretionary or mandatory (in terms of timing)	Fully discretionary	Fully Discretionary	Mandatory	Mandatory	Mandatory	Fully discretionary	Mandatory
Fully discretionary, partially discretionary or mandatory (in terms of amount)	Fully discretionary	Fully Discretionary	Mandatory	Mandatory	Mandatory	Fully discretionary	Mandatory

## Pillar 3 Disclosures

Existence of step up or other incentive to redeem	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Noncumulative or cumulative	Non-cumulative	Non-cumulative	Cumulative	Cumulative	Cumulative	Non-cumulative	Cumulative
Convertible or non-convertible	N/A	Non-Convertible	Convertible	Convertible	Convertible	N/A	Non-Convertible
If convertible, conversion trigger(s)	N/A	N/A	Resolution trigger	Resolution trigger	Resolution trigger	N/A	N/A
If convertible, fully or partially	N/A	Non-convertible	Fully	Fully	Fully	N/A	N/A
If convertible, conversion rate	N/A	N/A	Conversion rate to be determined by the BoE	Conversion rate to be determined by the BoE	Conversion rate to be determined by the BoE	N/A	N/A
If convertible, mandatory or optional conversion	N/A	N/A	Optional	Optional	Optional	N/A	N/A
If convertible, specify instrument type convertible into	N/A	N/A	Ordinary Shares	Ordinary Shares	Ordinary Shares	N/A	N/A
If convertible, specify issuer of instrument it converts to	N/A	N/A	GSI	GSI	GSI	N/A	N/A
Write-down features	N/A	Yes	N/A	N/A	N/A	N/A	N/A
If write-down, write-down trigger(s)	N/A	Regulatory Trigger Event <sup>1</sup> and Resolution trigger	N/A	N/A	N/A	N/A	N/A
If write-down, full or partial	N/A	Always fully (to \$0.01 per Note)	N/A	N/A	N/A	N/A	N/A
If write-down, permanent or temporary	N/A	Permanent	N/A	N/A	N/A	N/A	N/A
If temporary write-down, description of write-up mechanism	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Type of subordination (only for eligible liabilities)	N/A	Contractual	Contractual	Contractual	Contractual	N/A	Contractual
Ranking of the instrument in normal insolvency proceedings	Equity	Perpetual unsecured securities	Subordinated loan facility	Subordinated loan facility	Subordinated loan facility	Equity	Subordinated loan facility
Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Preference shares	Preference Shares	Unsecured and unsubord-inated debt	Unsecured and unsubord-inated debt	Unsecured and unsubord-inated debt	Preference shares	Unsecured and unsubord-inated debt
Non-compliant transitioned features	No	No	No	No	No	No	No
If yes, specify non-compliant features	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Link to the full term and conditions of the instrument (signposting) <sup>5</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A

1. First date of ordinary share issuance.

2. The original maturity date has been extended following amendment and the current maturity date is reflected in the table.

3. CoF represents Cost of Funds (the US Federal Reserve Funds Rate) and LTDS represents Long Term Debt Spread (the Goldman Sachs Weighted Average Cost of Debt).

4. Regulatory Trigger Event will be deemed to have occurred at any time where: (i) the CET1 Ratio of the GSGUKL and its consolidated subsidiaries as calculated by GSGUKL or the PRA is less than 7 per cent.; and (ii) the CET1 Ratio of GSI as calculated by GSGUKL or the PRA is less than 7 per cent.

5. Instruments are internally issued as such no prospectus is available.

## Pillar 3 Disclosures

## Prudential Valuation Adjustments

Prudent Valuation Adjustment (“PVA”) represents the excess of valuation adjustments required to achieve prudent value, over any adjustment applied in the firm’s fair value that addresses the same source of valuation uncertainty. The firm has documented policies and maintains systems and controls for the calculation of PVA as required by the Rules Supplementing Article 105 on Standards for Prudential Valuation in the PRA Rulebook. For a valuation input where the range of plausible values is created from mid prices, Prudent Value represents the point within the range where the firm is 90% confident that the mid value which could be achieved in exiting the valuation exposure would be at that price or better. The Firm’s methodology addresses fair value uncertainties arising from a number of sources; market price uncertainty, close-out costs, model risk, unearned credit spreads, investing and funding cost, concentrated positions, future administrative costs, early termination, operational risk. Methodologies utilised by our independent control functions to calculate PVA are aligned with, and use the same external data sources as, those used when carrying out price verification of fair value.

Table 51: Prudential Valuation Adjustments (PVA)

## GSGUK

<i>\$ in millions</i>								As of December 2022		
Category level AVA	Risk category					Category level AVA - Valuation uncertainty		Total category level post-diversification	Of which: Total core approach in the trading book	Of which: Total core approach in the banking book
	Equity	Interest Rates	Foreign exchange	Credit	Commodities	Unearned credit spreads AVA	Investment and funding costs AVA			
Market price uncertainty	332	137	3	199	3	40	77	396	343	53
Close-out cost	304	-	-	27	-	-	-	166	166	-
Concentrated positions	22	-	-	32	-	-	-	54	53	1
Early termination	-	-	-	-	-	-	-	-	-	-
Model risk	7	26	0	18	0	-	-	26	25	1
Operational risk	32	7	0	15	0	-	-	54	51	3
Future administrative costs	-	-	-	-	-	-	-	-	-	-
<b>Total Additional Valuation Adjustments (AVAs)</b>								<b>\$ 696</b>	<b>\$ 638</b>	<b>\$ 58</b>

## GSI

<i>\$ in millions</i>								As of December 2022		
Category level AVA	Risk category					Category level AVA - Valuation uncertainty		Total category level post-diversification	Of which: Total core approach in the trading book	Of which: Total core approach in the banking book
	Equity	Interest Rates	Foreign exchange	Credit	Commodities	Unearned credit spreads AVA	Investment and funding costs AVA			
Market price uncertainty	332	125	3	153	3	40	77	367	334	33
Close-out cost	304	-	-	27	-	-	-	166	166	-
Concentrated positions	22	-	-	31	-	-	-	53	53	0
Early termination	-	-	-	-	-	-	-	-	-	-
Model risk	7	26	0	17	0	-	-	25	25	0
Operational risk	32	6	0	15	0	-	-	53	50	3
Future administrative costs	-	-	-	-	-	-	-	-	-	-
<b>Total Additional Valuation Adjustments (AVAs)</b>								<b>\$ 664</b>	<b>\$ 628</b>	<b>\$ 36</b>

## Pillar 3 Disclosures

## GSIB

<i>\$ in millions</i>								As of December 2022		
Category level AVA	Risk category					Category level AVA - Valuation uncertainty		Total category level post-diversification	Of which: Total core approach in the trading book	Of which: Total core approach in the banking book
	Equity	Interest Rates	Foreign exchange	Credit	Commodities	Unearned credit spreads AVA	Investment and funding costs AVA			
Market price uncertainty	0	11	0	13	-	-	-	12	9	3
Close-out cost	-	-	-	-	-	-	-	-	-	-
Concentrated positions	-	-	-	1	-	-	-	1	-	1
Early termination	-	-	-	-	-	-	-	-	-	-
Model risk	0	0	0	1	-	-	-	1	1	-
Operational risk	0	1	0	1	-	-	-	1	1	0
Future administrative costs	-	-	-	-	-	-	-	-	-	-
<b>Total Additional Valuation Adjustments (AVAs)</b>								<b>\$ 15</b>	<b>\$ 11</b>	<b>\$ 4</b>

## Governance Arrangements

Directors of regulated entities are selected based primarily on the following criteria: (i) judgement, character, expertise, skills and knowledge useful to the oversight of the companies' businesses; (ii) diversity of viewpoints, backgrounds, experiences, and other demographics; (iii) business or other relevant experience; and (iv) the extent to which the interplay of the candidate's expertise, skills, knowledge and experience with that of other Board members will build a Board that is effective, collegial and responsive to the needs of the companies.

In selecting new directors, we consider a number of factors in seeking to develop a Board that, as a whole, reflects a range of skills, diversity, experience and expertise. It is our aim that at least 40% of the members of the Boards of the regulated entities in our UK group are women.

As of December 31, 2022, 40% of the members of the GSI Board and 50% of the members of the GSIB Board were women.

We have set out below the biographies of the members of the Boards of Directors of GSI and GSIB as of December 31, 2022, together with the positions and number of directorships they held at that date, including those at Goldman Sachs. We have excluded appointments held with organisations which do not pursue predominantly commercial objectives, such as charitable, educational and religious community organisations and counted directorships held within the same group as a single directorship in accordance with the PRA's General Organisational Requirements at 5.4-5.6 and the FCA's Senior Management Arrangements, Systems and Controls (SYSC) handbook at 4.3A.5-7.

**Table 52: GSI Board of Directors<sup>1</sup>**

Name	Role	Background	Directorships
J. M. D. Barroso <sup>2</sup>	Non-executive director and chair	José Manuel joined the GSI Board of Directors in July 2016 as chair and a non-executive director, and also acts as an advisor to the firm. He is also a member of the GSI Board Nominations Committee. He served as President of the European Commission from 2004 to 2014 and as the Prime Minister of Portugal from 2002 to 2004, having been elected to the Portuguese Parliament in 1985 and having held various ministerial positions. Since January 2021 he has been the chair of the board of Gavi, the Vaccine Alliance. José Manuel has a number of academic positions and has received various honorary degrees, prizes and decorations. On behalf of the European Union, José Manuel received the Nobel Peace Prize in 2012. José Manuel graduated in Law from the University of Lisbon and earned an MA in Political Science and a diploma in European studies from the University of Geneva.	1
C. G. Cripps	Non-executive director	Catherine joined the GSI Board of Directors in April 2019 and is chair of the GSI Board Risk Committee and a member of the GSI Board Audit Committee. Catherine was formerly an Investment Director at GAM, the CEO of a multi-strategy fund of Aida Capital Limited and has held various positions in equity derivatives trading, risk management and product control at different investment banks. Catherine also serves as a non-executive director at Maniyar Capital Advisors UK Ltd, Polar Capital Technology Trust plc and since June 2022, Pool Reinsurance Company Limited. She stepped down as a director of Warwick Company (UK) Limited in May 2022. Catherine earned an MA in Physics from Oxford University and has completed a period of post graduate research in Quantum Information at Imperial College, London.	4
L. A. Donnelly	Executive director and chief operation officer	Lisa joined the GSI Board of Directors in September 2022. She is chief administrative officer for EMEA. She also oversees Operations, where she is responsible for coordinating common practices, standards and protocols for global Operations functions. She is chair of the EMEA Federation Leadership Group, Operations Leadership Group, co-chair of the Firmwide Operational Risk and Resilience Committee and is a member of the European Management Committee, Firmwide Conduct Committee, EMEA Conduct Committee, Goldman Sachs International Risk Committee and EMEA Inclusion and Diversity Committee. Lisa also serves as a director on the Goldman Sachs Bank Europe SE Supervisory Board. Lisa joined Goldman Sachs in 2000. Prior to joining the firm, Lisa worked at Deloitte Consulting. Lisa earned a BA in English Literature from the University of Cambridge.	1
R. J. Gnodde	Executive director and chief executive officer	Richard is chief executive officer of GSI having joined the GSI Board in October 2006. He has been a member of the Firmwide Management Committee since 2003 and is also chair of the European Management Committee, co-chair of the EMEA Inclusion and Diversity Committee and a member of the Firmwide Reputational Risk Committee. Richard is also chair of the Goldman Sachs Bank Europe SE Supervisory Board. Richard joined Goldman Sachs in 1987. Richard serves as a trustee of the University of Cape Town Trust and is on the Campaign Board of Cambridge University. Richard earned a BA from the University of Cape Town and an MA from Cambridge University.	1
S. Gyimah	Non-executive director	Sam joined the GSI Board of Directors in November 2020 and is a member of the GSI Board Audit Committee. Sam was formerly the Member of Parliament for East Surrey from 2010 through to 2019. During this time, Sam served in a number of ministerial positions including joint Minister for Higher Education, Innovation, Technology and Research at the Department for Business, Energy and Industrial Strategy and the Department for Education in 2018, as well as Parliamentary Under Secretary of State at the Ministry of Justice between 2016 and 2018. Sam has also served as a government whip and	2

<sup>1</sup>Dermot McDonogh retired as a director of GSIB on 29 July 2022; and

On 16 November 2022 the Board of GSI approved Sir Bradley Fried (i) as a non-executive director, such appointment to be with effect from 1 February 2023; and (ii) as chair of GSI, such appointment to be with effect from 1 February 2023 (at which point he became the acting chair), subject to regulatory approval which was granted on 13 April 2023.

<sup>2</sup>José Manuel Barroso retired as the chair of GSI on 31 January 2023 and as a director of GSI on 31 March 2023.

## Pillar 3 Disclosures

		as Parliamentary Private Secretary to Prime Minister David Cameron, attending Cabinet. Sam is also a non-executive director of Oxford University Innovation and holds a number of advisory roles including with Blume Equity LLP. Sam earned an MA in Philosophy, Politics and Economics from the University of Oxford.	
N. P. Harman	Non-executive director	Nigel joined the GSI Board of Directors in December 2016 and is chair of the GSI Board Audit Committee and a member of the GSI Board Risk Committee. He was formerly a partner at KPMG, acting in a number of roles including Chairman of UK Banking, Head of Banking and Head of Financial Risk Management. Nigel earned a BSc (Hons) in Economics and Accountancy from Bristol University. He is also a fellow of the Institute of Chartered Accountants.	1
T. L. Miller OBE	Non-executive director	Therese (“Terry”) joined the GSI Board of Directors in July 2018 and is chair of the GSI Board Nominations Committee and GSI Board Remuneration Committee and is a member of the GSI Board Risk Committee. She served as general counsel for the London Organising Committee of the Olympic Games and Paralympic Games (“LOCOG”) from 2006 to 2013 and as a director of the organizing committee for the 2014 Invictus Games. Prior to joining LOCOG, Terry was the International General Counsel of GSI. She is a non-executive director of Rothesay Life plc and Stelrad Group plc and is the senior independent director of Galliford Try Holdings plc. She is also a Nominated Director of the British Equestrian Federation. She was appointed an Officer of the Order of the British Empire for her services to the London 2012 Games.	4
N. Pathmanabhan	Executive director	Niru joined the GSI Board of Directors in May 2022. He is co-head of Global Interest Rate Products Trading. He serves on the European Management Committee, Firmwide Client Franchise Committee and EMEA Global Banking & Markets - Public Best Execution Committee. He joined Goldman Sachs in 1999. Niru earned an MA in Mathematics from Oxford University.	1
E. E. Stecher <sup>3</sup>	Non-executive director	Esta joined the GSI Board of Directors in July 2018 and is a member of the GSI Remuneration Committee. She also chairs the Boards of Directors of Goldman Sachs International Bank, Goldman Sachs Bank USA and the Goldman Sachs Philanthropy Fund and is a member of the Supervisory Board of Goldman Sachs Bank Europe SE. In September 2021, Esta retired as a partner and became a senior advisor to the firm. Esta is a trustee emeritus of Columbia University and remains involved in other roles at Columbia University. Esta joined Goldman Sachs in 1994, prior to which she was a partner at Sullivan & Cromwell. Esta earned a BA from the University of Minnesota and a JD from Columbia Law School.	2
M. O. Winkelman <sup>4</sup>	Non-executive director	Mark joined the GSI Board of Directors in June 2016 and is a member of the GSI Board Risk Committee and was a member of the GSI Board Remuneration Committee until May 2022 <sup>3</sup> . He has also served as a non-executive director of The Goldman Sachs Group, Inc. since December 2014 and is chair of The Goldman Sachs Group, Inc. Risk Committee and a member of its Audit and Governance Committees. Mark previously held a number of senior roles at Goldman Sachs between 1978 and 1994, including as a member of the Management Committee, co-head of the Fixed Income Division and head of the J. Aron Division. Mark is also a trustee emeritus of the Board of Penn Medicine of the University of Pennsylvania.	1

<sup>3</sup> Esta Stecher retired as the chair and a director of GSI on 31 January 2023.

<sup>4</sup> Mark Winkelman retired as a director of GSI on 31 January 2023.

Table 53: GSIB Board of Directors<sup>5</sup>

Name	Role	Background	Director-ships
C. G. Cripps	Non-executive director	Catherine joined the GSIB Board of Directors in April 2019 and is chair of the GSIB Board Risk Committee and a member of the GSIB Board Audit Committee. Catherine was formerly an Investment Director at GAM, the CEO of a multi-strategy fund of Aida Capital Limited and has held various positions in equity derivatives trading, risk management and product control at different investment banks. Catherine also serves as a non-executive director at Maniyar Capital Advisors UK Ltd, Polar Capital Technology Trust plc and , since June 2022, Pool Reinsurance Company Limited. She stepped down as a director of Warwick Company (UK) Limited in May 2022. . Catherine earned an MA in Physics from Oxford University and has completed a period of post graduate research in Quantum Information at Imperial College, London.	4
L. A. Donnelly	Executive director and chief operation officer	Lisa joined the GSIB Board of Directors in September 2022. She is chief administrative officer for EMEA. She also oversees Operations, where she is responsible for coordinating common practices, standards and protocols for global Operations functions. She is chair of the EMEA Federation Leadership Group, Operations Leadership Group, co-chair of the Firmwide Operational Risk and Resilience Committee and is a member of the European Management Committee, Firmwide Conduct Committee, EMEA Conduct Committee and EMEA Inclusion and Diversity Committee. She is also a member of the Goldman Sachs International Bank Management Committee and the Goldman Sachs International Bank Risk Committee, Lisa also serves as a director on the Goldman Sachs Bank Europe SE Supervisory Board. Lisa joined Goldman Sachs in 2000. Prior to joining the firm, Lisa worked at Deloitte Consulting. Lisa earned a BA in English Literature from the University of Cambridge.	1
A. S. Golten	Non-executive director	Alex joined the GSIB Board of Directors in July 2022. He is head of Market Risk and Enterprise Risk. In addition, he oversees risk within the Fixed Income, Currency and Commodities and Equities businesses. Alex is co-chair of the Global Banking & Markets Investment Committee, as well as a member of the Firmwide Risk Committee, Firmwide Risk Appetite Committee and Allowance for Loan and Lease Losses Committee. He is also secretary of the Firmwide Enterprise Risk Committee. Alex joined Goldman Sachs in 1997. Alex earned an MA in Economics from the University of Edinburgh.	1
S. Gyimah	Non-executive director	Sam joined the GSIB Board of Directors in November 2020 and is a member of the GSIB Board Audit Committee. Sam was formerly the Member of Parliament for East Surrey from 2010 through to 2019. During this time, Sam served in a number of ministerial positions including joint Minister for Higher Education, Innovation, Technology and Research at the Department for Business, Energy and Industrial Strategy and the Department for Education in 2018, as well as Parliamentary Under Secretary of State at the Ministry of Justice between 2016 and 2018. Sam has also served as a government whip and as Parliamentary Private Secretary to Prime Minister David Cameron, attending Cabinet. Sam is also a non-executive director of Oxford University Innovation and holds a number of advisory roles including with Blume Equity LLP. Sam earned an MA in Philosophy, Politics and Economics from the University of Oxford.	2
N. P. Harman	Non-executive director	Nigel joined the GSIB Board of Directors in December 2016 and is chair of the GSIB Board Audit Committee and a member of the GSIB Board Risk Committee. He was formerly a partner at KPMG, acting in a number of roles including Chairman of UK Banking, Head of Banking and Head of Financial Risk Management. Nigel earned a BSc (Hons) in Economics and Accountancy from Bristol University. He is also a fellow of the Institute of Chartered Accountants.	1
T. L. Miller OBE	Non-executive director	Therese (“Terry”) joined the GSIB Board of Directors in August 2015 and is chair of the GSIB Board Nominations Committee and GSIB Board Remuneration Committee and is a member of the GSIB Board Risk Committee. She served as general counsel for the London Organising Committee of the Olympic Games and Paralympic Games (“LOCOG”) from 2006 to 2013 and as a director of the organizing committee for the 2014 Invictus Games. Prior to joining LOCOG, Terry was the International General Counsel of GSI. She is a non-executive director of Rothesay Life plc and Stelrad Group plc and is the senior independent director of Galliford Try Holdings plc. She is also a Nominated Director of the British Equestrian Federation. She was appointed an Officer of the Order of the British Empire for her services to the London 2012 Games.	4
N. Pathmanabhan	Executive director	Niru joined the GSIB Board of Directors in May 2022. He is co-head of Global Interest Rate Products Trading. He serves on the European Management Committee, Firmwide Client Franchise Committee and EMEA Global Banking & Markets - Public Best Execution Committee. He joined Goldman Sachs in 1999. Niru earned an MA in Mathematics from Oxford University.	1
E. E. Stecher <sup>6</sup>	Non-executive director and chair	Esta joined the GSIB Board of Directors in July 2011 and was appointed chair in October 2016. She is a member of the GSIB Board Nominations and Remuneration Committees. She also chairs the Boards of Directors of Goldman Sachs Bank USA and the Goldman Sachs Philanthropy Fund and is a member of the Supervisory Board of Goldman Sachs Bank Europe SE. In September 2021, Esta retired as a partner and became a senior advisor to the firm. Esta is a trustee emeritus of Columbia University and remains involved in other roles at Columbia University. Esta joined Goldman Sachs in 1994, prior to which she was a partner at Sullivan & Cromwell. Esta earned a BA from the University of Minnesota and a JD from Columbia Law School.	2

<sup>5</sup> David Bicarregui retired as a director of GSIB on 27 April 2022;

Dermot McDonogh retired as a director and chief executive officer of GSIB on 29 July 2022;

Richard Gnodde was approved as an executive director and chief executive officer by the Board of GSIB on 28 July 2022, subject to regulatory approval. This was granted on 5 January 2023 and Richard Gnodde was appointed as a director and chief executive officer of GSIB that same day; and

on 16 November 2022 the Board of GSIB approved Sir Bradley Fried (i) as a non-executive director, such appointment to be with effect from 1 February 2023; and (ii) as chair of GSIB, such appointment to be with effect from 1 February 2023 (at which point he became the acting chair), subject to regulatory approval which was granted on 13 April 2023.

<sup>6</sup> Esta Stecher retired as the chair and a director of GSIB on 31 January 2023.

## Climate Risk

### Overview

Climate risk is the risk of adverse outcomes arising from the long and/or short term impacts of climate. GSGUK categorizes climate risk into physical risk and transition risk. Physical risk is the risk that asset values may decline as a result of changes in the climate, while transition risk is the risk that asset values may decline because of changes in climate policies or changes in the underlying economy due to de-carbonization.

Informed by the results of our risk identification process, we have developed and implemented methodologies applied to the entity for both physical and transition risk to assess the potential impact of climate-related and environment (C&E) risks and perform scenario analysis to identify vulnerabilities and risks. This foundation of quantification allows for robust integration of climate-related risk into relevant risk management processes and transaction considerations.

### Physical Risk

In both our physical and transition risk stress testing, we leverage open-source data and models used by the scientific and climate policy communities. For physical risk stress tests, we employ a combination of open-source data Global Circulation Models (GCM) and our internal hazard methodologies to project how climate variables such as temperature may evolve over time at different geographical locations for GSGUK. We have developed a climate scoring approach for a number of significant physical risks, such as, extreme temperature, water stress, wildfire, etc. For each of these physical climate risk indices, and based on the scenario used, we categorize the physical risk severity of the relevant assets in GSGUK's portfolio. We continue to monitor the severity of impacts for GSGUK resiliency.

We analyse concentrations of real estate loan exposure in cities with extremely high physical risk as projected under the climate change scenarios. Also, we recognize that through our own operational footprint in the U.K., foreign branch offices, and GS service entities across the world, we may have exposure to physical risk. We monitor our people and buildings closely to ensure efficient cooling systems and appropriate infrastructure are in place.

### Transition Risk

Transition risk emerges from policy, legal, technology and market changes resulting from the shift to a lower carbon economy. For example, under certain scenarios that implement new policies and regulations supportive of the Paris Agreement, carbon-intensive sectors may suffer from transition risk, especially as the market experiences changed preferences. In our GSGUK transition risk stress tests, we use Integrated Assessment Models (IAM) as a foundation to

which we add our internally developed methodologies. IAMs, which are open-source models used by the climate policy community, combine a physical climate model with an underlying economic model.

We project the effects of a climate policy change from a base case to other more stringent climate policy scenarios. As a result, we model transition risk by generating risk factor shocks such as equity shocks, credit spread shocks and credit rating shocks by country and by industry under different climate policy scenarios. Once we develop the shocks, we apply them to relevant GSGUK portfolios to produce stress tests and assess impacts.

Under our current approach, we have estimated the magnitude of potential losses in equity investments and wholesale loans across climate scenario pathways. These estimates assume that changes in climate policies have an immediate impact on market prices and related economic and market variables. We actively monitor the estimated loss impact from transition risk to the firm but deem the impact to be currently non-material for the entity. We continue to refine our estimates and methodologies as the industry and regulatory landscapes evolve.

### Risk Identification and Appetite

Risk discovery is based on top-down, greenhouse gas emission pathways, and bottom-up processes, portfolio-aligned loan level analysis. The firm identifies risks, assesses materiality through scenario analysis and stress testing, integrates considerations into transaction and risk management decisions, and continues to evaluate impacts during ongoing monitoring. Based on our findings and as industry-wide capabilities advance, including data availability, we are continuously evaluating relevant enhancements to our approach.

GSGUK evaluates multiple scenarios which consider macroeconomic assumptions to understand the potential range of impacts. The scenarios, with varying implementation dates of policy changes and probabilities of temperature change, provide insight into the financial risks that may arise. A key component of GSGUK's climate-related and environmental risk program has included establishing Risk Appetite Statement (RAS) thresholds on the financial risks generated by physical risk and transition risk. Through scenario analysis and risk appetite, GSGUK monitors the results of physical and transition risk to understand the materiality of its most exposed portfolios. GSGUK continues to enhance climate risk assessments through developing versatile stress testing capabilities and integrating considerations of the broader climate-related framework at relevant stages of the transaction underwriting process.



## Pillar 3 Disclosures

In the assessment of the firm's climate risk drivers and their transmission channels, we also recognize the importance of categorizing climate risks and their integration into our existing risk practices across risk categories (credit, market, liquidity, operational) and their corresponding risk management processes and procedures.

### Climate Risk Integration

For GSGUK climate-related risks manifest in different ways across our business and we have continued to make significant enhancements to our climate risk management framework, including steps to further integrate climate risk into our broader entity risk management processes.

Broadly, we have processes in place to assess materiality of climate-related and environmental risk per risk category. As follows, we detail how climate-related and environmental risks are assessed and managed across categories.

- **Credit Risk:** incorporates climate risk into credit evaluations and underwriting processes for select industries and in select loan commitments
- **Market Risk:** considers climate-related and environmental impacts in the firm's equity investments through the current physical climate risk assessment performed as a part of transaction due diligence. In addition, we are further developing capability to stress market risk factors in climate risk scenarios for select high-risk sectors to capture transition risk
- **Operational Risk:** the Environmental Risk teams reviews physical climate risk data for equity and credit investment in real estate transactions, including those relating to GSGUK, and instructs the business to evaluate mitigants for transactions with high risk factors, including for biodiversity and broader environmental risks
- **Liquidity Risk:** evaluates the potential impact of transition and physical risk on the GSGUK's potential liquidity outflows

**Second Line Integration.** Credit Risk Spotlight. For a counterparty within a high-emitting sector and meeting the eligibility criteria, Credit Risk analyses the company's ability to mitigate the risk associated with their transition to a low-carbon economy. Credit Risk assesses the counterparty's disclosures and available public statements on emission reduction targets and assigns an appropriate mitigation score. This score is incorporated into the overall credit rating of the counterparty.

**First Line Integration.** A significant focus of our climate risk management program is appropriate integration in our first line business strategy. The firm including GSGUK, incorporates climate risk into our credit evaluation and

underwriting processes for select industries and in select loan commitments. As part of its oversight responsibility the GSI and GSIB-related and environmental risk assessments in select transaction underwriting decisions and continues to further strengthen business adoption of climate-related and environmental risk management. Our upfront business selection and due diligence processes include sector and geographical guidelines and are overseen through designated committee review processes. Enhanced considerations for assessing climate-related and environmental risk during underwriting have been established, including a dedicated section to document physical and transition risk exposure and potential mitigation within select investment committee reporting. Targeted trainings have been conducted with teams most frequently impacted by these changes, and we continue to enhance ongoing monitoring.

Consistent with the firmwide governance structure from senior management to GS Group Board and its committees, including the Risk Committee of the Board and Public Responsibilities Committee of the Board, we have integrated oversight of climate-related risks into GSGUK risk management governance structure. This includes oversight by GSI and GSIB's Board and Risk Committee, these governing and management bodies regularly receive reporting of climate risk appetite metrics and updates on our risk management approach to climate risk as the firm continues to enhance its framework.

In general, GSGUK is integrated into and thereby benefits from the broader firmwide risk management and control framework supporting climate change risk management commensurate with the company's activities. As of year-end 2022, climate change related risks were identified as relevant but based on the quantification analysis and risk category (credit, market, liquidity, operational) assessments they have been assessed as non-material risks to GSGUK.

## UK Remuneration Disclosures

### Introduction

The following disclosures are made by Goldman Sachs Group UK Limited in accordance with Article 450 of Chapter 4 of the Disclosure (“CRR”) Part of the PRA Rulebook in respect of Goldman Sachs International (“GSI”) and Goldman Sachs International Bank (“GSIB”) (together, the “UK Companies”<sup>1</sup>), applicable in the UK pursuant to the European Union (Withdrawal) Act in 2018. For the purposes of this remuneration disclosure, any reference to an EU regulation, including to a Binding Technical Standard and Guidelines, is a reference to the UK version of that regulation, unless otherwise stated.

### Remuneration Programme Philosophy

Retention of talented employees is critical to executing the firm’s business strategy successfully. Remuneration is, therefore, a key component of the costs the firm incurs to generate revenues, similar to cost of goods sold or manufacturing costs in other industries.

The remuneration philosophy and the objectives of the remuneration programme for the firm are reflected in the Compensation Principles for GS Group, as posted on the Goldman Sachs public website:

<http://www.goldmansachs.com/investor-relations/corporate-governance/corporate-governance-documents/compensation-principles.pdf>

In particular, effective remuneration practices should:

- (i) Encourage a real sense of teamwork and communication, binding individual short-term interests to the institution’s long-term interests;
- (ii) Evaluate performance on a multi-year basis;
- (iii) Discourage excessive or concentrated risk-taking;
- (iv) Allow an institution to attract and retain proven talent;
- (v) Align aggregate remuneration for the firm with performance over the cycle; and
- (vi) Promote a strong risk management & control environment

### Compensation Frameworks

The Amended and Restated Firmwide Performance Assessment & Variable Compensation Framework (“Firmwide Compensation Framework”) formalises the variable remuneration practices of the firm.

The primary purpose of this Firmwide Compensation Framework is to assist the firm in assuring that its variable compensation programme does not provide “covered employees” (i.e., senior executives as well as other employees of the firm, who, either individually or as part of a group, have the ability to expose the firm to material amounts of risk) with incentives to take imprudent risks and is consistent with the safety and soundness of the firm. Each business (e.g., Asset & Wealth Management, Global Banking & Markets) and each of its underlying business units (e.g., Asset Management, Investment Banking) maintains a Performance Assessment & Variable Compensation Framework that is specific to the business or the business unit, as applicable, and that is consistent with the Firmwide Compensation Framework (collectively, the “Compensation Frameworks”).

In addition, the firm utilises the Management Committee Performance Assessment Framework to provide greater definition to, and transparency regarding, the pre-established financial and non-financial factors considered by the GS Group Compensation Committee to assess the firm’s performance in connection with compensation decisions for Management Committee members. Performance is assessed in a holistic manner, without ascribing specific weight to any single factor or metric.

### Remuneration Governance

#### The Compensation Committee

The Board of Directors of GS Group (the “Group Board”) oversees the development, implementation and effectiveness of the firm’s global remuneration practices, and it generally exercises this responsibility directly or through delegation to the Compensation Committee of the Group Board (the “Compensation Committee”). The responsibilities of the Compensation Committee include:

<sup>1</sup> These disclosures include any employees assigned from time to time to Goldman Sachs Bank (USA) London branch.

**Pillar 3 Disclosures**

- Review and approval of (or recommendation to the Group Board to approve) the firm’s variable remuneration structure, including the portion to be paid as share-based awards, all year-end share-based grants for eligible employees (including those employed by the UK Companies), and the terms and conditions of such awards.
- Assisting the Group Board in its oversight of the development, implementation and effectiveness of policies and strategies relating to the Human Capital Management (“HCM”) function, including recruiting, retention, career development and progression, management succession (other than that within the purview of the Corporate Governance and Nominating Committee) and diversity.
- Overseeing the development and implementation of the remuneration policies of GSI and GSIB insofar as they relate to employees of GSI and GSIB whose remuneration is subject to the relevant provisions of the Prudential Regulation Authority (“PRA”) Rulebook or Financial Conduct Authority (“FCA”) Handbook.
- To take steps to satisfy itself that the remuneration policies of GSI and GSIB are in accordance with the relevant provisions of the PRA Rulebook and FCA Handbook (“Remuneration Code”), including in particular that:
  - the remuneration policies of GSI and GSIB appropriately take into account the long-term interests of shareholders, investors and other stakeholders in GSI and GSIB; and
  - the remuneration policies of GSI and GSIB are consistent with and promote sound and effective risk management and do not encourage risk-taking that exceeds the level of tolerated risk of GSI and GSIB.

The Compensation Committee held 8 meetings in 2022 to discuss and make determinations regarding remuneration.

The members of the Compensation Committee at the end of 2022 were Mark O. Winkelman (Chair), M. Michele Burns, Drew G. Faust, Kimberley D. Harris, Kevin R. Johnson, Ellen J. Kullman, Lakshmi N. Mittal and Adebayo O. Ogunlesi (ex-officio). None of the members of the Compensation Committee was an employee of the firm. All members of the Compensation Committee were “independent” within the meaning of the New York Stock Exchange Rules and the Group Board Policy on Director Independence.

**External Consultants**

The Compensation Committee recognises the importance of using a remuneration consultant that is appropriately qualified and is determined to be independent.

For 2022, the Compensation Committee received the advice of a remuneration consultant from Meridian.

**Other Group Stakeholders**

In carrying out the responsibilities of the Compensation Committee, the Chair of the Compensation Committee met multiple times with senior management during the year, including the firm’s Chief Operating Officer (“COO”), the Executive Vice President, the Global Head of HCM and other members of senior management.

**The Remuneration Committees**

The responsibilities of the Board Remuneration Committees of GSI and GSIB (the “Remuneration Committees”) include:

- the members of the GSI Board Remuneration Committee were Therese Miller (Chair), Mark O. Winkelman and Esta Stecher;
- the members of the GSIB Board Remuneration Committee were Therese Miller (Chair) and Esta Stecher; and
- none of the members of the Remuneration Committees was an employee of the UK Companies.
- Making recommendations to the Boards of GSI and GSIB for approval and adoption of the remuneration policies of GSI and GSIB once satisfied that the policies are in accordance with the Remuneration Code.

The Remuneration Committees held 6 meetings in 2022 to discuss and make determinations regarding the remuneration policies of GSI and GSIB.

At the end of 2022:

- the members of the GSI Board Remuneration Committee were Therese Miller (Chair), Mark O. Winkelman and Esta Stecher;
- the members of the GSIB Board Remuneration Committee were Therese Miller (Chair) and Esta Stecher; and
- none of the members of the Remuneration Committees was an employee of the UK Companies.

**Compensation-related Risk Assessment**

The GS Group’s Chief Risk Officer (“CRO”) presented an annual compensation-related risk assessment to the Compensation Committee, meeting jointly with the Risk Committee of the GS Board, to assist the Compensation Committee in its assessment of the effectiveness of the firm’s remuneration programme, and particularly, whether the programme is consistent with the principle that variable remuneration does not encourage employees to expose the

**Pillar 3 Disclosures**

firm to imprudent risk. This assessment most recently occurred in December 2022.

GS Group's CRO, and the CRO for GSI and GSIB also provided a compensation-related risk assessment to the Remuneration Committees.

In addition, the firm's EMEA Conduct Committee assists senior management of the UK Companies in the oversight of conduct risk and business standards.

**Global Remuneration Determination Process**

The firm's global process for setting variable remuneration (including the requirement to consider risk and compliance issues) applies to employees of the UK Companies in the same way as to employees in other regions and is subject to oversight by the senior management of the firm in the region. The firm uses a highly disciplined and robust process for setting variable remuneration across all regions following the processes outlined in the Compensation Frameworks.

This process involves compensation managers and compensation committees at various levels in the firm, along with the business and business unit heads, HCM and the Firmwide Management Committee (the firm's most senior leaders), as appropriate.

In addition, as part of the remuneration determination process, members of the firm's Compliance, Risk, Employment Law Group and Employee Relations functions make arrangements for business and business unit management to take into consideration certain compliance, risk or control matters when determining remuneration of individuals. Before any individual remuneration decisions are finalised, Employee Relations and the Employment Law Group assess the recommended remuneration for relevant individuals in the context of overall performance and other factors, and recommendations are reviewed with respect to comparators.

Additionally, the Remuneration Committees oversee the development and implementation of the remuneration policies of GSI and GSIB, and review remuneration-related information during the year, including an annual compensation-related risk assessment, an overview of the firm's remuneration programme and structure, and certain remuneration data.

**Link Between Pay and Performance**

In 2022, annual remuneration for employees comprised fixed remuneration (including base salary) and variable

remuneration. The firm's remuneration practices provide for variable remuneration determinations to be made on a discretionary basis. Variable remuneration is based on multiple factors and is not set as a fixed percentage of revenue or by reference to any other formula, consistent with the process outlined in the Compensation Frameworks. Firmwide performance is a key factor in determining variable remuneration.

The firm is committed to aligning variable remuneration with performance. In order to do so, the performance of the firm, relevant business, and/or business unit, desk (if applicable) and individual over the past year, as well as over prior years, are taken into account.

The firm believes that the firm's senior leaders have responsibility for overall performance and, as a result, senior employees have experienced more volatility in their remuneration year-over-year, particularly in periods when the firm's performance declined significantly.

The firm believes that multi-year guarantees should be avoided as they risk misaligning remuneration and performance, and guaranteed variable remuneration should be awarded in exceptional circumstances only (for example, for certain new hires).

**Performance Measurement**

Variable remuneration determinations take into account firm, relevant business and/or, business unit, desk (if applicable) and individual performance.

**Firmwide performance**

Certain firmwide financial metrics and year-on-year changes in those metrics are reviewed, including the following:

- Return on average common equity;
- Efficiency ratio;
- Book value per common share;
- Pre-tax earnings;
- Net revenues; and
- Diluted earnings per share

**Pillar 3 Disclosures****Business, business unit, desk performance**

Additionally, at both the business and business unit level, quantitative and/or qualitative metrics specific to such levels, respectively, and below are used to evaluate the performance of the business/business unit and their respective employees.

**Individual performance**

Employees are evaluated annually as part of the performance review feedback process. This process reflects input from a number of employees, including supervisors, peers and those who are junior to the employee, regarding an array of performance measures. The performance evaluations for 2022 included assessments of Teamwork and Collaboration (One GS); Compliance, Risk Management, Code of Conduct, and Firm Reputation; sensitivity to Risk and Control (revenue-producing employees); Control Side Empowerment (control functions); and Culture. As part of the performance review feedback process, managers with three or more direct reports are assessed and receive feedback on their performance as a manager.

**Performance Assessment Framework**

The Performance Assessment Framework, which guided the Compensation Committee's process for 2022, aligns performance metrics and goals across the firm's most senior leaders, and helps to ensure that the remuneration programme for the Firmwide Management Committee continues to be appropriately aligned with the firm's long-term strategy, stakeholder expectations and the safety and soundness of the firm.

**Risk Adjustment**

Prudent risk management is a hallmark of the firm's culture and sensitivity to risk and risk management are key elements in assessing employee performance, including as part of the performance review feedback process noted above.

The firm takes risk, including conduct risk, into account both on an ex-ante and ex-post basis when setting the amount and form of variable remuneration for employees. As indicated in the Compensation Frameworks, different lines of business have different risk profiles and these are taken into account when determining remuneration. These include credit, market, liquidity, operational, reputational, legal, compliance and conduct risks.

Guidelines are provided to assist compensation managers when exercising discretion during the remuneration process to promote appropriate consideration of the different risks presented by the firm's businesses. Further, to ensure the

independence of control function employees, remuneration for those employees is not determined by individuals in revenue-producing positions but rather by the management of the relevant control function.

Consistent with prior years, for 2022 certain employees receive a portion of their variable remuneration as a share-based award that is subject to a number of terms and conditions that could result in forfeiture or recapture. For further details, see "Structure of Remuneration" below.

In the 2022 annual compensation-related risk assessment presented to the Compensation Committee, meeting jointly with the Risk Committee of the Group Board, GS Group's CRO confirmed that the various components of the firm's remuneration programmes and policies (for example, process, structure and governance) balanced risk and incentives in a manner that does not encourage imprudent risk-taking. In addition, the CRO stated that the firm has a risk management process that, among other things, is consistent with the safety and soundness of the firm and focuses on our:

- (i) *Risk management culture*: the firm's culture emphasises continuous and prudent risk management;
- (ii) *Risk-taking authority*: there is a formal process for identifying employees who, individually or as part of a group, have the ability to expose the firm to material amounts of risk;
- (iii) *Upfront risk management*: the firm has tight controls on the allocation, utilisation and overall management of risk-taking, as well as comprehensive profit and loss and other management information which provide ongoing performance feedback. In addition, in determining variable remuneration, the firm reviews performance metrics that incorporate ex-ante risk adjustments; and
- (iv) *Governance*: the oversight of the Group Board, management structure and the associated processes all contribute to a strong control environment and control functions have input into remuneration structure and design.

The CRO for GSI and GSIB, alongside the GS Group CRO, also presented the annual compensation-related risk assessment to the Remuneration Committees to provide appropriate assurances with respect to GSI and GSIB.

**Structure of Remuneration**

In accordance with a resolution of the shareholders of Goldman Sachs Group UK Limited, the variable component of remuneration paid to certain employees identified under Chapter 3 of the Remuneration Part of the PRA Rulebook as

## Pillar 3 Disclosures

“Material Risk Taker” of GSI and GSIB shall not exceed 200% of the fixed component.

### Fixed Remuneration

The firm has a global salary approach to ensure consistency in salary levels and to achieve an appropriate balance between fixed and variable remuneration.

For certain employees identified as Material Risk Takers in accordance with Commission Delegated Regulation with regard to regulatory technical standards on criteria to identify categories of staff whose professional activities have a material impact on an institution’s risk profile under Chapter 3 of the Remuneration Part of the PRA Rulebook, and the PRA Rulebook (Remuneration Part), additional fixed remuneration is awarded in the form of an allowance generally paid in cash. The selection of recipients and the value of allowances awarded are determined as a result of an evaluation of professional experience, role and level of organisational responsibility.

### Variable Remuneration

For employees with total remuneration and variable remuneration above specific thresholds, variable remuneration is generally paid in a combination of cash and share-based remuneration. In general, the portion paid in the form of a share-based award increases as variable remuneration increases and, for Material Risk Takers, is set to ensure compliance with the applicable rules of the Remuneration Code.

The variable remuneration programme is flexible to allow the firm to respond to changes in market conditions and to maintain its pay-for-performance approach. Variable remuneration is discretionary (even if paid consistently over a period of years).

### Share-Based Remuneration

The firm believes that remuneration should encourage a long-term, firmwide approach to performance and discourage imprudent risk-taking. Paying a significant portion of variable remuneration in the form of share-based remuneration that delivers over time, changes in value according to the price of shares of common stock (shares) of GS Group, and is subject to forfeiture or recapture encourages a long-term, firmwide focus because its value is realised through long-term responsible behaviour and the financial performance of the firm.

The firm imposes transfer restrictions, retention requirements, and anti-hedging policies to further align the

interests of the firm’s employees with those of the firm’s shareholders. The firm’s retention and transfer restriction policies, coupled with the practice of paying senior employees a significant portion of variable remuneration in the form of share-based awards, leads to a considerable investment in shares of GS Group over time. For share-based awards granted to certain employees, performance conditions may also be applicable.

- **Deferral Policy:** The deferred portion of fiscal year 2022 annual variable remuneration was generally awarded in the form of Restricted Stock Units (RSUs). GS Group Inc. issues awards in the form of RSUs to the bank’s employees in exchange for employee services. An RSU is an unfunded, unsecured promise to deliver a share on a predetermined date. RSUs awarded in respect of fiscal year 2022 generally deliver in three equal instalments on or about each of the first, second and third anniversaries of the grant date, assuming the employee has satisfied the terms and conditions of the award at each such date. Where required under the Remuneration Code, RSUs awarded in respect of fiscal year 2022 for Material Risk Takers generally deliver in four equal instalments on or about each of the first, second, third and fourth anniversaries of the grant date, or, for Material Risk Takers who perform a Risk Management Function, on or about each of the first, second, third, fourth and fifth anniversaries of the grant date, or, for Material Risk Takers who perform a PRA Senior Management Function, on or about each of the third, fourth, fifth, sixth and seventh anniversaries of the grant date, assuming in each case, the employee has satisfied the terms and conditions of the award at each such date.

- **Transfer Restrictions:** The firm generally requires certain individuals to hold a material portion of the shares they receive in respect of RSUs granted as part of their year-end remuneration according to the firm’s global deferral table. These transfer restrictions apply to the lower of 50% of the shares delivered before reduction for tax withholding, or the number of shares received after reduction for tax withholding. Because combined tax and social security rates in the United Kingdom are close to 50%, transfer restrictions apply to substantially all net shares delivered to employees resident in the United Kingdom.

An employee generally cannot sell, exchange, transfer, assign, pledge, hedge or otherwise dispose of any RSUs or shares that are subject to transfer restrictions.

- **Retention Requirement:** All shares delivered to employees designated as Material Risk Takers in relation to their variable remuneration are subject to retention in accordance with the requirements of the Remuneration Code.

## Pillar 3 Disclosures

- Forfeiture and Recapture Provisions:** The RSUs and shares delivered thereunder in relation to variable remuneration are subject to forfeiture or recapture if the Compensation Committee or its delegate(s) determine(s) that during 2022 the employee participated (or otherwise oversaw or was responsible for, depending on the circumstances, another individual's participation) in the structuring or marketing of any product or service, or participated on behalf of the firm or any of its clients in the purchase or sale of any security or other property, in any case without appropriate consideration of the risk to the firm or the broader financial system as a whole (for example, if the employee were to improperly analyse risk or fail sufficiently to raise concerns about such risk) and, as a result of such action or omission, the Compensation Committee or its delegate(s) determine(s) there has been, or reasonably could be expected to be, a material adverse impact on the firm, the employee's business unit or the broader financial system.

This provision is not limited to financial risks and is designed to encourage the consideration of the full range of risks associated with the activities (for example, legal, compliance or reputational). The provision also does not require that a material adverse impact actually occur, but rather may be triggered if the firm determines that there is a reasonable expectation of such an impact.

The Compensation Committee previously adopted guidelines that set forth a formal process regarding determinations to forfeit or recapture awards for failure to consider risk appropriately upon the occurrence of certain pre-determined events (for example, in the event of annual firmwide, business unit and below or individual losses). The review of whether forfeiture or recapture is appropriate includes input from the CRO, as well as representatives from the Legal division, as appropriate. Determinations are made by the Compensation Committee or its delegates, with any determinations made by delegates reported to the Compensation Committee.

RSUs granted to all Material Risk Takers in relation to variable remuneration are generally subject to forfeiture until delivery of the underlying shares if US bank regulators recommend the appointment of a receiver under the US Dodd-Frank Wall Street Reform and Consumer Protection Act 2010 ("Dodd-Frank") based on its determination that GS Group is "in default" or "in danger of default" as defined under Dodd-Frank, or fails to maintain for 90 consecutive business days, the required "minimum tier 1 capital ratio" (as defined under Federal Reserve Board regulations).

All variable remuneration granted to Material Risk Takers is generally subject to forfeiture or recapture in the event of a "material failure of risk management", or in the event that the employee engages in "serious misconduct", at any time during the seven year period after grant (share-based awards) or payment (cash).

Additionally, RSUs and shares delivered thereunder in relation to variable remuneration are generally subject to forfeiture or recapture if it is appropriate to hold a Material Risk Taker accountable in whole or in part for an "adjustment event" that occurred during 2022. This may include conduct which resulted in a material loss of capital or a material relevant regulatory sanction for the firm.

An employee's RSUs may also be forfeited, and shares delivered thereunder recaptured if the employee engages in conduct constituting "cause" at any time before the RSUs are delivered and any applicable transfer restrictions lapse. Cause includes, among other things, any material violation of any firm policy, any act or statement that negatively reflects on the firm's name, reputation or business interests and any conduct detrimental to the firm.

With respect to all of the forfeiture conditions, if the firm determines after delivery or release of transfer restrictions that an RSU or share delivered thereunder should have been forfeited or recaptured, the firm can require return of any shares delivered or repayment to the firm of the fair market value of the shares when delivered (including those withheld to pay taxes) or any other amounts paid or delivered in respect thereof.

- Hedging:** The firm's anti-hedging policy ensures employees maintain the intended exposure to the firm's stock performance. In particular, all employees are prohibited from hedging RSUs, shares that are subject to transfer restrictions, and, to the extent applicable, retention shares. In addition, executive officers of GS Group (as defined under the Securities Exchange Act of 1934) are prohibited from hedging any shares that they can freely sell. Employees, other than executive officers, may hedge only shares that they can otherwise sell. However, no employee may enter into uncovered hedging transactions or sell short any shares. Employees may only enter into transactions or otherwise make investment decisions with respect to shares during applicable "window periods".
- Treatment upon Termination or Change-in-Control:** As a general matter, delivery schedules are not accelerated, and transfer restrictions are not removed, when an employee leaves the firm. The limited exceptions include death and "conflicted employment." A change in control alone is not sufficient to trigger acceleration of any

**Pillar 3 Disclosures**

deliveries or removal of transfer restrictions; only if the change in control is followed within 18 months by a termination of employment by the firm without “cause” or by the employee for “good reason” will delivery and release of transfer restrictions be accelerated.

12 of the Remuneration Code. The amounts relate only to those employees who were Material Risk Takers at the end of the fiscal year, December 31, 2022. All remuneration figures in the tables below are in USD millions.

**Quantitative Disclosures**

The following tables show aggregate quantitative remuneration information for 704 individuals, categorised as Material Risk Takers for the purposes of the Remuneration Code in respect of their duties for the UK Companies. The PRA was consulted on these awards as part of their normal assessment of remuneration.

Material Risk Takers are also eligible to receive certain general non-discretionary ancillary payments and benefits on a similar basis to other employees. These payments and benefits are not included in the disclosures below.

***Aggregate remuneration: split between fixed and variable remuneration and forms of variable remuneration***

Remuneration paid or awarded for the financial year ended December 31, 2022 comprised fixed remuneration (salaries, allowances and director fees) and variable remuneration. The figures are split into two tables showing “Senior Management” and “Other Material Risk Takers” according to the following definitions:

- **Senior Management:** members of the Boards of Directors of the UK Companies, members of the Management Committees for the Europe, Middle East and Africa (EMEA) region and GSIB, the head of each revenue-producing business unit in the EMEA region and heads of significant business lines in the EMEA region who perform a significant management function corresponding to PRA and FCA Senior Managers of the UK Companies.
- **Other Material Risk Takers:** other employees whose activities have a material impact on the risk profile of the firm.

As required by Article 450 of Chapter 4 of the Disclosure (CRR) Part of the PRA Rulebook, the quantitative information referred to in Article 450(1)(h) of Chapter 4 of the Disclosure (CRR) Part of the PRA Rulebook has also been provided separately for each major business area, internal control functions, corporate functions, and at the level of the management body (defined as Executive Directors of the UK Companies) in its management and supervisory function of the UK Companies. In addition, the deferred remuneration shown in the table below includes remuneration subject to the deferral requirements in Principle



## Pillar 3 Disclosures

Table 54: UK REM1 - Remuneration awarded for the financial year

		MB Supervisory function	MB Management function	Other senior management	Other identified staff	
1	Fixed remuneration	Number of identified staff	8	5	34	657
2		Total fixed remuneration	2.89	25.52	107.47	506.85
3		Of which: cash-based	2.89	18.63	101.00	506.85
		(Not applicable in the UK)				
UK-4a		Of which: shares or equivalent ownership interests	-	-	-	-
5		Of which: share-linked instruments or equivalent non-cash instruments	-	6.89	7.47	-
UK-5x		Of which: other instruments	-	-	-	-
		(Not applicable in the UK)				
7		Of which: other forms	-	-	-	-
		(Not applicable in the UK)				
9	Variable remuneration	Number of identified staff	8	5	34	657
10		Total variable remuneration	-	17.56	47.58	370.53
11		Of which: cash-based	-	0.28	1.97	66.51
12		Of which: deferred	-	-	-	-
UK-13a		Of which: shares or equivalent ownership interests	-	17.28	45.61	304.02
UK-14a		Of which: deferred	-	17.00	43.37	238.23
UK-13b		Of which: share-linked instruments or equivalent non-cash instruments	-	-	-	-
UK-14b		Of which: deferred	-	-	-	-
UK-14x		Of which: other instruments	-	-	-	-
UK-14y		Of which: deferred	-	-	-	-
15	Of which: other forms	-	-	-	-	
16	Of which: deferred	-	-	-	-	
17	<b>Total remuneration (2 + 10)</b>	<b>\$ 2.89</b>	<b>\$ 43.08</b>	<b>\$ 155.05</b>	<b>\$ 877.38</b>	

Table 55: UK REM2 - Special payments to staff whose professional activities have a material impact on institutions' risk profile (identified staff)

		MB Supervisory function	MB Management function	Other senior management	Other identified staff
	<b>Guaranteed variable remuneration awards</b>				
1	Guaranteed variable remuneration awards - Number of identified staff	-	-	-	2
2	Guaranteed variable remuneration awards - Total amount	-	-	-	0.22
3	Of which guaranteed variable remuneration awards paid during the financial year, that are not taken into account in the bonus cap	-	-	-	-
	<b>Severance payments awarded in previous periods, that have been paid out during the financial year</b>				
4	Severance payments awarded in previous periods, that have been paid out during the financial year - Number of identified staff	-	-	-	1
5	Severance payments awarded in previous periods, that have been paid out during the financial year - Total amount	-	-	-	0.04
	<b>Severance payments awarded during the financial year</b>				
6	Severance payments awarded during the financial year - Number of identified staff	-	-	-	6
7	Severance payments awarded during the financial year - Total amount	-	-	-	0.99
8	Of which paid during the financial year	-	-	-	0.99
9	Of which deferred	-	-	-	-
10	Of which severance payments paid during the financial year, that are not taken into account in the bonus cap	-	-	-	-
11	Of which highest payment that has been awarded to a single person	-	-	-	0.49

## Pillar 3 Disclosures

Table 56: UK REM3 - Deferred remuneration

	Deferred and retained remuneration	Total amount of deferred remuneration awarded for previous performance periods	Of which due to vest in the financial year	Of which vesting in subsequent financial years	Amount of performance adjustment made in the financial year to deferred remuneration that was due to vest in the financial year	Amount of performance adjustment made in the financial year to deferred remuneration that was due to vest in future performance years	Total amount of adjustment during the financial year due to ex post implicit adjustments (i.e. changes of value of deferred remuneration due to the changes of prices of instruments)	Total amount of deferred remuneration awarded before the financial year actually paid out in the financial year	Total of amount of deferred remuneration awarded for previous performance period that has vested but is subject to retention periods
1	MB Supervisory function	-	-	-	-	-	-	-	-
2	Cash-based	-	-	-	-	-	-	-	-
3	Shares or equivalent ownership interests	-	-	-	-	-	-	-	-
4	Share-linked instruments or equivalent non-cash instruments	-	-	-	-	-	-	-	-
5	Other instruments	-	-	-	-	-	-	-	-
6	Other forms	-	-	-	-	-	-	-	-
7	MB Management function	86.39	18.38	68.01	-	-	(9.85)	18.38	18.38
8	Cash-based	-	-	-	-	-	-	-	-
9	Shares or equivalent ownership interests	86.39	18.38	68.01	-	-	(9.85)	18.38	18.38
10	Share-linked instruments or equivalent non-cash instruments	-	-	-	-	-	-	-	-
11	Other instruments	-	-	-	-	-	-	-	-
12	Other forms	-	-	-	-	-	-	-	-
13	Other senior management	226.66	63.46	163.20	-	-	(25.88)	63.46	63.46
14	Cash-based	-	-	-	-	-	-	-	-
15	Shares or equivalent ownership interests	226.66	63.46	163.20	-	-	(25.88)	63.46	63.46
16	Share-linked instruments or equivalent non-cash instruments	-	-	-	-	-	-	-	-
17	Other instruments	-	-	-	-	-	-	-	-
18	Other forms	-	-	-	-	-	-	-	-
19	Other identified staff	538.80	214.76	324.04	-	-	(61.64)	214.76	214.76
20	Cash-based	-	-	-	-	-	-	-	-
21	Shares or equivalent ownership interests	538.80	214.76	324.04	-	-	(61.64)	214.76	214.76
22	Share-linked instruments or equivalent non-cash instruments	-	-	-	-	-	-	-	-
23	Other instruments	-	-	-	-	-	-	-	-
24	Other forms	-	-	-	-	-	-	-	-
25	<b>Total amount</b>	<b>\$ 851.85</b>	<b>\$ 296.60</b>	<b>\$ 555.25</b>	<b>-</b>	<b>-</b>	<b>\$(97.37)</b>	<b>\$ 296.60</b>	<b>\$ 296.60</b>

## Pillar 3 Disclosures

Table 57: UK REM4 - Remuneration of 1 million EUR or more per year

EUR	Identified staff that are high earners as set out in Article 450(1)(i) of Chapter 4 of the Disclosure (CRR) Part of the PRA Rulebook	
1	1 000 000 to below 1 500 000	126
2	1 500 000 to below 2 000 000	60
3	2 000 000 to below 2 500 000	26
4	2 500 000 to below 3 000 000	28
5	3 000 000 to below 3 500 000	14
6	3 500 000 to below 4 000 000	11
7	4 000 000 to below 4 500 000	10
8	4 500 000 to below 5 000 000	8
9	5 000 000 to below 6 000 000	8
10	6 000 000 to below 7 000 000	2
11	7 000 000 to below 8 000 000	1
12	8 000 000 to below 9 000 000	2
13	9 000 000 to below 10 000 000	2
14	10 000 000 and above	10

Table 58: UK REM5 - Information on remuneration of staff whose professional activities have a material impact on institutions' risk profile (identified staff)

		Management body remuneration			Business areas						Total
		MB Supervisory function <sup>1</sup>	MB Management function	Total MB	Investment banking <sup>2</sup>	Retail banking	Asset management <sup>3</sup>	Corporate functions	Ind. internal control functions	All other	
1	Total number of identified staff										704
2	Of which: members of the MB	8	5	13							
3	Of which: other senior management				16	-	5	7	6	34	
4	Of which: other identified staff				553	-	66	30	8	657	
5	Total remuneration of identified staff	\$ 2.89	\$ 43.07	\$ 45.96	\$ 843.49	-	\$ 137.58	\$ 38.60	\$ 12.77	\$ 1,032.43	
6	Of which: variable remuneration	-	17.55	17.55	361.33	-	34.80	16.26	5.72	418.11	
7	Of which: fixed remuneration	2.89	25.52	28.41	482.16	-	102.78	22.34	7.05	614.32	

1. MB (Management Body)
2. Reflects Material Risk Takers in Global Banking & Markets and Global Investment Research
3. Reflects Material Risk Takers in Asset & Wealth Management

## Cautionary Note on Forward-Looking Statements

We have included in these disclosures, and our management may make, statements that may constitute “forward-looking statements.” Forward-looking statements are not historical facts or statements of current conditions, but instead represent only our beliefs regarding future events, many of which, by their nature, are inherently uncertain and outside of our control. These statements may relate to, among other things, (i) our future plans and results, (ii) the objectives and effectiveness of our risk management and liquidity policies, and (iii) the effect of changes to the regulations, and our future status, activities or reporting under banking and financial regulation.

It is possible that our actual results and financial condition may differ, possibly materially, from the anticipated results and financial condition in these forward-looking statements. Important factors that could cause our actual results and financial condition to differ from those in these statements include, among others, those discussed in “Risk Factors” in Part I, Item 1A in the firm’s 2022 Form 10-K.

## Glossary

- Advanced Internal Ratings-Based (AIRB).** The AIRB approach of CRR provides a methodology for banks, subject to supervisory approval, to use various risk parameters to determine the EAD and risk-weights for regulatory capital calculations. Other risk parameters used in the determination of risk weights are each counterparty's Probability of Default (PD), Loss Given Default (LGD) and the effective maturity of the trade or portfolio of trades.
- Central Counterparty (CCP).** A counterparty, such as a clearing house, that facilitates trades between counterparties.
- Comprehensive Risk.** The potential loss in value, due to price risk and defaults, for credit correlation positions. Comprehensive risk consists of a modelled measure which is calculated at a 99.9% confidence level over a one-year time horizon, subject to a floor which is 8% of the standardised specific risk add-on.
- Credit Correlation Position.** A securitisation position for which all or substantially all of the value of the underlying exposures is based on the credit quality of the issuer for which a two-way market exists, or indices based on such exposures for which a two-way market exists, or hedges of these positions (which are typically not securitisation positions).
- Credit Risk.** 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 we hold.
- Credit Valuation Adjustment (CVA).** An adjustment applied to uncollateralised OTC derivatives to cover the risk of mark-to-market losses of bilateral credit risk (i.e. counterparty and own) in uncollateralised derivatives.
- Debt Valuation Adjustment (DVA).** An adjustment applied to debt held at fair value representing the mark-to-market of unilateral own credit risk in unsecured debt held at fair value.
- Default.** A default is considered to have occurred when either or both of the two following events have taken place: (i) we consider that the obligor is unlikely to pay its credit obligations to us in full; or (ii) the obligor has defaulted on a payment and/or is past due more than 90 days on any material Wholesale credit obligation, 180 days on residential mortgage obligations or 120 days on other retail obligations.
- Default Risk.** The risk of loss on a position that could result from failure of an obligor to make timely payments of principal or interest on its debt obligation, and the risk of loss that could result from bankruptcy, insolvency, or similar proceedings.
- Effective Expected Positive Exposure (EEPE).** The time-weighted average of non-declining positive credit exposure over the EE simulation. EEPE is used in accordance with the IMM as the exposure measure that is then risk weighted to determine counterparty risk capital requirements.
- Event Risk.** The risk of loss on equity or hybrid equity positions as a result of a financial event, such as the announcement or occurrence of a company merger, acquisition, spin-off, or dissolution.
- Expected Exposure (EE).** The expected value of the probability distribution of non-negative credit risk exposures to a counterparty at any specified future date before the maturity date of the longest term transaction in a netting set.
- Exposure at Default (EAD).** The exposure amount that is risk weighted for regulatory capital calculations. For on-balance-sheet assets, such as receivables and cash, EAD is generally based on the balance sheet value. For the calculation of EAD for off-balance-sheet exposures, including commitments and guarantees, an equivalent exposure amount is calculated based on the notional amount of each transaction multiplied by a credit conversion factor designed to estimate the net additions to funded exposures that would be likely to occur over a one-year horizon, assuming the obligor were to default. For substantially all of the counterparty credit risk arising from OTC derivatives, exchange-traded derivatives and securities financing transactions, internal models calculate the distribution of exposure upon which the EAD calculation is based.
- Idiosyncratic Risk.** The risk of loss in the value of a position that arises from changes in risk factors unique to that position.
- Incremental Risk.** The potential loss in value of non-securitised positions due to the default or credit migration of issuers of financial instruments over a one-year time horizon. This measure is calculated at a 99.9% confidence level over a one-year time horizon using a multi-factor model.

## Pillar 3 Disclosures

- **Internal Models Methodology (IMM).** The IMM establishes a methodology for entities to use their internal models to estimate exposures arising from OTC derivatives, securities financing transactions and cleared transactions, subject to qualitative and quantitative requirements and supervisory approval.
- **Loss Given Default (LGD).** An estimate of the economic loss rate if a default occurs during economic downturn conditions.
- **Market Risk.** The risk of loss in the value of our inventory, investments, loans and other financial assets and liabilities accounted for at fair value, due to changes in market conditions.
- **Operational Risk.** The risk of an adverse outcome resulting from inadequate or failed internal processes, people, systems or from external events.
- **Other Systemically Important Institutions.** Institutions identified by national regulators as those whose failure or malfunction could potentially lead to serious negative consequences for the domestic financial systems and real economy.
- **Prudent Valuation Adjustment (PVA).** A deduction from CET1 capital where the prudent value of trading assets or other financial assets measured at fair value is materially lower than the fair value recognised in the consolidated financial information.
- **Probability of Default (PD).** Estimate of the probability that an obligor will default over a one-year horizon.
- **Regulatory Value-at-Risk (VaR).** The potential loss in value of trading positions due to adverse market movements over a 10-day time horizon with a 99% confidence level.
- **Regulatory VaR Backtesting.** Comparison of daily positional and actual loss results to the Regulatory VaR measure calculated as of the end of the prior business day.
- **SA-CCR.** Effective from January 2022, the new standardised approach to counterparty credit risk (SA-CCR) replaces the mark-to-market method to determine the exposure value for derivatives. The approach is used for the purposes of determining the exposure value for derivatives risk weighted assets calculations that are not in scope of the internal model method, for leverage and large exposure purposes.
- **Securitisation Position.** Represents a transaction or scheme in which the credit risk associated with an exposure or pool of exposures is tranching and both payments in the transaction or scheme are dependent upon the performance of the exposure or pool of exposures and the subordination of tranches determines the distribution of losses during the ongoing life of the transaction or scheme.
- **Specific Risk.** The risk of loss on a position that could result from factors other than broad market movements and includes event risk, default risk and idiosyncratic risk. The specific risk add-on is applicable for both securitisation positions and for certain non-securitised debt and equity positions, to supplement the model-based measures.
- **Stress Testing.** Stress testing is a method of determining the effect of various hypothetical stress scenarios.
- **Stressed VaR (SVaR).** The potential loss in value of trading assets and liabilities, as well as certain investments, loans, and other financial assets and liabilities, during a period of significant market stress. SVaR is calculated at a 99% confidence level over a 10-day horizon using market data inputs from a continuous 12-month period of stress.
- **Synthetic Securitisation.** Defined as a securitisation transaction in which the tranching is achieved by the use of credit derivatives or guarantees, and the pool of exposures is not removed from the balance sheet of the originator.
- **Traditional Securitisation.** Defined as a securitisation transaction which involves the economic transfer of the exposures being securitised to a securitisation special purpose entity which issues securities; and so that this must be accomplished by the transfer of ownership of the securitised exposures from the originator or through sub-participation; and the securities issued do not represent payment obligations of the originator.
- **Value-at-Risk (VaR).** The potential loss in value of trading assets and liabilities, certain investments, loans, and other financial assets and liabilities accounted for at fair value, due to adverse market movements over a defined time horizon with a specified confidence level. Risk management VaR is calculated at a 95% confidence level over a one-day horizon.
- **Wholesale Exposure.** A term used to refer collectively to credit exposures to companies, sovereigns or government entities (other than Securitisation, Retail or Equity exposures).

## Pillar 3 Disclosures

## Appendix I: Scope of Consolidation Tables

## Consolidated Balance Sheet under the Regulatory Scope of Consolidation

The following three tables provide a reconciliation of GSGUK, GSI and GSIB balance sheet as of December 31, 2022 on an accounting consolidation basis to the GSGUK, GSI and GSIB balance sheet under the regulatory scope of consolidation. It also breaks down how carrying values under the scope of regulatory consolidation are allocated to the different risk frameworks laid out in Part Three of the CRR.

**Table 59: Differences Between Accounting and Regulatory Scopes of Consolidation and Mapping of Financial Statement Categories with Regulatory Risk Categories<sup>1</sup>**

## GSGUK

<i>\$ in millions</i>		As of December 2022					
	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Carrying values of items				Not subject to own funds requirements or subject to deduction from own funds
			Subject to the credit risk framework	Subject to the CCR framework	Subject to the securitisation framework	Subject to the market risk framework	
<b>Assets</b>							
Cash and cash equivalents	29,822	29,822	29,822	-	-	-	-
Collateralised agreements	247,701	247,701	-	247,701	-	113,083	-
Customer and other receivables	78,944	78,944	3,964	73,007	-	-	-
Trading assets	876,265	876,265	2,198	800,191	-	873,480	-
Investments	3,409	3,409	3,359	-	50	-	-
Loans	9,426	9,426	8,708	-	718	-	-
Other assets	8,023	8,023	2,999	4,376	-	-	648
Investment property	20	20	20	-	-	-	-
<b>Total assets</b>	<b>\$ 1,253,610</b>	<b>\$ 1,253,610</b>	<b>\$ 51,070</b>	<b>\$ 1,125,275</b>	<b>\$ 767</b>	<b>\$ 986,562</b>	<b>\$ 648</b>
<b>Liabilities</b>							
Collateralised financings	99,775	99,775	-	99,775	-	75,744	-
Customer and other payables	111,421	111,421	-	-	-	-	111,421
Trading Liabilities	843,676	843,676	-	787,062	-	841,565	639
Unsecured borrowings	79,517	79,517	-	-	-	-	79,517
Deposits	67,342	67,342	-	-	-	123	67,219
Other liabilities	4,644	4,644	-	-	-	-	4,644
<b>Total liabilities</b>	<b>\$ 1,206,375</b>	<b>\$ 1,206,375</b>	<b>-</b>	<b>\$ 886,837</b>	<b>-</b>	<b>\$ 917,432</b>	<b>\$ 263,439</b>

## Pillar 3 Disclosures

## GSI

\$ in millions

As of December 2022

	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Carrying values of items				
			Subject to the credit risk framework	Subject to the CCR framework	Subject to the securitisation framework	Subject to the market risk framework	Not subject to own funds requirements or subject to deduction from own funds
<b>Assets</b>							
Cash and cash equivalents	\$ 11,707	\$ 11,707	\$ 11,707	-	-	-	-
Customer and other receivables	78,967	78,967	3,523	73,471	-	-	-
Trading assets	872,810	872,810	2,198	800,381	-	871,969	-
Collateralised agreements	235,796	235,796	-	235,796	-	137,691	-
Investments	280	280	280	-	-	-	-
Loans	222	222	222	-	-	-	-
Other Assets	3,259	3,259	2,659	-	-	-	600
<b>Total assets</b>	<b>\$ 1,203,041</b>	<b>\$ 1,203,041</b>	<b>\$ 20,589</b>	<b>\$ 1,109,648</b>	<b>-</b>	<b>\$ 1,009,660</b>	<b>\$ 600</b>
<b>Liabilities</b>							
Customer and other payables	\$ 110,983	\$ 110,983	-	-	-	-	110,983
Collateralised financings	124,735	124,735	-	124,735	-	101,021	-
Trading Liabilities	844,313	844,313	-	787,619	-	843,674	639
Unsecured Borrowings	76,205	76,205	-	-	-	-	76,205
Other Liabilities	4,596	4,596	-	-	-	-	4,596
<b>Total liabilities</b>	<b>\$ 1,160,832</b>	<b>\$ 1,160,832</b>	<b>-</b>	<b>\$ 912,354</b>	<b>-</b>	<b>\$ 944,696</b>	<b>\$ 192,423</b>



## Pillar 3 Disclosures

## GSIB

<i>\$ in millions</i>		As of December 2022					
	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Carrying values of items				Not subject to own funds requirements or subject to deduction from own funds
			Subject to the credit risk framework	Subject to the CCR framework	Subject to the securitisation framework	Subject to the market risk framework	
<b>Assets</b>							
Cash and cash equivalents	18,455	18,455	18,455	-	-	-	-
Customer and receivables	209	209	209	-	-	-	-
Trading assets	5,367	5,367	-	2,100	-	3,434	-
Collateralised agreements	37,489	37,489	8,762	28,727	-	12,762	-
Investments	4,078	4,078	4,028	-	50	-	-
Loans	9,109	9,109	6,143	-	651	-	-
Other Assets	2,273	2,273	344	-	-	-	43
<b>Total assets</b>	<b>\$ 76,980</b>	<b>\$ 76,980</b>	<b>\$ 37,941</b>	<b>\$ 30,827</b>	<b>\$ 701</b>	<b>\$ 16,196</b>	<b>\$ 43</b>
<b>Liabilities</b>							
Customer and other payables	764	764	-	-	-	-	764
Collateralised financings	301	301	-	301	-	301	-
Trading liabilities	1,604	1,604	-	1,604	-	160	-
Deposits	67,841	67,841	-	-	-	622	67,219
Unsecured Borrowings	2,827	2,827	-	-	-	-	2,827
Other liabilities	169	169	-	-	-	-	169
<b>Total liabilities</b>	<b>\$ 73,506</b>	<b>\$ 73,506</b>	<b>-</b>	<b>\$ 1,905</b>	<b>-</b>	<b>\$ 1,083</b>	<b>\$ 70,979</b>

<sup>1</sup> Carrying values under the scope of regulatory consolidation shown in the first column may not be the sum of the carrying values shown in the remaining columns as some items are subject to capital requirements in one or more risk frameworks.

## Pillar 3 Disclosures

## Regulatory Balance Sheet Assets Reconciliation to Exposure at Default (EAD)

The following three tables present a reconciliation of the consolidated regulatory balance sheet to EAD for items subject to credit risk, CCR and securitisation and frameworks.

**Table 60: Main Sources of Differences Between Regulatory Exposures Amounts and Carrying Values in Financial Statements**

## GSGUK

		As of December 2022				
		Total	Credit risk framework	Items subject to		
Securitisation framework	CCR framework			Market Risk framework <sup>1</sup>		
1	Assets carrying value amount under the scope of regulatory consolidation (as per template LI1)	\$ 2,163,674	\$ 51,070	\$ 767	\$ 1,125,275	\$ 986,562
2	Liabilities carrying value amount under the regulatory scope of consolidation (as per template LI1)	(1,804,269)	-	-	(886,837)	(917,432)
3	Total net amount under the regulatory scope of consolidation	\$ 359,405	\$ 51,070	\$ 767	\$ 238,438	\$ 69,130
4	Off-balance-sheet amounts <sup>2</sup>	10,221	10,113	108	-	
5	Differences in valuations	-	-	-	-	
6	Differences due to different netting rules, other than those already included in row 2	-	-	-	-	
7	Differences due to consideration of provisions	-	-	-	-	
8	Differences due to the use of credit risk mitigation techniques (CRMs)	(75,951)	-	-	(75,951)	
9	Differences due to credit conversion factors	(1,473)	(1,473)	-	-	
10	Differences due to Securitisation with risk transfer	-	-	-	-	
11	Other differences	(0)	(0)	(0)	(0)	
12	Exposure amounts considered for regulatory purposes	\$ 292,202	\$ 59,710	\$ 875	\$ 162,487	

## GSI

		As of December 2022				
		Total	Credit risk framework	Items subject to		
Securitisation framework	CCR framework			Market Risk framework <sup>1</sup>		
1	Assets carrying value amount under the scope of regulatory consolidation (as per template LI1)	\$ 2,139,897	\$ 20,589	-	\$ 1,109,648	\$ 1,009,660
2	Liabilities carrying value amount under the regulatory scope of consolidation (as per template LI1)	(1,857,050)	0	-	(912,354)	(944,696)
3	Total net amount under the regulatory scope of consolidation	\$ 282,847	\$ 20,589	-	\$ 197,294	\$ 64,964
4	Off-balance-sheet amounts <sup>2</sup>	5,710	5,710	-	-	
5	Differences in valuations	-	-	-	-	
6	Differences due to different netting rules, other than those already included in row 2	-	-	-	-	
7	Differences due to consideration of provisions	-	-	-	-	
8	Differences due to the use of credit risk mitigation techniques (CRMs)	(34,662)	-	-	(34,662)	
9	Differences due to credit conversion factors	(46)	(46)	-	-	
10	Differences due to Securitisation with risk transfer	-	-	-	-	
11	Other differences	0	0	-	-	
12	Exposure amounts considered for regulatory purposes	\$ 253,849	\$ 26,253	-	\$ 162,632	

## Pillar 3 Disclosures

## GSIB

\$ in millions		As of December 2022				
		Items subject to				
		Total	Credit risk framework	Securitisation framework	CCR framework	Market Risk framework <sup>1</sup>
1	Assets carrying value amount under the scope of regulatory consolidation (as per template LI1)	\$ 85,665	\$ 37,941	\$ 701	\$ 30,827	\$ 16,196
2	Liabilities carrying value amount under the regulatory scope of consolidation (as per template LI1)	(2,988)	-	-	(1,905)	(1,083)
3	Total net amount under the regulatory scope of consolidation	\$ 82,677	\$ 37,941	\$ 701	\$ 28,922	\$ 15,113
4	Off-balance-sheet amounts <sup>2</sup>	5,918	5,810	108	-	
5	Differences in valuations	-	-	-	-	
6	Differences due to different netting rules, other than those already included in row 2	-	-	-	-	
7	Differences due to consideration of provisions	-	-	-	-	
8	Differences due to the use of credit risk mitigation techniques (CRMs)	(26,530)	-	-	(26,530)	
9	Differences due to credit conversion factors	(1,453)	(1,453)	-	-	
10	Differences due to Securitisation with risk transfer	-	-	-	-	
11	Other differences	-	-	-	-	
12	Exposure amounts considered for regulatory purposes	\$ 60,612	\$42,298	\$ 809	\$ 2,392	

<sup>1</sup>**Market Risk Framework:** Exposure amounts considered for regulatory purposes under row 12 in the table above are not disclosed for Market risk framework given exposure amounts are more relevant for Credit, Counterparty Credit and securitisation frameworks.

<sup>2</sup>**Off balance sheet amounts:** Off balance sheet amounts are stated gross and primarily consist of undrawn committed facilities and guarantees.

### Explanations of differences between accounting and regulatory exposure amounts

The carrying value of assets is usually measured at amortised cost or fair value as at the balance sheet date. For on-balance-sheet assets, such as receivables and cash, the EAD is generally based on the carrying value. For the calculation of EAD for off-balance-sheet exposures, including commitments and guarantees, a credit equivalent exposure amount is calculated based on the notional amount of each transaction multiplied by a credit conversion factor in accordance with Article 166 of CRR.

As GSGUK calculates the majority of its credit exposure under the IMM, the impacts of netting and collateral are integral to the calculation of the exposure. The exposures considered for regulatory purposes are presented on a net and collateralised basis where there is a legally enforceable netting and collateral opinion. Under IFRS, netting is required if legal right of set-off exists and the cash flows are intended to be settled on a net basis.

## Pillar 3 Disclosures

## Appendix II: Credit Risk Tables

Table 61: Equity exposures under the simple risk weighted approach

## GSGUK

\$ in millions						As of December 2022
Categories	On-balance sheet exposure	Off-balance sheet exposure	Risk weight	Exposure value	Risk weighted exposure	Expected loss amount
Private equity exposures	-	-	190%	-	-	-
Exchange-traded equity exposures	639	-	290%	639	1,853	5
Other equity exposures	216	-	370%	216	798	5
<b>Total</b>	<b>\$ 855</b>	<b>-</b>		<b>\$ 855</b>	<b>\$ 2,651</b>	<b>\$ 10</b>

## GSI

\$ in millions						As of December 2022
Categories	On-balance sheet exposure	Off-balance sheet exposure	Risk weight	Exposure value	Risk weighted exposure	Expected loss amount
Private equity exposures	-	-	190%	-	-	-
Exchange-traded equity exposures	639	-	290%	639	1,853	5
Other equity exposures	216	-	370%	216	798	5
<b>Total</b>	<b>\$ 855</b>	<b>-</b>		<b>\$ 855</b>	<b>\$ 2,651</b>	<b>\$ 10</b>

## GSIB

\$ in millions						As of December 2022
Categories	On-balance sheet exposure	Off-balance sheet exposure	Risk weight	Exposure value	Risk weighted exposure	Expected loss amount
Private equity exposures	-	-	190%	-	-	-
Exchange-traded equity exposures	-	-	290%	-	-	-
Other equity exposures	0	-	370%	0	0	0
<b>Total</b>	<b>\$ 0</b>	<b>-</b>		<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 0</b>

Table 62: Standardised approach – Credit risk exposure and CRM effects

## GSGUK

\$ in millions							As of December 2022
Exposure classes	Exposures before CCF and before CRM		Exposures post CCF and post CRM		RWAs and RWAs density		
	On-balance-sheet exposures	Off-balance-sheet exposures	On-balance-sheet exposures	Off-balance-sheet amount	RWAs	RWAs density (%)	
1 Central governments or central banks	2,663	-	2,663	-	\$ 1,236	46%	
2 Regional government or local authorities	-	-	-	-	-	-	
3 Public sector entities	-	-	-	-	-	-	
4 Multilateral development banks	-	-	-	-	-	-	
5 International organisations	-	-	-	-	-	-	
6 Institutions	2,515	-	2,515	-	1,257	50%	
7 Corporates	2,348	-	2,348	-	2,683	114%	
8 Retail	52	-	52	-	39	75%	
9 Secured by mortgages on immovable property	70	-	70	-	25	35%	
10 Exposures in default	15	-	15	-	18	122%	
11 Exposures associated with particularly high risk	705	-	705	-	1,057	150%	
12 Covered bonds	-	-	-	-	-	-	
13 Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	
14 Collective investment undertakings	-	-	-	-	-	-	
15 Equity	-	-	-	-	-	-	

## Pillar 3 Disclosures

16	Other items	370	-	370	-	370	100%
17	<b>TOTAL</b>	<b>\$ 8,738</b>	-	<b>\$ 8,738</b>	-	<b>\$ 6,685</b>	<b>76%</b>

## GSI

Exposure classes		Exposures before CCF and before CRM		Exposures post CCF and post CRM		RWAs and RWAs density	
		On-balance-sheet exposures	Off-balance-sheet exposures	On-balance-sheet exposures	Off-balance-sheet amount	RWAs	RWAs density (%)
\$ in millions		As of December 2022					
1	Central governments or central banks	385	-	385	-	962	250%
2	Regional government or local authorities	-	-	-	-	-	-
3	Public sector entities	-	-	-	-	-	-
4	Multilateral development banks	-	-	-	-	-	-
5	International organisations	-	-	-	-	-	-
6	Institutions	-	-	-	-	-	-
7	Corporates	2,150	-	2,150	-	2,484	116%
8	Retail	-	-	-	-	-	-
9	Secured by mortgages on immovable property	-	-	-	-	-	-
10	Exposures in default	-	-	-	-	-	-
11	Exposures associated with particularly high risk	-	-	-	-	-	-
12	Covered bonds	-	-	-	-	-	-
13	Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-
14	Collective investment undertakings	-	-	-	-	-	-
15	Equity	-	-	-	-	-	-
16	Other items	5	-	5	-	5	100%
17	<b>TOTAL</b>	<b>\$ 2,540</b>	-	<b>\$ 2,540</b>	-	<b>\$ 3,451</b>	<b>136%</b>

## GSIB

Exposure classes		Exposures before CCF and before CRM		Exposures post CCF and post CRM		RWAs and RWAs density	
		On-balance-sheet exposures	Off-balance-sheet exposures	On-balance-sheet exposures	Off-balance-sheet amount	RWAs	RWAs density (%)
\$ in millions		As of December 2022					
1	Central governments or central banks	2,278	-	2,278	-	274	12%
2	Regional government or local authorities	-	-	-	-	-	-
3	Public sector entities	-	-	-	-	-	-
4	Multilateral development banks	-	-	-	-	-	-
5	International organisations	-	-	-	-	-	-
6	Institutions	-	-	-	-	-	-
7	Corporates	77	-	77	-	77	100%
8	Retail	7	-	7	-	6	75%
9	Secured by mortgages on immovable property	37	-	37	-	13	35%
10	Exposures in default	5	-	5	-	6	106%
11	Exposures associated with particularly high risk	-	-	-	-	-	-
12	Covered bonds	-	-	-	-	-	-
13	Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-
14	Collective investment undertakings	-	-	-	-	-	-
15	Equity	-	-	-	-	-	-
16	Other items	45	-	45	-	45	100%
17	<b>TOTAL</b>	<b>\$ 2,449</b>	-	<b>\$ 2,449</b>	-	<b>\$ 421</b>	<b>17%</b>

## Pillar 3 Disclosures

Table 63: Standardised Approach

## GSGUK

<i>\$ in millions</i>												As of December 2022	
Exposure classes	Risk weight										Total	Of which unrated	
	0%	20%	35%	50%	75%	100%	150%	250%	1250%	Others			
1 Central governments or central banks	2,169	-	-	-	-	-	-	494	-	-	2,663	2,663	
6 Institutions	-	2	-	2,513	-	-	-	-	-	-	2,515	2,515	
7 Corporates	-	-	-	-	-	2,319	-	-	29	-	2,348	2,348	
8 Retail exposures	-	-	-	-	52	-	-	-	-	-	52	52	
9 Exposures secured by mortgages on immovable property	-	-	70	-	-	-	-	-	-	-	70	70	
10 Exposures in default	-	-	-	-	-	8	7	-	-	-	15	15	
11 Exposures associated with particularly high risk	-	-	-	-	-	-	705	-	-	-	705	705	
16 Other items	-	-	-	-	-	370	-	-	-	-	370	370	
<b>17 Total</b>	<b>\$ 2,169</b>	<b>\$ 2</b>	<b>\$ 70</b>	<b>\$ 2,513</b>	<b>\$ 52</b>	<b>\$ 2,697</b>	<b>\$ 712</b>	<b>\$ 494</b>	<b>\$ 29</b>	<b>-</b>	<b>\$ 8,738</b>	<b>\$ 8,738</b>	

## GSI

<i>\$ in millions</i>												As of December 2022	
Exposure classes	Risk weight										Total	Of which unrated	
	0%	20%	35%	50%	75%	100%	150%	250%	1250%	Others			
1 Central governments or central banks	-	-	-	-	-	-	-	385	-	-	385	385	
6 Institutions	-	-	-	-	-	-	-	-	-	-	-	-	
7 Corporates	-	-	-	-	-	2,121	-	-	29	-	2,150	2,150	
8 Retail exposures	-	-	-	-	-	-	-	-	-	-	-	-	
9 Exposures secured by mortgages on immovable property	-	-	-	-	-	-	-	-	-	-	-	-	
10 Exposures in default	-	-	-	-	-	-	-	-	-	-	-	-	
11 Exposures associated with particularly high risk	-	-	-	-	-	-	-	-	-	-	-	-	
16 Other items	-	-	-	-	-	5	-	-	-	-	5	5	
<b>17 Total</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$ 2,126</b>	<b>-</b>	<b>\$ 385</b>	<b>\$ 29</b>	<b>-</b>	<b>\$ 2,540</b>	<b>\$ 2,540</b>	

## GSIB

<i>\$ in millions</i>												As of December 2022	
Exposure classes	Risk weight										Total	Of which unrated	
	0%	20%	35%	50%	75%	100%	150%	250%	1250%	Others			
1 Central governments or central banks	2,168	-	-	-	-	-	-	110	-	-	2,278	2,278	
6 Institutions	-	-	-	-	-	-	-	-	-	-	-	-	
7 Corporates	-	-	-	-	-	77	-	-	-	-	77	77	
8 Retail exposures	-	-	-	-	7	-	-	-	-	-	7	7	
9 Exposures secured by mortgages on immovable property	-	-	37	-	-	-	-	-	-	-	37	37	
10 Exposures in default	-	-	-	-	-	4	1	-	-	-	5	5	
11 Exposures associated with particularly high risk	-	-	-	-	-	-	-	-	-	-	-	-	
16 Other items	-	-	-	-	-	45	-	-	-	-	45	45	
<b>17 Total</b>	<b>\$ 2,168</b>	<b>-</b>	<b>\$ 37</b>	<b>-</b>	<b>\$ 7</b>	<b>\$ 126</b>	<b>\$ 1</b>	<b>\$ 110</b>	<b>-</b>	<b>-</b>	<b>\$ 2,449</b>	<b>\$ 2,449</b>	

## Pillar 3 Disclosures

Table 64: Scope of the use of IRB and SA approaches

## GSGUK

\$ in millions						As of December 2022
	Exposure value as defined in Article 166 CRR for exposures subject to IRB approach	Total exposure value for exposures subject to the Standardised approach and to the IRB approach	Percentage of total exposure value subject to the permanent partial use of the SA (%)	Percentage of total exposure value subject to IRB Approach (%)	Percentage of total exposure value subject to a roll-out plan (%)	
Central governments or central banks	\$ 25,749	\$ 28,412	9%	0%	91%	
<i>Of which Regional governments or local authorities</i>		-	0%	0%	100%	
<i>Of which Public sector entities</i>		7	0%	0%	100%	
Institutions	7,100	9,252	27%	0%	73%	
Corporates	19,377	20,721	10%	0%	90%	
<i>Of which Corporates - Specialised lending, excluding slotting approach</i>		-	0%	0%	100%	
<i>Of which Corporates - Specialised lending under slotting approach</i>		-	0%	0%	100%	
Retail	-	\$ 136	100%	0%	0%	
<i>of which Retail – Secured by real estate SMEs</i>		78	100%	0%	0%	
<i>of which Retail – Secured by real estate non-SMEs</i>		-	0%	0%	100%	
<i>of which Retail – Qualifying revolving</i>		-	0%	0%	100%	
<i>of which Retail – Other SMEs</i>		58	100%	0%	0%	
<i>of which Retail – Other non-SMEs</i>		-	0%	0%	100%	
Equity	855	1,560	45%	0%	55%	
Other non-credit obligation assets	-	370	100%	0%	0%	
<b>Total</b>	<b>\$ 53,081</b>	<b>\$ 60,451</b>	<b>14%</b>	<b>0%</b>	<b>86%</b>	

## GSI

\$ in millions						As of December 2022
	Exposure value as defined in Article 166 CRR for exposures subject to IRB approach	Total exposure value for exposures subject to the Standardised approach and to the IRB approach	Percentage of total exposure value subject to the permanent partial use of the SA (%)	Percentage of total exposure value subject to IRB Approach (%)	Percentage of total exposure value subject to a roll-out plan (%)	
Central governments or central banks	\$ 7,354	\$ 7,739	5%	0%	95%	
<i>Of which Regional governments or local authorities</i>		-	0%	0%	100%	
<i>Of which Public sector entities</i>		7	0%	0%	100%	
Institutions	5,741	5,741	0%	0%	100%	
Corporates	10,021	12,006	16%	0%	84%	
<i>Of which Corporates - Specialised lending, excluding slotting approach</i>		-	0%	0%	100%	
<i>Of which Corporates - Specialised lending under slotting approach</i>		-	0%	0%	100%	
Retail		-	0%	0%	100%	
<i>of which Retail – Secured by real estate SMEs</i>		-	0%	0%	100%	
<i>of which Retail – Secured by real estate non-SMEs</i>		-	0%	0%	100%	
<i>of which Retail – Qualifying revolving</i>		-	0%	0%	100%	
<i>of which Retail – Other SMEs</i>		-	0%	0%	100%	

## Pillar 3 Disclosures

<i>of which Retail – Other non-SMEs</i>		-	0%	0%	100%
Equity	855	855	0%	0%	100%
Other non-credit obligation assets	-	5	100%	0%	0%
<b>Total</b>	<b>\$ 23,971</b>	<b>\$ 26,346</b>	<b>10%</b>	<b>0%</b>	<b>90%</b>

## GSIB

<i>\$ in millions</i>	As of December 2022				
	Exposure value as defined in Article 166 CRR for exposures subject to IRB approach	Total exposure value for exposures subject to the Standardised approach and to the IRB approach	Percentage of total exposure value subject to the permanent partial use of the SA (%)	Percentage of total exposure value subject to IRB Approach (%)	Percentage of total exposure value subject to a roll-out plan (%)
Central governments or central banks	\$ 18,395	\$ 20,673	11%	0%	89%
<i>Of which Regional governments or local authorities</i>		-	0%	0%	100%
<i>Of which Public sector entities</i>		-	0%	0%	100%
Institutions	12,437	12,073	0%	0%	100%
Corporates	9,514	8,751	1%	0%	99%
<i>Of which Corporates - Specialised lending, excluding slotting approach</i>		-	0%	0%	100%
<i>Of which Corporates - Specialised lending under slotting approach</i>		-	0%	0%	100%
Retail	-	50	100%	0%	0%
<i>of which Retail – Secured by real estate SMEs</i>		42	100%	0%	0%
<i>of which Retail – Secured by real estate non-SMEs</i>		-	0%	0%	100%
<i>of which Retail – Qualifying revolving</i>		-	0%	0%	100%
<i>of which Retail – Other SMEs</i>		8	100%	0%	0%
<i>of which Retail – Other non-SMEs</i>		-	0%	0%	100%
Equity	0	0	0%	0%	100%
Other non-credit obligation assets	-	45	100%	0%	0%
<b>Total</b>	<b>\$ 40,346</b>	<b>\$ 41,592</b>	<b>6%</b>	<b>0%</b>	<b>94%</b>



## Pillar 3 Disclosures

Table 65: IRB approach – Back-testing of PD per exposure class (fixed PD scale)

## GSGUK

\$ in millions		As of December 2022					
Exposure class	PD range	Number of obligors at the end of previous year		Observed average default rate (%)	Exposures weighted average PD (%)	Average PD (%)	Average historical annual default rate (%)
			Of which number of obligors which defaulted in the year				
Central governments or central banks	0.00 to <0.15	28	-	0.00%	0.01%	0.02%	0.00%
	0.00 to <0.10	28	-	0.00%	0.01%	0.02%	0.00%
	0.10 to <0.15	-	-	0.00%	-	0.00%	0.00%
	0.15 to <0.25	5	-	0.00%	0.18%	0.18%	0.00%
	0.25 to <0.50	1	-	0.00%	0.26%	0.26%	0.00%
	0.50 to <0.75	2	-	0.00%	0.67%	0.67%	0.00%
	0.75 to <2.50	-	-	0.00%	-	0.00%	20.00%
	0.75 to <1.75	-	-	0.00%	-	0.00%	20.00%
	1.75 to <2.5	-	-	0.00%	-	0.00%	0.00%
	2.50 to <10.00	-	-	0.00%	5.80%	0.00%	20.00%
	2.5 to <5	-	-	0.00%	-	0.00%	0.00%
	5 to <10	-	-	0.00%	5.80%	0.00%	20.00%
	10.00 to <100.00	-	-	0.00%	-	0.00%	0.00%
	10 to <20	-	-	0.00%	-	0.00%	0.00%
	20 to <30	-	-	0.00%	-	0.00%	0.00%
30.00 to <100.00	-	-	0.00%	-	0.00%	0.00%	
100.00 (Default)	-	-	0.00%	-	0.00%	0.00%	
<b>Subtotal</b>		<b>36</b>	<b>-</b>	<b>0.00%</b>	<b>-</b>	<b>-</b>	<b>-</b>
Institution	0.00 to <0.15	232	-	0.00%	0.06%	0.05%	0.00%
	0.00 to <0.10	232	-	0.00%	0.06%	0.05%	0.00%
	0.10 to <0.15	-	-	0.00%	-	0.00%	0.00%
	0.15 to <0.25	46	-	0.00%	0.17%	0.18%	0.00%
	0.25 to <0.50	18	-	0.00%	0.26%	0.26%	0.00%
	0.50 to <0.75	18	-	0.00%	0.67%	0.65%	0.00%
	0.75 to <2.50	12	-	0.00%	1.57%	1.76%	3.33%
	0.75 to <1.75	9	-	0.00%	1.56%	1.56%	10.00%
	1.75 to <2.5	3	-	0.00%	2.37%	2.37%	0.00%
	2.50 to <10.00	17	-	0.00%	9.22%	7.90%	0.00%
	2.5 to <5	-	-	0.00%	-	0.00%	0.00%
	5 to <10	17	-	0.00%	9.22%	7.90%	0.00%
	10.00 to <100.00	24	-	0.00%	23.78%	23.78%	0.00%
	10 to <20	-	-	0.00%	-	0.00%	0.00%
	20 to <30	24	-	0.00%	23.78%	23.78%	0.00%
30.00 to <100.00	-	-	0.00%	-	0.00%	0.00%	
100.00 (Default)	-	-	0.00%	99.90%	0.00%	0.00%	
<b>Subtotal</b>		<b>367</b>	<b>-</b>	<b>0.00%</b>	<b>-</b>	<b>-</b>	<b>-</b>
Corporate	0.00 to <0.15	705	-	0.00%	0.05%	0.05%	0.00%
	0.00 to <0.10	705	-	0.00%	0.05%	0.05%	0.00%
	0.10 to <0.15	-	-	0.00%	-	0.00%	0.00%
	0.15 to <0.25	285	-	0.00%	0.17%	0.18%	0.00%
	0.25 to <0.50	110	-	0.00%	0.26%	0.26%	0.00%
	0.50 to <0.75	146	-	0.00%	0.65%	0.64%	4.00%
	0.75 to <2.50	483	-	0.00%	1.73%	1.60%	0.34%
	0.75 to <1.75	460	-	0.00%	1.56%	1.56%	0.00%
	1.75 to <2.5	23	-	0.00%	2.37%	2.37%	2.79%
	2.50 to <10.00	80	1	1.25%	7.33%	6.20%	21.35%
	2.5 to <5	-	-	0.00%	-	0.00%	0.00%
	5 to <10	80	1	1.25%	7.33%	6.20%	21.35%
	10.00 to <100.00	176	1	0.57%	23.78%	23.78%	2.33%
	10 to <20	-	-	0.00%	-	0.00%	0.00%
	20 to <30	176	-	0.57%	23.78%	23.78%	2.24%
30.00 to <100.00	-	-	0.00%	-	0.00%	0.00%	
100.00 (Default)	-	-	0.00%	100%	0.00%	0.00%	
<b>Subtotal</b>		<b>1,985</b>	<b>2</b>	<b>0.10%</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total (all portfolios)</b>		<b>2,388</b>	<b>2</b>	<b>0.08%</b>	<b>-</b>	<b>-</b>	<b>-</b>

## Pillar 3 Disclosures

## GSI

\$ in millions		As of December 2022					
Exposure class	PD range	Number of obligors at the end of previous year		Observed average default rate (%)	Exposures weighted average PD (%)	Average PD (%)	Average historical annual default rate (%)
			Of which number of obligors which defaulted in the year				
Central governments or central banks	0.00 to <0.15	24	-	0.00%	0.03%	0.03%	0.00%
	0.00 to <0.10	24	-	0.00%	0.03%	0.03%	0.00%
	0.10 to <0.15	-	-	0.00%	-	0.00%	0.00%
	0.15 to <0.25	3	-	0.00%	0.18%	0.18%	0.00%
	0.25 to <0.50	1	-	0.00%	0.26%	0.26%	0.00%
	0.50 to <0.75	-	-	0.00%	-	0.00%	0.00%
	0.75 to <2.50	-	-	0.00%	-	0.00%	20.00%
	0.75 to <1.75	-	-	0.00%	-	0.00%	20.00%
	1.75 to <2.5	-	-	0.00%	-	0.00%	0.00%
	2.50 to <10.00	-	-	0.00%	5.80%	0.00%	20.00%
	2.5 to <5	-	-	0.00%	-	0.00%	0.00%
	5 to <10	-	-	0.00%	5.80%	0.00%	20.00%
	10.00 to <100.00	-	-	0.00%	-	0.00%	0.00%
	10 to <20	-	-	0.00%	-	0.00%	0.00%
	20 to <30	-	-	0.00%	-	0.00%	0.00%
30.00 to <100.00	-	-	0.00%	-	0.00%	0.00%	
100.00 (Default)	-	-	0.00%	-	0.00%	0.00%	
<b>Subtotal</b>		<b>28</b>	-	<b>0.00%</b>	-	-	-
Institution	0.00 to <0.15	194	-	0.00%	0.06%	0.05%	0.00%
	0.00 to <0.10	194	-	0.00%	0.06%	0.05%	0.00%
	0.10 to <0.15	-	-	0.00%	-	0.00%	0.00%
	0.15 to <0.25	42	-	0.00%	0.17%	0.18%	0.00%
	0.25 to <0.50	18	-	0.00%	0.26%	0.26%	0.00%
	0.50 to <0.75	17	-	0.00%	0.67%	0.65%	0.00%
	0.75 to <2.50	12	-	0.00%	1.57%	1.76%	3.33%
	0.75 to <1.75	9	-	0.00%	1.56%	1.56%	10.00%
	1.75 to <2.5	3	-	0.00%	2.37%	2.37%	0.00%
	2.50 to <10.00	13	-	0.00%	9.22%	8.54%	0.00%
	2.5 to <5	-	-	0.00%	-	0.00%	0.00%
	5 to <10	13	-	0.00%	9.22%	8.54%	0.00%
	10.00 to <100.00	23	-	0.00%	23.78%	23.78%	0.00%
	10 to <20	-	-	0.00%	-	0.00%	0.00%
	20 to <30	23	-	0.00%	23.78%	23.78%	0.00%
30.00 to <100.00	-	-	0.00%	-	0.00%	0.00%	
100.00 (Default)	-	-	0.00%	99.90%	0.00%	0.00%	
<b>Subtotal</b>		<b>319</b>	-	<b>0.00%</b>	-	-	-
Corporate	0.00 to <0.15	672	-	0.00%	0.06%	0.05%	0.00%
	0.00 to <0.10	672	-	0.00%	0.06%	0.05%	0.00%
	0.10 to <0.15	-	-	0.00%	-	0.00%	0.00%
	0.15 to <0.25	223	-	0.00%	0.17%	0.18%	0.00%
	0.25 to <0.50	110	-	0.00%	0.26%	0.26%	0.00%
	0.50 to <0.75	98	-	0.00%	0.65%	0.63%	0.00%
	0.75 to <2.50	483	-	0.00%	1.69%	1.60%	0.26%
	0.75 to <1.75	460	-	0.00%	1.56%	1.56%	0.00%
	1.75 to <2.5	23	-	0.00%	2.37%	2.37%	3.33%
	2.50 to <10.00	27	-	0.00%	6.19%	6.97%	14.47%
	2.5 to <5	-	-	0.00%	-	0.00%	0.00%
	5 to <10	27	-	0.00%	6.19%	6.97%	14.47%
	10.00 to <100.00	120	-	0.00%	23.78%	23.78%	1.73%
	10 to <20	-	-	0.00%	-	0.00%	0.00%
	20 to <30	120	-	0.00%	23.78%	23.78%	1.57%
30.00 to <100.00	-	-	0.00%	-	0.00%	0.00%	
100.00 (Default)	-	-	0.00%	99.97%	0.00%	0.00%	
<b>Subtotal</b>		<b>1,733</b>	-	<b>0.00%</b>	-	-	-
<b>Total (all portfolios)</b>		<b>2,080</b>	-	<b>0.00%</b>	-	-	-

**GSIB**

\$ in millions		As of December 2022					
Exposure class	PD range	Number of obligors at the end of previous year		Observed average default rate (%)	Exposures weighted average PD (%)	Average PD (%)	Average historical annual default rate (%)
			Of which number of obligors which defaulted in the year				
Central governments or central banks	0.00 to <0.15	6	-	0.00%	0.01%	0.02%	0.00%
	0.00 to <0.10	6	-	0.00%	0.01%	0.02%	0.00%
	0.10 to <0.15	-	-	0.00%	-	0.00%	0.00%
	0.15 to <0.25	2	-	0.00%	0.18%	0.18%	0.00%
	0.25 to <0.50	-	-	0.00%	-	0.00%	0.00%
	0.50 to <0.75	2	-	0.00%	0.67%	0.67%	0.00%
	0.75 to <2.50	-	-	0.00%	-	0.00%	0.00%
	0.75 to <1.75	-	-	0.00%	-	0.00%	0.00%
	1.75 to <2.5	-	-	0.00%	-	0.00%	0.00%
	2.50 to <10.00	-	-	0.00%	-	0.00%	0.00%
	2.5 to <5	-	-	0.00%	-	0.00%	0.00%
	5 to <10	-	-	0.00%	-	0.00%	0.00%
	10.00 to <100.00	-	-	0.00%	-	0.00%	0.00%
	10 to <20	-	-	0.00%	-	0.00%	0.00%
	20 to <30	-	-	0.00%	-	0.00%	0.00%
	30.00 to <100.00	-	-	0.00%	-	0.00%	0.00%
	100.00 (Default)	-	-	0.00%	-	0.00%	0.00%
<b>Subtotal</b>		<b>10</b>	<b>-</b>	<b>0.00%</b>	<b>-</b>	<b>0.00%</b>	<b>0.00%</b>
Institution	0.00 to <0.15	51	-	0.00%	0.06%	0.06%	0.00%
	0.00 to <0.10	51	-	0.00%	0.06%	0.06%	0.00%
	0.10 to <0.15	-	-	0.00%	-	0.00%	0.00%
	0.15 to <0.25	6	-	0.00%	0.18%	0.18%	0.00%
	0.25 to <0.50	-	-	0.00%	-	0.00%	0.00%
	0.50 to <0.75	2	-	0.00%	0.67%	0.67%	0.00%
	0.75 to <2.50	-	-	0.00%	-	0.00%	0.00%
	0.75 to <1.75	-	-	0.00%	-	0.00%	0.00%
	1.75 to <2.5	-	-	0.00%	-	0.00%	0.00%
	2.50 to <10.00	4	-	0.00%	6.09%	5.80%	0.00%
	2.5 to <5	-	-	0.00%	-	0.00%	0.00%
	5 to <10	4	-	0.00%	6.09%	5.80%	0.00%
	10.00 to <100.00	1	-	0.00%	23.78%	23.78%	0.00%
10 to <20	-	-	0.00%	-	0.00%	0.00%	
20 to <30	1	-	0.00%	23.78%	23.78%	0.00%	
30.00 to <100.00	-	-	0.00%	-	0.00%	0.00%	
100.00 (Default)	-	-	0.00%	-	0.00%	0.00%	
<b>Subtotal</b>		<b>64</b>	<b>-</b>	<b>0.00%</b>	<b>-</b>	<b>-</b>	<b>-</b>
Corporate	0.00 to <0.15	33	-	0.00%	0.05%	0.05%	0.00%
	0.00 to <0.10	33	-	0.00%	0.05%	0.05%	0.00%
	0.10 to <0.15	-	-	0.00%	-	0.00%	0.00%
	0.15 to <0.25	62	-	0.00%	0.17%	0.18%	0.00%
	0.25 to <0.50	-	-	0.00%	0.26%	0.00%	0.00%
	0.50 to <0.75	48	-	0.00%	0.65%	0.67%	20.00%
	0.75 to <2.50	-	-	0.00%	1.95%	0.00%	2.06%
	0.75 to <1.75	-	-	0.00%	1.56%	0.00%	0.00%
	1.75 to <2.5	-	-	0.00%	2.37%	0.00%	5.08%
	2.50 to <10.00	54	1	1.85%	7.61%	5.80%	20.82%
	2.5 to <5	-	-	0.00%	-	0.00%	0.00%
	5 to <10	54	1	1.85%	7.61%	5.80%	20.82%
	10.00 to <100.00	57	1	1.75%	23.78%	23.78%	21.19%
	10 to <20	-	-	0.00%	-	0.00%	0.00%
20 to <30	57	1	1.75%	23.78%	23.78%	21.19%	
30.00 to <100.00	-	-	0.00%	-	0.00%	0.00%	
100.00 (Default)	-	-	0.00%	100.00%	0.00%	0.00%	
<b>Subtotal</b>		<b>254</b>	<b>2</b>	<b>0.79%</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total (all portfolios)</b>		<b>328</b>	<b>2</b>	<b>0.61%</b>	<b>-</b>	<b>-</b>	<b>-</b>

**Table 66: IRB approach – Back-testing of PD per exposure class (only for PD estimates according to point (f) of Article 180(1) CRR)**

**GSGUK**

								As of December 2022	
Exposure class	PD range	External rating equivalent		Number of obligors at the end of previous year		Observed average default rate (%)	Average PD (%)	Average historical annual default rate (%)	
		Moody's	S&P		Of which number of obligors which defaulted in the year				
Central governments or central banks	0.00 to <0.03	Aaa, Aa1, Aa2, Aa3	AAA, AA+, AA, AA-	16	-	0.00%	0.01%	0.00%	
	0.03 to <0.06	A1, A2, A3	A+, A, A-	7	-	0.00%	0.03%	0.00%	
	0.06 to <0.17	Baa1	BBB+	5	-	0.00%	0.06%	0.00%	
	0.17 to <0.18	Baa2	BBB	1	-	0.00%	0.17%	0.00%	
	0.18 to <0.26	Baa3	BBB-	4	-	0.00%	0.18%	0.00%	
	0.26 to <0.6	Ba1	BB+	1	-	0.00%	0.26%	0.00%	
	0.6 to <0.67	Ba2	BB		-	0.00%	0.00%	0.00%	
	0.67 to <1.56	Ba3	BB-	2	-	0.00%	0.67%	0.00%	
	1.56 to <2.37	B1	B+		-	0.00%	0.00%	20.00%	
	2.37 to <5.8	B2	B		-	0.00%	0.00%	0.00%	
	5.8 to <9.76	B3	B-		-	0.00%	0.00%	0.00%	
	9.76 to <23.78	Caa1, Caa2, Caa3-Ca	CCC+, CCC, CCC- CC		-	0.00%	0.00%	20.00%	
23.78 to <100	C	C		-	0.00%	0.00%	0.00%		
100 (Default)	D	D		-	0.00%	0.00%	0.00%		
Institutions	0.00 to <0.03	Aaa, Aa1, Aa2, Aa3	AAA, AA+, AA, AA-		-	0.00%	0.00%	0.00%	
	0.03 to <0.06	A1, A2, A3	A+, A, A-	41	-	0.00%	0.03%	0.00%	
	0.06 to <0.17	Baa1	BBB+	191	-	0.00%	0.06%	0.00%	
	0.17 to <0.18	Baa2	BBB	18	-	0.00%	0.17%	0.00%	
	0.18 to <0.26	Baa3	BBB-	28	-	0.00%	0.18%	0.00%	
	0.26 to <0.6	Ba1	BB+	18	-	0.00%	0.26%	0.00%	
	0.6 to <0.67	Ba2	BB	5	-	0.00%	0.60%	0.00%	
	0.67 to <1.56	Ba3	BB-	13	-	0.00%	0.67%	0.00%	
	1.56 to <2.37	B1	B+	9	-	0.00%	1.56%	10.00%	
	2.37 to <5.8	B2	B	3	-	0.00%	2.37%	0.00%	
	5.8 to <9.76	B3	B-	8	-	0.00%	5.80%	0.00%	
	9.76 to <23.78	Caa1, Caa2, Caa3-Ca	CCC+, CCC, CCC- CC	9	-	0.00%	9.76%	0.00%	
23.78 to <100	C	C	24	-	0.00%	23.78%	0.00%		
100 (Default)	D	D		-	0.00%	0.00%	0.00%		
Corporates	0.00 to <0.03	Aaa, Aa1, Aa2, Aa3	AAA, AA+, AA, AA-		-	0.00%	0.00%	0.00%	
	0.03 to <0.06	A1, A2, A3	A+, A, A-	321	-	0.00%	0.03%	0.00%	
	0.06 to <0.17	Baa1	BBB+	384	-	0.00%	0.06%	0.00%	
	0.17 to <0.18	Baa2	BBB	75	-	0.00%	0.17%	0.00%	
	0.18 to <0.26	Baa3	BBB-	210	-	0.00%	0.18%	0.00%	
	0.26 to <0.6	Ba1	BB+	110	-	0.00%	0.26%	0.00%	
	0.6 to <0.67	Ba2	BB	57	-	0.00%	0.60%	0.00%	
	0.67 to <1.56	Ba3	BB-	89	-	0.00%	0.67%	20.00%	
	1.56 to <2.37	B1	B+	460	-	0.00%	1.56%	0.00%	
	2.37 to <5.8	B2	B	23	-	0.00%	2.37%	2.79%	
	5.8 to <9.76	B3	B-	72	-	0.00%	5.80%	20.90%	
	9.76 to <23.78	Caa1, Caa2, Caa3-Ca	CCC+, CCC, CCC- CC	8	1	12.50%	9.76%	23.79%	
	23.78 to <100	C	C	176	1	0.57%	23.78%	2.24%	
100 (Default)	D	D	-	-	0.00%	0.00%	0.00%		

**GSI**

As of December 2022								
Exposure class	PD range	External rating equivalent		Number of obligors at the end of previous year	Of which number of obligors which defaulted in the year	Observed average default rate (%)	Average PD (%)	Average historical annual default rate (%)
		Moody's	S&P					
Central governments or central banks	0.00 to <0.03	Aaa, Aa1, Aa2, Aa3	AAA, AA+, AA, AA-	13	-	0.00%	0.01%	0.00%
	0.03 to <0.06	A1, A2, A3	A+, A, A-	6	-	0.00%	0.03%	0.00%
	0.06 to <0.17	Baa1	BBB+	5	-	0.00%	0.06%	0.00%
	0.17 to <0.18	Baa2	BBB	1	-	0.00%	0.17%	0.00%
	0.18 to <0.26	Baa3	BBB-	2	-	0.00%	0.18%	0.00%
	0.26 to <0.6	Ba1	BB+	1	-	0.00%	0.26%	0.00%
	0.6 to <0.67	Ba2	BB	-	-	0.00%	0.00%	0.00%
	0.67 to <1.56	Ba3	BB-	-	-	0.00%	0.00%	0.00%
	1.56 to <2.37	B1	B+	-	-	0.00%	0.00%	20.00%
	2.37 to <5.8	B2	B	-	-	0.00%	0.00%	0.00%
	5.8 to <9.76	B3	B-	-	-	0.00%	0.00%	0.00%
	9.76 to <23.78	Caa1, Caa2, Caa3-Ca	CCC+, CCC, CCC- CC	-	-	0.00%	0.00%	20.00%
23.78 to <100	C	C	-	-	0.00%	0.00%	0.00%	
100 (Default)	D	D	-	-	0.00%	0.00%	0.00%	
Institutions	0.00 to <0.03	Aaa, Aa1, Aa2, Aa3	AAA, AA+, AA, AA-	-	-	0.00%	0.00%	0.00%
	0.03 to <0.06	A1, A2, A3	A+, A, A-	35	-	0.00%	0.03%	0.00%
	0.06 to <0.17	Baa1	BBB+	159	-	0.00%	0.06%	0.00%
	0.17 to <0.18	Baa2	BBB	18	-	0.00%	0.17%	0.00%
	0.18 to <0.26	Baa3	BBB-	24	-	0.00%	0.18%	0.00%
	0.26 to <0.6	Ba1	BB+	18	-	0.00%	0.26%	0.00%
	0.6 to <0.67	Ba2	BB	5	-	0.00%	0.60%	0.00%
	0.67 to <1.56	Ba3	BB-	12	-	0.00%	0.67%	0.00%
	1.56 to <2.37	B1	B+	9	-	0.00%	1.56%	10.00%
	2.37 to <5.8	B2	B	3	-	0.00%	2.37%	0.00%
	5.8 to <9.76	B3	B-	4	-	0.00%	5.80%	0.00%
	9.76 to <23.78	Caa1, Caa2, Caa3-Ca	CCC+, CCC, CCC- CC	9	-	0.00%	9.76%	0.00%
23.78 to <100	C	C	23	-	0.00%	23.78%	0.00%	
100 (Default)	D	D	-	-	0.00%	0.00%	0.00%	
Corporates	0.00 to <0.03	Aaa, Aa1, Aa2, Aa3	AAA, AA+, AA, AA-	-	-	0.00%	0.00%	0.00%
	0.03 to <0.06	A1, A2, A3	A+, A, A-	315	-	0.00%	0.03%	0.00%
	0.06 to <0.17	Baa1	BBB+	357	-	0.00%	0.06%	0.00%
	0.17 to <0.18	Baa2	BBB	75	-	0.00%	0.17%	0.00%
	0.18 to <0.26	Baa3	BBB-	148	-	0.00%	0.18%	0.00%
	0.26 to <0.6	Ba1	BB+	110	-	0.00%	0.26%	0.00%
	0.6 to <0.67	Ba2	BB	57	-	0.00%	0.60%	0.00%
	0.67 to <1.56	Ba3	BB-	41	-	0.00%	0.67%	0.00%
	1.56 to <2.37	B1	B+	460	-	0.00%	1.56%	0.00%
	2.37 to <5.8	B2	B	23	-	0.00%	2.37%	3.33%
	5.8 to <9.76	B3	B-	19	-	0.00%	5.80%	11.54%
	9.76 to <23.78	Caa1, Caa2, Caa3-Ca	CCC+, CCC, CCC- CC	8	-	0.00%	9.76%	16.19%
	23.78 to <100	C	C	120	-	0.00%	23.78%	1.57%
100 (Default)	D	D	-	-	0.00%	0.00%	0.00%	

**GSIB**

Exposure class	PD range	External rating equivalent		Number of obligors at the end of previous year		Observed average default rate (%)	Average PD (%)	Average historical annual default rate (%)
		Moody's	S&P		Of which number of obligors which defaulted in the year			
Central governments or central banks	0.00 to <0.03	Aaa, Aa1, Aa2, Aa3	AAA, AA+, AA, AA-	4	-	0.00%	0.01%	0.00%
	0.03 to <0.06	A1, A2, A3	A+, A, A-	2	-	0.00%	0.03%	0.00%
	0.06 to <0.17	Baa1	BBB+		-	0.00%	0.00%	0.00%
	0.17 to <0.18	Baa2	BBB		-	0.00%	0.00%	0.00%
	0.18 to <0.26	Baa3	BBB-	2	-	0.00%	0.18%	0.00%
	0.26 to <0.6	Ba1	BB+		-	0.00%	0.00%	0.00%
	0.6 to <0.67	Ba2	BB		-	0.00%	0.00%	0.00%
	0.67 to <1.56	Ba3	BB-	2	-	0.00%	0.67%	0.00%
	1.56 to <2.37	B1	B+		-	0.00%	0.00%	0.00%
	2.37 to <5.8	B2	B		-	0.00%	0.00%	0.00%
	5.8 to <9.76	B3	B-		-	0.00%	0.00%	0.00%
	9.76 to <23.78	Caa1, Caa2, Caa3-Ca	CCC+, CCC, CCC- CC		-	0.00%	0.00%	0.00%
23.78 to <100	C	C		-	0.00%	0.00%	0.00%	
100 (Default)	D	D		-	0.00%	0.00%	0.00%	
Institutions	0.00 to <0.03	Aaa, Aa1, Aa2, Aa3	AAA, AA+, AA, AA-		-	0.00%	0.00%	0.00%
	0.03 to <0.06	A1, A2, A3	A+, A, A-	7	-	0.00%	0.03%	0.00%
	0.06 to <0.17	Baa1	BBB+	44	-	0.00%	0.06%	0.00%
	0.17 to <0.18	Baa2	BBB		-	0.00%	0.00%	0.00%
	0.18 to <0.26	Baa3	BBB-	6	-	0.00%	0.18%	0.00%
	0.26 to <0.6	Ba1	BB+		-	0.00%	0.00%	0.00%
	0.6 to <0.67	Ba2	BB		-	0.00%	0.00%	0.00%
	0.67 to <1.56	Ba3	BB-	2	-	0.00%	0.67%	0.00%
	1.56 to <2.37	B1	B+		-	0.00%	0.00%	0.00%
	2.37 to <5.8	B2	B		-	0.00%	0.00%	0.00%
	5.8 to <9.76	B3	B-	4	-	0.00%	5.80%	0.00%
	9.76 to <23.78	Caa1, Caa2, Caa3-Ca	CCC+, CCC, CCC- CC		-	0.00%	0.00%	0.00%
23.78 to <100	C	C	1	-	0.00%	23.78%	0.00%	
100 (Default)	D	D		-	0.00%	0.00%	0.00%	
Corporates	0.00 to <0.03	Aaa, Aa1, Aa2, Aa3	AAA, AA+, AA, AA-		-	0.00%	0.00%	0.00%
	0.03 to <0.06	A1, A2, A3	A+, A, A-	6	-	0.00%	0.03%	0.00%
	0.06 to <0.17	Baa1	BBB+	27	-	0.00%	0.06%	0.00%
	0.17 to <0.18	Baa2	BBB		-	0.00%	0.00%	0.00%
	0.18 to <0.26	Baa3	BBB-	62	-	0.00%	0.18%	0.00%
	0.26 to <0.6	Ba1	BB+		-	0.00%	0.00%	0.00%
	0.6 to <0.67	Ba2	BB		-	0.00%	0.00%	0.00%
	0.67 to <1.56	Ba3	BB-	48	-	0.00%	0.67%	20.00%
	1.56 to <2.37	B1	B+		-	0.00%	0.00%	0.00%
	2.37 to <5.8	B2	B		-	0.00%	0.00%	5.08%
	5.8 to <9.76	B3	B-	54	-	0.00%	5.80%	20.57%
	9.76 to <23.78	Caa1, Caa2, Caa3-Ca	CCC+, CCC, CCC- CC		1	100.00%	0.00%	40.00%
23.78 to <100	C	C	57	1	1.75%	23.78%	21.19%	
100 (Default)	D	D		-	0.00%	0.00%	0.00%	

## Pillar 3 Disclosures

Table 67: Maturity of Exposures

## GSGUK

\$ in millions		Net exposure value					As of December 2022	
		On demand	<= 1 year	> 1 year <= 5 years	> 5 years	No stated maturity	Total	
1	Loans and advances	\$ 173,374	\$ 160,486	\$ 7,875	\$ 860	\$ 56	\$ 342,651	
2	Debt securities	0	96	170	2,300	26	2,592	
<b>3</b>	<b>Total</b>	<b>\$ 173,374</b>	<b>\$ 160,582</b>	<b>\$ 8,045</b>	<b>\$ 3,160</b>	<b>\$ 82</b>	<b>\$ 345,243</b>	

## GSI

\$ in millions		Net exposure value					As of December 2022	
		On demand	<= 1 year	> 1 year <= 5 years	> 5 years	No stated maturity	Total	
1	Loans and advances	\$ 170,033	\$ 145,240	\$ 1,060	\$ 576	\$ 56	\$ 316,965	
2	Debt securities	0	3	34	-	26	63	
<b>3</b>	<b>Total</b>	<b>\$ 170,033</b>	<b>\$ 145,243</b>	<b>\$ 1,094</b>	<b>\$ 576</b>	<b>\$ 82</b>	<b>\$ 317,028</b>	

## GSIB

\$ in millions		Net exposure value					As of December 2022	
		On demand	<= 1 year	> 1 year <= 5 years	> 5 years	No stated maturity	Total	
1	Loans and advances	\$ 3,795	\$ 30,054	\$ 14,246	\$ 804	-	\$ 48,899	
2	Debt securities	-	93	1,547	2,439	-	4,079	
<b>3</b>	<b>Total</b>	<b>\$ 3,795</b>	<b>\$ 30,147</b>	<b>\$ 15,793</b>	<b>\$ 3,243</b>	<b>-</b>	<b>\$ 52,978</b>	

Table 68: Collateral Obtained by Taking Possession and Execution Processes

## GSGUK

\$ in millions	As of December 2022	
	Collateral obtained by taking possession	
	Value at initial recognition	Accumulated negative changes
Property Plant and Equipment (PP&E)	-	-
<b>Other than Property Plant and Equipment</b>	<b>\$ 22</b>	<b>\$ 1</b>
Residential immovable property	-	-
Commercial Immovable property	-	-
Movable property (auto, shipping, etc.)	-	-
Equity and debt instruments	22	1
Other Collateral	-	-
<b>Total</b>	<b>\$ 22</b>	<b>\$ 1</b>

## GSI

\$ in millions	As of December 2022	
	Collateral obtained by taking possession accumulated	
	Value at initial recognition	Accumulated negative changes
Property Plant and Equipment (PP&E)	-	-
<b>Other than Property Plant and Equipment</b>	<b>\$ 22</b>	<b>\$ 1</b>
Residential immovable property	-	-
Commercial Immovable property	-	-
Movable property (auto, shipping, etc.)	-	-
Equity and debt instruments	22	1
Other	-	-
<b>Total</b>	<b>\$ 22</b>	<b>\$ 1</b>

## Pillar 3 Disclosures

Table 69: Credit Quality of Performing and Non-performing Exposures by Past Due Days

GSGUK

		As of December 2022											
		Gross carrying amount / Nominal amount											
		Performing exposures			Non-performing exposures								Of which defaulted
	Not past due or Past due <= 30 days	Past due > 30 days <= 90 days	Unlikely to pay that are not past-due or past-due <= 90 days	Past due > 90 days <= 180 days	Past due > 180 days <= 1 year	Past due > 1 year <= 2 years	Past due > 2 year <= 5 years	Past due > 5 year <= 7 years	Past due > 7 years				
<b>005</b>	<b>Cash balances at central banks and other demand deposits</b>	<b>\$ 29,822</b>	<b>\$ 29,822</b>	-	-	-	-	-	-	-	-	-	-
<b>010</b>	<b>Loans and advances</b>	<b>\$ 342,573</b>	<b>\$ 342,573</b>	-	<b>\$ 186</b>	<b>\$ 130</b>	-	-	-	-	-	<b>\$ 56</b>	<b>\$ 186</b>
020	Central banks	1,717	1,717	-	-	-	-	-	-	-	-	-	-
030	General governments	2,890	2,890	-	-	-	-	-	-	-	-	-	-
040	Credit institutions	45,802	45,802	-	56	-	-	-	-	-	-	56	56
050	Other financial corporations	286,278	286,278	-	40	40	-	-	-	-	-	-	40
060	Non-financial corporations	4,736	4,736	-	90	90	-	-	-	-	-	-	90
070	Of which SMEs	-	-	-	-	-	-	-	-	-	-	-	-
080	Households	1,150	1,150	-	-	-	-	-	-	-	-	-	-
<b>090</b>	<b>Debt Securities</b>	<b>\$ 2,564</b>	<b>\$ 2,564</b>	-	<b>\$ 30</b>	<b>\$ 3</b>	<b>\$ 19</b>	-	-	-	-	<b>\$ 7</b>	<b>\$ 30</b>
100	Central banks	-	-	-	-	-	-	-	-	-	-	-	-
110	General governments	2,392	2,392	-	-	-	-	-	-	-	-	-	-
120	Credit institutions	0	0	-	7	-	-	-	-	-	-	7	7
130	Other financial corporations	164	164	-	3	3	-	-	-	-	-	-	3
140	Non-financial corporations	8	8	-	20	-	19	-	-	-	-	-	20
<b>150</b>	<b>Off-balance sheet exposures</b>	<b>\$ 3,797</b>			<b>\$ 39</b>								<b>\$ 39</b>
160	Central banks	-			-								-
170	General governments	15			-								-
180	Credit institutions	73			-								-
190	Other financial corporations	1,245			-								-
200	Non-financial corporations	2,459			39								39
210	Households	5			-								-
<b>220</b>	<b>Total</b>	<b>\$ 378,756</b>	<b>\$ 374,959</b>	-	<b>\$ 255</b>	<b>\$ 133</b>	<b>\$ 19</b>	-	-	-	-	<b>\$ 63</b>	<b>\$ 255</b>



## Pillar 3 Disclosures

## GSI

\$ millions		As of December 2022										
		Gross carrying amount / Nominal amount										
		Performing exposures			Non-performing exposures							
			Not past due or Past due <= 30 days	Past due > 30 days <= 90 days	Unlikely to pay that are not past-due or past-due <= 90 days	Past due > 90 days <= 180 days	Past due > 180 days <= 1 year	Past due > 1 year <= 2 years	Past due > 2 year <= 5 years	Past due > 5 year <= 7 years	Past due > 7 years	Of which defaulted
<b>005</b>	<b>Cash balances at central banks and other demand deposits</b>	<b>\$ 11,707</b>	<b>\$ 11,707</b>	-	-	-	-	-	-	-	-	-
<b>010</b>	<b>Loans and advances</b>	<b>\$ 316,909</b>	<b>\$ 316,909</b>	-	<b>\$ 56</b>	-	-	-	-	-	<b>\$ 56</b>	<b>\$ 56</b>
020	Central banks	1,562	1,562	-	-	-	-	-	-	-	-	-
030	General governments	2,886	2,886	-	-	-	-	-	-	-	-	-
040	Credit institutions	46,315	46,315	-	56	-	-	-	-	-	56	56
050	Other financial corporations	264,397	264,397	-	-	-	-	-	-	-	-	-
060	Non-financial corporations	1,581	1,581	-	-	-	-	-	-	-	-	-
070	Of which SMEs	-	-	-	-	-	-	-	-	-	-	-
080	Households	168	168	-	-	-	-	-	-	-	-	-
<b>090</b>	<b>Debt Securities</b>	<b>\$ 37</b>	<b>\$ 37</b>	-	<b>\$ 26</b>	-	<b>\$ 19</b>	-	-	<b>\$ 0</b>	<b>\$ 7</b>	<b>\$ 26</b>
100	Central banks	-	-	-	-	-	-	-	-	-	-	-
110	General governments	0	0	-	-	-	-	-	-	-	-	-
120	Credit institutions	0	0	-	7	-	-	-	-	-	7	7
130	Other financial corporations	34	34	-	-	-	-	-	-	-	-	-
140	Non-financial corporations	3	3	-	19	-	19	-	-	0	-	19
<b>150</b>	<b>Off-balance sheet exposures</b>	<b>\$ 468</b>		-								-
160	Central banks	-		-								-
170	General governments	15		-								-
180	Credit institutions	73		-								-
190	Other financial corporations	380		-								-
200	Non-financial corporations	-		-								-
210	Households	-		-								-
<b>220</b>	<b>Total</b>	<b>\$ 329,121</b>	<b>\$ 328,653</b>	-	<b>\$ 82</b>	-	<b>\$ 19</b>	-	-	<b>\$ 0</b>	<b>\$ 63</b>	<b>\$ 82</b>

## Pillar 3 Disclosures

## GSIB

		As of December 2022										
		Gross carrying amount / Nominal amount										
		Performing exposures			Non-performing exposures							
		Not past due or Past due <= 30 days	Past due > 30 days <= 90 days		Unlikely to pay that are not past-due or past-due <= 90 days	Past due > 90 days <= 180 days	Past due > 180 days <= 1 year	Past due > 1 year <= 2 years	Past due > 2 year <= 5 years	Past due > 5 year <= 7 years	Past due > 7 years	Of which defaulted
<b>005</b>	<b>Cash balances at central banks and other demand deposits</b>	<b>\$ 18,455</b>	<b>\$ 18,455</b>	-	-	-	-	-	-	-	-	-
<b>010</b>	<b>Loans and advances</b>	<b>\$ 48,876</b>	<b>\$ 48,876</b>	-	<b>\$ 130</b>	<b>\$ 130</b>	-	-	-	-	-	<b>\$ 130</b>
020	Central banks	155	155	-	-	-	-	-	-	-	-	-
030	General governments	5	5	-	-	-	-	-	-	-	-	-
040	Credit institutions	-	-	-	-	-	-	-	-	-	-	-
050	Other financial corporations	44,675	44,675	-	40	40	-	-	-	-	-	40
060	Non-financial corporations	3,154	3,154	-	90	90	-	-	-	-	-	90
070	Of which SMEs	-	-	-	-	-	-	-	-	-	-	-
080	Households	887	887	-	-	-	-	-	-	-	-	-
<b>090</b>	<b>Debt Securities</b>	<b>\$ 4,076</b>	<b>\$ 4,076</b>	-	<b>\$ 3</b>	<b>\$ 3</b>	-	-	-	-	-	<b>\$ 3</b>
100	Central banks	-	-	-	-	-	-	-	-	-	-	-
110	General governments	2,392	2,392	-	-	-	-	-	-	-	-	-
120	Credit institutions	0	0	-	-	-	-	-	-	-	-	-
130	Other financial corporations	1,684	1,684	-	3	3	-	-	-	-	-	3
140	Non-financial corporations	-	-	-	-	-	-	-	-	-	-	-
<b>150</b>	<b>Off-balance sheet exposures</b>	<b>\$ 3,329</b>			<b>\$ 39</b>							<b>\$ 39</b>
160	Central banks	-			-							-
170	General governments	-			-							-
180	Credit institutions	-			-							-
190	Other financial corporations	865			-							-
200	Non-financial corporations	2,458			39							39
210	Households	6			-							-
<b>220</b>	<b>Total</b>	<b>\$ 74,736</b>	<b>\$ 71,407</b>	-	<b>\$ 172</b>	<b>\$ 133</b>	-	-	-	-	-	<b>\$ 172</b>

## Pillar 3 Disclosures

Table 70: Performing and Non-performing Exposures and Related Provisions

GSGUK

\$ millions		Gross carrying amount/nominal amount											As of December 2022			
		Performing exposures						Non-performing exposures					Accumulated partial write-off	Collateral and financial guarantees received		
		Performing exposures – accumulated impairment and provisions			Non-performing exposures – accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions			Performing exposures – accumulated impairment and provisions		Non-performing exposures – accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions				On performing exposures	On non-performing exposures	
			Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3		Of which stage 1	Of which stage 2		Of which stage 2				Of which stage 3
05	Cash balances at central banks and other demand deposits	\$ 29,822	\$ 29,822	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Loans and advances	\$ 342,573	\$ 179,820	\$ 614	\$ 186	-	\$ 130	\$ (57)	\$ (40)	\$ (17)	\$ (74)	-	\$ (52)	\$ 33	\$ 266,524	\$ 34
20	Central banks	1,717	919	-	-	-	-	-	-	-	-	-	-	-	1,157	-
30	General governments	2,890	2,580	-	-	-	-	-	-	-	-	-	-	-	1,491	-
40	Credit institutions	45,802	27,144	-	56	-	-	-	-	-	(22)	-	-	-	22,425	-
50	Other financial corporations	286,278	144,136	142	40	-	40	(18)	(10)	(7)	(5)	-	(5)	-	238,823	34
60	Non-financial corporations	4,736	4,055	465	90	-	90	(31)	(22)	(10)	(47)	-	(47)	33	1,622	-
70	Of which SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80	Households	1,150	986	7	-	-	-	(8)	(8)	(0)	-	-	-	-	1,006	-
90	Debt securities	\$ 2,564	\$ 2,257	-	\$ 30	-	\$ 3	-	-	-	\$ (19)	-	\$ (1)	-	-	-
100	Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110	General governments	2,392	2,169	-	-	-	-	-	-	-	-	-	-	-	-	-
120	Credit institutions	0	0	-	7	-	-	-	-	-	-	-	-	-	-	-
130	Other financial corporations	164	88	-	3	-	3	-	-	-	(1)	-	(1)	-	-	-
140	Non-financial corporations	8	-	-	20	-	-	-	-	-	(18)	-	-	-	-	-
150	Off-balance-sheet exposures	\$ 3,797	\$ 3,523	\$ 273	\$ 39	-	\$ 39	\$ (21)	\$ (13)	\$ (8)	\$ (2)	-	\$ (2)		-	-
160	Central banks	-	-	-	-	-	-	-	-	-	-	-	-		-	-
170	General governments	15	15	-	-	-	-	-	-	-	-	-	-		-	-
180	Credit institutions	73	73	-	-	-	-	-	-	-	-	-	-		-	-
190	Other financial corporations	1,245	1,245	-	-	-	-	(1)	(1)	-	-	-	-		-	-
200	Non-financial corporations	2,459	2,185	273	39	-	39	(20)	(12)	(8)	(2)	-	(2)		-	-
210	Households	5	5	-	-	-	-	(0)	(0)	-	-	-	-		-	-
220	Total	\$ 378,756	\$ 215,422	\$ 887	\$ 255	-	\$ 172	\$ (78)	\$ (53)	\$ (25)	\$ (95)	-	\$ (55)	\$ 33	\$ 266,524	\$ 34

## Pillar 3 Disclosures

## GSI

\$ millions													As of December 2022			
		Gross carrying amount/nominal amount						Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions						Collateral and financial guarantees received		
		Performing exposures			Non-performing exposures			Performing exposures – accumulated impairment and provisions			Non-performing exposures – accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions			Accumulated partial write-off	On performing exposures	On non-performing exposures
			Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3		Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3			
05	Cash balances at central banks and other demand deposits	\$ 11,707	\$ 11,707	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Loans and advances	\$ 316,909	\$ 164,961	-	\$ 56	-	-	-	-	-	\$ (22)	-	-	-	\$ 245,979	-
20	Central banks	1,562	764	-	-	-	-	-	-	-	-	-	-	-	1,157	-
30	General governments	2,886	2,576	-	-	-	-	-	-	-	-	-	-	-	1,491	-
40	Credit institutions	46,315	27,535	-	56	-	-	-	-	-	(22)	-	-	-	22,726	-
50	Other financial corporations	264,397	132,448	-	-	-	-	-	-	-	-	-	-	-	220,359	-
60	Non-financial corporations	1,581	1,470	-	-	-	-	-	-	-	-	-	-	-	191	-
70	Of which SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80	Households	168	168	-	-	-	-	-	-	-	-	-	-	-	55	-
90	Debt securities	\$ 37	-	-	\$ 26	-	-	-	-	-	\$ (18)	-	-	-	-	-
100	Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110	General governments	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120	Credit institutions	0	-	-	7	-	-	-	-	-	-	-	-	-	-	-
130	Other financial corporations	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-
140	Non-financial corporations	3	-	-	19	-	-	-	-	-	(18)	-	-	-	-	-
150	Off-balance-sheet exposures	\$ 468	\$ 468	-	-	-	-	-	-	-	-	-	-	-	-	-
160	Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
170	General governments	15	15	-	-	-	-	-	-	-	-	-	-	-	-	-
180	Credit institutions	73	73	-	-	-	-	-	-	-	-	-	-	-	-	-
190	Other financial corporations	380	380	-	-	-	-	-	-	-	-	-	-	-	-	-
200	Non-financial corporations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
210	Households	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
220	Total	\$ 329,121	\$ 177,136	-	\$ 82	-	-	-	-	-	\$ (40)	-	-	-	\$ 245,979	-

## Pillar 3 Disclosures

## GSIB

\$ millions													As of December 2022			
		Gross carrying amount/nominal amount						Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions					Accumulated partial write-off	Collateral and financial guarantees received		
		Performing exposures			Non-performing exposures			Performing exposures – accumulated impairment and provisions			Non-performing exposures – accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions			On performing exposures	On non-performing exposures	
			Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3		Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3			
05	Cash balances at central banks and other demand deposits	\$ 18,455	\$ 18,455	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Loans and advances	\$48,876	\$ 25,293	\$ 614	\$ 130	-	\$ 130	\$ (55)	\$ (38)	\$ (17)	\$ (52)	-	\$ (52)	\$ 33	\$ 44,655	\$ 34
20	Central banks	155	155	-	-	-	-	-	-	-	-	-	-	-	-	-
30	General governments	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-
40	Credit institutions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	Other financial corporations	44,675	21,755	142	40	-	40	(17)	(11)	(7)	(5)	-	(5)	-	42,366	34
60	Non-financial corporations	3,154	2,584	465	90	-	90	(31)	(21)	(10)	(47)	-	(47)	33	1,431	-
70	Of which SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80	Households	887	794	7	-	-	-	(7)	(6)	(0)	-	-	-	-	858	-
90	Debt securities	\$ 4,076	\$ 2,216	-	\$ 3	-	\$ 3	-	-	-	\$ (1)	-	\$ (1)	-	\$ 1,457	-
100	Central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110	General governments	2,392	2,169	-	-	-	-	-	-	-	-	-	-	-	-	-
120	Credit institutions	0	(0)	-	-	-	-	-	-	-	-	-	-	-	-	-
130	Other financial corporations	1,684	47	-	3	-	3	-	-	-	(1)	-	(1)	-	1,457	-
140	Non-financial corporations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
150	Off-balance-sheet exposures	\$3,329	\$ 3,056	\$ 273	\$ 39	-	\$ 39	\$ (21)	\$ (13)	\$ (8)	\$ (2)	-	\$ (2)		-	-
160	Central banks	-	-	-	-	-	-	-	-	-	-	-	-		-	-
170	General governments	-	-	-	-	-	-	-	-	-	-	-	-		-	-
180	Credit institutions	-	-	-	-	-	-	-	-	-	-	-	-		-	-
190	Other financial corporations	865	865	-	-	-	-	(1)	(1)	-	-	-	-		-	-
200	Non-financial corporations	2,458	2,185	273	39	-	39	(20)	(12)	(8)	(2)	-	(2)		-	-
210	Households	6	6	-	-	-	-	(0)	(0)	-	-	-	-		-	-
220	Total	\$ 74,736	\$ 49,020	\$ 887	\$ 172	-	\$ 172	\$ (76)	\$ (51)	\$ (25)	\$ (55)	-	\$ (55)	\$ 33	\$ 46,112	\$ 34

## Pillar 3 Disclosures

Table 71: Credit quality of loans and advances to non-financial corporations by industry

## GSGUK

\$ in millions		Gross carrying amount				Accumulated impairment	As of December 2022 Accumulated negative changes in fair value due to credit risk on non-performing exposures
		Of which non-performing	Of which loans and advances subject to impairment				
				Of which defaulted			
010	Agriculture, forestry and fishing	10	-	-	-	(0)	-
020	Mining and quarrying	111	-	-	-	(2)	-
030	Manufacturing	1,071	-	60	-	(35)	-
040	Electricity, gas, steam and air conditioning supply	175	-	-	-	(0)	-
050	Water supply	0	-	-	-	-	-
060	Construction	116	-	-	-	(2)	-
070	Wholesale and retail trade	718	-	-	-	(6)	-
080	Transport and storage	73	-	2	-	(1)	-
090	Accommodation and food service activities	4	-	-	-	(0)	-
100	Information and communication	713	-	-	-	(3)	-
110	Financial and insurance activities	-	-	-	-	-	-
120	Real estate activities	983	-	-	-	(3)	-
130	Professional, scientific and technical activities	285	-	-	-	(6)	-
140	Administrative and support service activities	167	-	28	-	(20)	-
150	Public administration and defence, compulsory social security	-	-	-	-	-	-
160	Education	133	-	-	-	(0)	-
170	Human health services and social work activities	36	-	-	-	(0)	-
180	Arts, entertainment and recreation	56	-	-	-	(0)	-
190	Other services	177	-	-	-	(0)	-
<b>200</b>	<b>Total</b>	<b>\$ 4,828</b>	-	<b>\$ 90</b>	-	<b>\$ (78)</b>	-

## Pillar 3 Disclosures

## GSI

\$ in millions		Gross carrying amount			Accumulated impairment	As of December 2022
		Of which non-performing	Of which defaulted	Of which loans and advances subject to impairment		
010	Agriculture, forestry and fishing	0	-	-	-	-
020	Mining and quarrying	13	-	-	-	-
030	Manufacturing	292	-	-	-	-
040	Electricity, gas, steam and air conditioning supply	170	-	-	-	-
050	Water supply	0	-	-	-	-
060	Construction	0	-	-	-	-
070	Wholesale and retail trade	231	-	-	-	-
080	Transport and storage	1	-	-	-	-
090	Accommodation and food service activities	2	-	-	-	-
100	Information and communication	417	-	-	-	-
110	Financial and insurance activities	-	-	-	-	-
120	Real estate activities	42	-	-	-	-
130	Professional, scientific and technical activities	84	-	-	-	-
140	Administrative and support service activities	14	-	-	-	-
150	Public administration and defence, compulsory social security	-	-	-	-	-
160	Education	95	-	-	-	-
170	Human health services and social work activities	36	-	-	-	-
180	Arts, entertainment and recreation	9	-	-	-	-
190	Other services	175	-	-	-	-
200	<b>Total</b>	<b>\$ 1,581</b>	-	-	-	-

## Pillar 3 Disclosures

## GSIB

\$ in millions		Gross carrying amount				Accumulated impairment	As of December 2022 Accumulated negative changes in fair value due to credit risk on non-performing exposures
		Of which non-performing	Of which loans and advances subject to impairment				
			Of which defaulted				
010	Agriculture, forestry and fishing	10	-	-	-	(0)	-
020	Mining and quarrying	98	-	-	-	(2)	-
030	Manufacturing	778	-	60	-	(35)	-
040	Electricity, gas, steam and air conditioning supply	5	-	-	-	(0)	-
050	Water supply	-	-	-	-	-	-
060	Construction	116	-	-	-	(2)	-
070	Wholesale and retail trade	487	-	-	-	(6)	-
080	Transport and storage	72	-	2	-	(1)	-
090	Accommodation and food service activities	2	-	-	-	(0)	-
100	Information and communication	297	-	-	-	(3)	-
110	Financial and insurance activities	-	-	-	-	-	-
120	Real estate activities	940	-	-	-	(3)	-
130	Professional, scientific and technical activities	201	-	-	-	(6)	-
140	Administrative and support service activities	153	-	28	-	(20)	-
150	Public administration and defence, compulsory social security	-	-	-	-	-	-
160	Education	38	-	-	-	(0)	-
170	Human health services and social work activities	1	-	-	-	(0)	-
180	Arts, entertainment and recreation	46	-	-	-	(0)	-
190	Other services	0	-	-	-	(0)	-
<b>200</b>	<b>Total</b>	<b>\$ 3,244</b>	-	<b>\$ 90</b>	-	<b>\$ (78)</b>	-



## Pillar 3 Disclosures

Table 72: Credit quality of forborne exposures

## GSGUK

\$ millions								As of December 2022	
		Gross carrying amount of forborne exposures / Nominal amount				Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions		Collaterals received and financial guarantees received on forborne exposures	
		Performing forborne	Non-performing forborne		On performing forborne exposures	On non-performing forborne exposures	Of which: Collateral and financial guarantees received on non-performing exposures with forbearance measures		
			Of which defaulted	Of which impaired					
005	Cash balances at central banks and other demand deposits	-	-	-	-	-	-	-	-
010	Loans and advances	\$ 70	\$ 112	\$ 112	\$ 112	\$ (3)	\$ (47)	\$ 73	\$ 34
020	Central banks	-	-	-	-	-	-	-	-
030	General governments	-	-	-	-	-	-	-	-
040	Credit institutions	-	-	-	-	-	-	-	-
050	Other financial corporations	67	40	40	40	(3)	(5)	73	34
060	Non-financial corporations	-	72	72	72	-	(42)	-	-
070	Households	3	-	-	-	(0)	-	-	-
080	Debt Securities	-	-	-	-	-	-	-	-
090	Loan commitments given	-	-	-	-	-	-	-	-
100	<b>Total</b>	<b>\$ 70</b>	<b>\$ 112</b>	<b>\$ 112</b>	<b>\$ 112</b>	<b>\$ (3)</b>	<b>\$ (47)</b>	<b>\$ 73</b>	<b>\$ 34</b>

## GSI

\$ millions								As of December 2022	
		Gross carrying amount of forborne exposures / Nominal amount				Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions		Collaterals received and financial guarantees received on forborne exposures	
		Performing forborne	Non-performing forborne		On performing forborne exposures	On non-performing forborne exposures	Of which: Collateral and financial guarantees received on non-performing exposures with forbearance measures		
			Of which defaulted	Of which impaired					
005	Cash balances at central banks and other demand deposits	-	-	-	-	-	-	-	-
010	Loans and advances	\$ 27	-	-	-	-	-	\$1	-
020	Central banks	-	-	-	-	-	-	-	-
030	General governments	-	-	-	-	-	-	-	-
040	Credit institutions	-	-	-	-	-	-	-	-
050	Other financial corporations	27	-	-	-	-	-	1	-
060	Non-financial corporations	-	-	-	-	-	-	-	-
070	Households	-	-	-	-	-	-	-	-
080	Debt Securities	-	-	-	-	-	-	-	-
090	Loan commitments given	-	-	-	-	-	-	-	-
100	<b>Total</b>	<b>\$ 27</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$ 1</b>	<b>-</b>

**GSIB**

\$ millions								As of December 2022	
		Gross carrying amount of forbore exposures / Nominal amount				Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions		Collaterals received and financial guarantees received on forbore exposures	
		Performing forbore	Non-performing forbore		On performing forbore exposures	On non-performing forbore exposures	Of which: Collateral and financial guarantees received on non-performing exposures with forbearance measures		
			Of which defaulted	Of which impaired					
005	Cash balances at central banks and other demand deposits	-	-	-	-	-	-	-	-
010	Loans and advances	\$ 43	\$ 112	\$ 112	\$ 112	\$ (3)	\$ (47)	\$ 72	\$ 34
020	Central banks	-	-	-	-	-	-	-	-
030	General governments	-	-	-	-	-	-	-	-
040	Credit institutions	-	-	-	-	-	-	-	-
050	Other financial corporations	40	40	40	40	(3)	(5)	72	34
060	Non-financial corporations	-	72	72	72	-	(42)	-	-
070	Households	3	-	-	-	(0)	-	-	-
080	Debt Securities	-	-	-	-	-	-	-	-
090	Loan commitments given	-	-	-	-	-	-	-	-
<b>100</b>	<b>Total</b>	<b>\$ 43</b>	<b>\$ 112</b>	<b>\$ 112</b>	<b>\$ 112</b>	<b>\$ (3)</b>	<b>\$ (47)</b>	<b>\$ 72</b>	<b>\$ 34</b>

## Pillar 3 Disclosures

Table 73: IRB approach – Disclosure of the extent of the use of CRM techniques

## GSGUK

\$ in millions													As of December 2022		
Exposure Class	Total exposures	Credit risk Mitigation techniques											Credit risk Mitigation methods in the calculation of RWAs		
		Funded credit Protection (FCP)										Unfunded credit Protection (UFCP)		RWA post all CRM assigned to the obligor exposure class	RWA with substitution effects
		Part of exposures covered by Financial Collaterals (%)	Part of exposures covered by Other eligible collaterals (%)	Part of exposures covered by Immovable property Collaterals (%)	Part of exposures covered by Receivables (%)	Part of exposures covered by Other physical collateral (%)	Part of exposures covered by Other funded credit protection (%)	Part of exposures covered by Cash on deposit (%)	Part of exposures covered by Life insurance policies (%)	Part of exposures covered by Instruments held by a third party (%)	Part of exposures covered by Guarantees (%)	Part of exposures covered by Credit Derivatives (%)			
Central governments and central banks	\$ 25,749	-	-	-	-	-	-	-	-	-	-	-	-	\$ 1,411	\$ 1,411
Institutions	7,546	-	-	-	-	-	-	-	-	-	-	-	-	3,413	3,413
Corporates	16,821	-	-	-	-	-	-	-	-	-	-	-	-	20,614	20,614
Of which Corporates – SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Of which Corporates – Specialised lending	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Of which Corporates – Other	16,821	-	-	-	-	-	-	-	-	-	-	-	-	20,614	20,614
Retail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Of which Retail – Immovable property SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Of which Retail – Immovable property non-SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Of which Retail – Qualifying revolving	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Of which Retail – Other SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Of which Retail – Other non-SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>\$ 50,116</b>	-	-	-	-	-	-	-	-	-	-	-	-	<b>\$ 25,438</b>	<b>\$ 25,438</b>

**Pillar 3 Disclosures**

**GSI**

\$ in millions													As of December 2022		
Exposure Class	Total exposures	Credit risk Mitigation techniques											Credit risk Mitigation methods in the calculation of RWAs		
		Funded credit Protection (FCP)										Unfunded credit Protection (UFCP)		RWA post all CRM assigned to the obligor exposure class	RWA with substitution effects
		Part of exposures covered by Financial Collaterals (%)	Part of exposures covered by Other eligible collaterals (%)	Part of exposures covered by Immovable property Collaterals (%)	Part of exposures covered by Receivables (%)	Part of exposures covered by Other physical collateral (%)	Part of exposures covered by Other funded credit protection (%)	Part of exposures covered by Cash on deposit (%)	Part of exposures covered by Life insurance policies (%)	Part of exposures covered by Instruments held by a third party (%)	Part of exposures covered by Guarantees (%)	Part of exposures covered by Credit Derivatives (%)			
Central governments and central banks	\$ 7,354	-	-	-	-	-	-	-	-	-	-	-	-	\$ 630	\$ 630
Institutions	5,485	-	-	-	-	-	-	-	-	-	-	-	-	2,541	2,541
Corporates	10,020	-	-	-	-	-	-	-	-	-	-	-	-	13,326	13,326
Of which Corporates – SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Of which Corporates – Specialised lending	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Of which Corporates – Other	10,020	-	-	-	-	-	-	-	-	-	-	-	-	13,326	13,326
Retail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Of which Retail – Immovable property SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Of which Retail – Immovable property non-SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Of which Retail – Qualifying revolving	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Of which Retail – Other SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Of which Retail – Other non-SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>\$ 22,859</b>	-	-	-	-	-	-	-	-	-	-	-	-	<b>\$ 16,497</b>	<b>\$ 16,497</b>

**Pillar 3 Disclosures**

**GSIB**

\$ in millions													As of December 2022		
Exposure Class	Total exposures	Credit risk Mitigation techniques											Credit risk Mitigation methods in the calculation of RWAs		
		Funded credit Protection (FCP)										Unfunded credit Protection (UFCP)		RWA post all CRM assigned to the obligor exposure class	RWA with substitution effects
		Part of exposures covered by Financial Collaterals (%)	Part of exposures covered by Other eligible collaterals (%)	Part of exposures covered by Immovable property Collaterals (%)	Part of exposures covered by Receivables (%)	Part of exposures covered by Other physical collateral (%)	Part of exposures covered by Other funded credit protection (%)	Part of exposures covered by Cash on deposit (%)	Part of exposures covered by Life insurance policies (%)	Part of exposures covered by Instruments held by a third party (%)	Part of exposures covered by Guarantees (%)	Part of exposures covered by Credit Derivatives (%)			
Central governments and central banks	\$ 18,395	-	-	-	-	-	-	-	-	-	-	-	\$ 782	\$ 782	
Institutions	12,354	-	-	-	-	-	-	-	-	-	-	-	925	925	
Corporates	9,098	-	-	-	-	-	-	-	-	-	-	-	9,741	9,741	
Of which Corporates – SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Of which Corporates – Specialised lending	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Of which Corporates – Other	9,098	-	-	-	-	-	-	-	-	-	-	-	9,741	9,741	
Retail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Of which Retail – Immovable property SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Of which Retail – Immovable property non-SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Of which Retail – Qualifying revolving	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Of which Retail – Other SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Of which Retail – Other non-SMEs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Total</b>	<b>\$ 39,847</b>	-	-	-	-	-	-	-	-	-	-	-	<b>\$ 11,448</b>	<b>\$ 11,448</b>	

## Pillar 3 Disclosures

Table 74: IRB approach – Credit risk exposures by exposure class and PD range

## GSGUK

\$ in millions													As of December 2022
PD range	On-balance sheet exposures	Off-balance-sheet exposures pre-CCF	Exposure weighted average CCF	Exposure post CCF and post CRM	Exposure weighted average PD (%)	Number of obligors	Exposure weighted average LGD (%)	Exposure weighted average maturity (years)	Risk weighted exposure amount after supporting factors	Density of risk weighted exposure amount	Expected loss amount	Value adjustments and provisions	
Sovereign	0.00 to <0.15	25,559	-	100.00%	25,559	0.01%	29	50%	1	1,284	5%	2	-
	0.00 to <0.10	25,559	-	100.00%	25,559	0.01%	29	50%	1	1,284	5%	2	-
	0.10 to <0.15	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
	0.15 to <0.25	59	-	100.00%	59	0.18%	3	50%	1	19	33%	0	-
	0.25 to <0.50	23	-	100.00%	23	0.26%	3	50%	1	10	42%	0	-
	0.50 to <0.75	98	-	100.00%	98	0.67%	2	50%	2	82	84%	0	-
	0.75 to <2.50	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
	0.75 to <1.75	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
	1.75 to <2.5	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
	2.50 to <10.00	10	-	100.00%	10	5.80%	1	50%	1	16	165%	0	-
	2.5 to <5	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
	5 to <10	10	-	100.00%	10	5.80%	1	50%	1	16	165%	0	-
	10.00 to <100.00	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
	10 to <20	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
	20 to <30	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
	30.00 to 100.00	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
	100.00 (Default)	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
	<b>Subtotal</b>	<b>\$ 25,749</b>	<b>-</b>	<b>100.00%</b>	<b>\$ 25,749</b>	<b>0.02%</b>	<b>38</b>	<b>50%</b>	<b>1</b>	<b>\$ 1,411</b>	<b>5%</b>	<b>\$ 3</b>	<b>-</b>
Institutions	0.00 to <0.15	5,205	1,252	95.15%	6,193	0.06%	201	63%	1	1,647	27%	2	(1)
	0.00 to <0.10	5,205	1,252	95.15%	6,193	0.06%	201	63%	1	1,647	27%	2	(1)
	0.10 to <0.15	-	-	0.00%	-	0.00%	-	0%	0	-	-	-	-
	0.15 to <0.25	423	220	91.47%	588	0.17%	55	64%	1	356	61%	1	-
	0.25 to <0.50	69	-	100.00%	69	0.26%	21	64%	1	49	71%	0	-
	0.50 to <0.75	390	14	99.12%	400	0.67%	21	67%	1	508	127%	2	(0)
	0.75 to <2.50	14	-	100.00%	14	1.57%	11	66%	1	24	173%	0	-
	0.75 to <1.75	14	-	100.00%	14	1.56%	8	66%	1	24	172%	0	-
	1.75 to <2.5	0	-	100.00%	0	2.37%	3	66%	1	0	201%	0	-
	2.50 to <10.00	113	-	100.00%	113	9.22%	21	64%	1	340	302%	7	-
	2.5 to <5	-	-	0.00%	-	0.00%	-	0%	0	-	-	-	-
	5 to <10	113	-	100.00%	113	9.22%	21	64%	1	340	302%	7	-
	10.00 to <100.00	128	0	100.00%	128	23.78%	32	61%	2	488	381%	18	(1)
	10 to <20	-	-	0.00%	-	0.00%	-	0%	0	-	-	-	-
20 to <30	128	0	100.00%	128	23.78%	32	61%	2	488	381%	18	(1)	
30.00 to <100.00	-	-	0.00%	-	0.00%	-	0%	0	-	-	-	-	
100.00 (Default)	41	-	100.00%	41	99.90%	5	66%	2	1	1%	-	-	
<b>Subtotal</b>	<b>\$ 6,383</b>	<b>\$ 1,486</b>	<b>95.89%</b>	<b>\$ 7,546</b>	<b>1.19%</b>	<b>367</b>	<b>92%</b>	<b>1</b>	<b>\$ 3,413</b>	<b>45%</b>	<b>\$ 30</b>	<b>\$(2)</b>	
Corporates	0.00 to <0.15	2,948	1,945	90.06%	4,485	0.05%	585	63%	2	1,374	31%	2	(0)
	0.00 to <0.10	2,948	1,945	90.06%	4,485	0.05%	585	63%	2	1,374	31%	2	(0)
	0.10 to <0.15	-	-	0.00%	-	0.00%	-	0%	0	-	-	-	-
	0.15 to <0.25	2,126	1,072	91.62%	3,089	0.17%	214	66%	2	2,041	66%	4	(0)
	0.25 to <0.50	687	1,189	84.15%	1,731	0.26%	147	69%	3	1,589	92%	3	(1)
	0.50 to <0.75	1,116	1,485	85.73%	2,527	0.65%	121	77%	2	3,621	143%	13	(2)
	0.75 to <2.50	965	1,593	84.43%	2,449	1.73%	410	69%	2	4,569	187%	29	(7)
	0.75 to <1.75	621	1,387	82.73%	1,934	1.56%	362	71%	2	3,638	188%	21	(2)
	1.75 to <2.5	344	206	90.65%	515	2.37%	48	62%	3	931	181%	8	(5)
	2.50 to <10.00	879	918	87.22%	1,649	7.33%	85	61%	3	4,472	271%	70	(6)
2.5 to <5	-	-	-	-	0.00%	-	0%	0	-	-	-	-	
5 to <10	879	918	87.22%	1,649	7.33%	85	61%	3	4,472	271%	70	(6)	

**Pillar 3 Disclosures**

10.00 to <100.00	382	386	87.45%	676	23.78%	292	58%	2	2,355	348%	93	(4)
10 to <20	-	-	-	-	-	-	0%	0	-	-	-	-
20 to <30	382	386	87.45%	676	23.78%	292	58%	2	2,355	348%	93	(4)
30.00 to <100.00	-	-	0.00%	-	0.00%	-	0%	0	-	-	-	-
100.00 (Default)	185	39	95.68%	215	100.00%	20	56%	3	593	276%	1	(18)
<b>Subtotal</b>	<b>\$ 9,288</b>	<b>\$ 8,627</b>	<b>93.89%</b>	<b>\$ 16,821</b>	<b>3.37%</b>	<b>1,874</b>	<b>67%</b>	<b>2</b>	<b>\$ 20,614</b>	<b>123%</b>	<b>\$ 215</b>	<b>\$(38)</b>
<b>Total (all portfolios)</b>	<b>\$ 41,420</b>	<b>\$ 10,113</b>	<b>97.25%</b>	<b>\$ 50,116</b>	<b>1.32%</b>	<b>2,279</b>	<b>62%</b>	<b>1</b>	<b>\$ 25,438</b>	<b>51%</b>	<b>\$ 247</b>	<b>\$(40)</b>

**GSI**

\$ in millions

												As of December 2022	
PD range	On-balance sheet exposures	Off-balance-sheet exposures pre-CCF	Exposure weighted average CCF	Exposure post CCF and post CRM	Exposure weighted average PD (%)	Number of obligors	Exposure weighted average LGD (%)	Exposure weighted average maturity (years)	Risk weighted exposure amount after supporting factors	Density of risk weighted exposure amount	Expected loss amount	Value adjustments and provisions	
Sovereign	0.00 to <0.15	7,262	-	100.00%	7,262	0.03%	25	50%	1	585	8%	1	-
	0.00 to <0.10	7,262	-	100.00%	7,262	0.03%	25	50%	1	585	8%	1	-
	0.10 to <0.15	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
	0.15 to <0.25	59	-	100.00%	59	0.18%	3	50%	1	19	33%	0	-
	0.25 to <0.50	23	-	100.00%	23	0.26%	3	50%	1	10	42%	0	-
	0.50 to <0.75	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
	0.75 to <2.50	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
	0.75 to <1.75	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
	1.75 to <2.5	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
	2.50 to <10.00	10	-	100.00%	10	5.80%	1	50%	1	16	165%	0	-
	2.5 to <5	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
	5 to <10	10	-	100.00%	10	5.80%	1	50%	1	16	165%	0	-
	10.00 to <100.00	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
	10 to <20	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
20 to <30	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-	
30.00 to 100.00	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-	
100.00 (Default)	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-	
<b>Subtotal</b>	<b>\$ 7,354</b>	<b>-</b>	<b>0.04%</b>	<b>\$ 7,354</b>	<b>0.04%</b>	<b>32</b>	<b>50%</b>	<b>1</b>	<b>\$ 630</b>	<b>9%</b>	<b>\$ 1</b>	<b>-</b>	
Institutions	0.00 to <0.15	4,459	-	100.00%	4,459	0.06%	195	64%	1	1,143	26%	2	-
	0.00 to <0.10	4,459	-	100.00%	4,459	0.06%	195	64%	1	1,143	26%	2	-
	0.10 to <0.15	-	-	0.00%	-	0.00%	-	0%	0	-	-	-	-
	0.15 to <0.25	369	-	100.00%	369	0.17%	48	66%	1	208	56%	0	-
	0.25 to <0.50	69	-	100.00%	69	0.26%	19	64%	1	49	71%	0	-
	0.50 to <0.75	327	8	99.41%	334	0.67%	18	69%	1	431	129%	2	-
	0.75 to <2.50	14	-	100.00%	14	1.57%	11	66%	1	24	173%	0	-
	0.75 to <1.75	14	-	100.00%	14	1.56%	8	66%	1	23	172%	0	-
	1.75 to <2.5	0	-	100.00%	0	2.37%	3	68%	1	0	201%	0	-
	2.50 to <10.00	113	-	100.00%	113	9.22%	19	64%	1	340	302%	7	-
	2.5 to <5	-	-	0.00%	-	0.00%	-	0%	0	-	-	-	-
	5 to <10	113	-	100.00%	113	9.22%	19	64%	1	340	302%	7	-
	10.00 to <100.00	86	-	100.00%	86	23.78%	22	66%	1	345	404%	13	-
	10 to <20	-	-	0.00%	-	0.00%	-	0%	0	-	-	-	-
20 to <30	86	-	100.00%	86	99.90%	22	66%	1	345	404%	13	-	
30.00 to <100.00	-	-	0.00%	-	0.00%	-	0%	0	-	-	-	-	
100.00 (Default)	41	-	100.00%	41	99.90%	5	66%	2	1	1%	-	-	
<b>Subtotal</b>	<b>\$ 5,478</b>	<b>\$ 8</b>	<b>100.00%</b>	<b>\$ 5,485</b>	<b>1.41%</b>	<b>337</b>	<b>99%</b>	<b>1</b>	<b>\$ 2,541</b>	<b>46%</b>	<b>\$ 24</b>	<b>-</b>	
Corporates	0.00 to <0.15	2,106	364	96.32%	2,470	0.06%	538	69%	1	806	33%	1	-
	0.00 to <0.10	2,106	364	96.32%	2,470	0.06%	538	69%	1	806	33%	1	-
	0.10 to <0.15	-	-	0.00%	-	0.00%	-	0%	0	-	-	-	-
	0.15 to <0.25	1,199	1,003	88.61%	2,201	0.17%	171	74%	1	1,481	67%	3	-
	0.25 to <0.50	143	773	78.90%	916	0.26%	112	88%	2	1,014	111%	2	-
0.50 to <0.75	130	1,651	76.83%	1,782	0.65%	89	94%	1	3,167	178%	11	-	

**Pillar 3 Disclosures**

0.75 to <2.50	324	1,507	79.42%	1,784	1.69%	353	76%	1	3,518	197%	23	-
0.75 to <1.75	276	1,275	79.45%	1,505	1.56%	324	74%	1	2,896	193%	17	-
1.75 to <2.5	48	232	79.29%	280	2.37%	29	84%	1	622	222%	6	-
2.50 to <10.00	47	406	77.61%	454	6.19%	31	97%	2	1,879	414%	27	-
2.5 to <5	-	-	0.00%	-	0.00%	-	0%	0	-	-	-	-
5 to <10	47	406	77.61%	454	6.19%	31	97%	2	1,879	414%	27	-
10.00 to <100.00	314	20	98.50%	334	23.78%	110	67%	1	1,349	404%	53	-
10 to <20	-	-	0.00%	-	0.00%	-	0%	0	-	-	-	-
20 to <30	314	20	98.50%	334	23.78%	110	67%	1	1,349	404%	53	-
30.00 to <100.00	-	-	0.00%	-	0.00%	-	0%	0	-	-	-	-
100.00 (Default)	56	24	92.48%	80	99.97%	12	56%	4	112	140%	-	-
<b>Subtotal</b>	<b>\$ 4,319</b>	<b>\$ 5,748</b>	<b>99.54%</b>	<b>\$ 10,021</b>	<b>2.36%</b>	<b>1,416</b>	<b>79%</b>	<b>1</b>	<b>\$ 13,326</b>	<b>133%</b>	<b>\$ 120</b>	<b>-</b>
<b>Total (all portfolios)</b>	<b>\$ 17,151</b>	<b>\$ 5,756</b>	<b>99.80%</b>	<b>\$ 22,860</b>	<b>1.39%</b>	<b>1,785</b>	<b>74%</b>	<b>1</b>	<b>\$ 16,497</b>	<b>72%</b>	<b>\$ 144</b>	<b>-</b>

**GSIB**

*\$ in millions* As of December 2022

PD range	On-balance sheet exposures	Off-balance-sheet exposures pre-CCF	Exposure weighted average CCF	Exposure post CCF and post CRM	Exposure weighted average PD (%)	Number of obligors	Exposure weighted average LGD (%)	Exposure weighted average maturity (years)	Risk weighted exposure amount after supporting factors	Density of risk weighted exposure amount	Expected loss amount	Value adjustments and provisions
0.00 to <0.15	18,297	-	100.00%	18,297	0.01%	8	50%	1	700	4%	1	-
0.00 to <0.10	18,297	-	100.00%	18,297	0.01%	8	50%	1	700	4%	1	-
0.10 to <0.15	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
0.15 to <0.25	0	-	100.00%	0	0.18%	1	50%	1	0	33%	0	-
0.25 to <0.50	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
0.50 to <0.75	98	-	100.00%	98	0.67%	2	50%	2	82	84%	0	-
0.75 to <2.50	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
0.75 to <1.75	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
1.75 to <2.5	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
2.50 to <10.00	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
2.5 to <5	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
5 to <10	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
10.00 to <100.00	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
10 to <20	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
20 to <30	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
30.00 to <100.00	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
100.00 (Default)	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
<b>Subtotal</b>	<b>\$ 18,395</b>	<b>-</b>	<b>100.00%</b>	<b>\$ 18,395</b>	<b>0.01%</b>	<b>11</b>	<b>50%</b>	<b>1</b>	<b>\$ 782</b>	<b>4%</b>	<b>\$ 1</b>	<b>-</b>
0.00 to <0.15	10,818	1,387	97.16%	12,019	0.06%	57	55%	1	538	4%	1	(1)
0.00 to <0.10	10,818	1,387	97.16%	12,019	0.06%	57	55%	1	538	4%	1	(1)
0.10 to <0.15	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
0.15 to <0.25	55	219	79.98%	219	0.18%	14	62%	2	149	68%	0	-
0.25 to <0.50	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
0.50 to <0.75	63	14	95.41%	74	0.67%	5	62%	2	96	130%	0	0
0.75 to <2.50	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
0.75 to <1.75	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
1.75 to <2.5	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
2.50 to <10.00	0	-	100.00%	0	6.09%	2	64%	1	0	257%	0	-
2.5 to <5	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
5 to <10	0	-	100.00%	0	6.09%	2	64%	1	0	257%	0	-



## Pillar 3 Disclosures

10.00 to <100.00	43	0	100.00%	43	23.78%	10	50%	3	143	334%	5	(1)
10 to <20	-	-	-	-	0.00%	-	0%	-	-	-	-	-
20 to <30	43	0	100.00%	43	23.78%	10	50%	3	143	334%	5	(1)
30.00 to <100.00	-	-	-	-	0.00%	-	0%	-	-	-	-	-
100.00 (Default)	-	-	-	-	0.00%	-	0%	-	-	-	-	-
<b>Subtotal</b>	<b>\$ 10,979</b>	<b>\$ 1,620</b>	<b>98.06%</b>	<b>\$ 12,354</b>	<b>0.15%</b>	<b>88</b>	<b>55%</b>	<b>1</b>	<b>\$ 925</b>	<b>7%</b>	<b>\$ 6</b>	<b>\$(2)</b>
0.00 to <0.15	1,492	1,633	86.93%	2,716	0.05%	52	54%	3	832	31%	1	(0)
0.00 to <0.10	1,492	1,633	86.93%	2,716	0.05%	52	54%	3	832	31%	1	(0)
0.10 to <0.15	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
0.15 to <0.25	1,318	440	93.74%	1,648	0.17%	49	52%	3	937	57%	1	(0)
0.25 to <0.50	544	576	87.13%	976	0.26%	36	55%	3	734	75%	1	(1)
0.50 to <0.75	884	291	93.81%	1,102	0.65%	36	57%	2	1,228	111%	4	(2)
0.75 to <2.50	641	253	92.93%	831	1.95%	59	57%	3	1,397	168%	9	(7)
0.75 to <1.75	345	112	93.85%	429	1.56%	42	59%	3	742	173%	4	(2)
1.75 to <2.5	296	141	91.96%	402	2.37%	17	56%	3	655	163%	5	(5)
2.50 to <10.00	831	592	89.60%	1,275	7.61%	49	50%	4	2,870	225%	49	(6)
2.5 to <5	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
5 to <10	831	592	89.60%	1,275	7.61%	49	50%	4	2,870	225%	49	(6)
10.00 to <100.00	140	366	81.94%	415	23.78%	173	50%	3	1,262	305%	49	(4)
10 to <20	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
20 to <30	140	366	81.94%	415	23.78%	173	50%	3	1,262	305%	49	(4)
30.00 to <100.00	-	-	0.00%	-	0.00%	-	0%	-	-	-	-	-
100.00 (Default)	106	39	93.29%	135	100.00%	11	56%	2	481	357%	1	(17)
<b>Subtotal</b>	<b>\$ 5,956</b>	<b>\$ 4,190</b>	<b>89.68%</b>	<b>\$ 9,098</b>	<b>3.96%</b>	<b>465</b>	<b>54%</b>	<b>3</b>	<b>\$ 9,741</b>	<b>107%</b>	<b>\$ 116</b>	<b>\$(36)</b>
<b>Total (all portfolios)</b>	<b>\$ 35,330</b>	<b>\$ 5,810</b>	<b>96.86%</b>	<b>\$ 39,847</b>	<b>0.96%</b>	<b>564</b>	<b>52%</b>	<b>1</b>	<b>\$ 11,448</b>	<b>29%</b>	<b>\$ 123</b>	<b>\$(38)</b>

Table 75: Changes in the stock of non-performing loans and advances

\$ in millions		As of December 2022		
		Gross carrying amount		
		GSGUK	GSI	GSIB
<b>010</b>	<b>Initial stock of non-performing loans and advances</b>	<b>\$ 58</b>	<b>\$ 56</b>	<b>\$ 2</b>
020	Inflows to non-performing portfolios	129	-	129
030	Outflows from non-performing portfolios	(1)	(0)	(1)
040	Outflows due to write-offs	-	-	-
050	Outflow due to other situations	(1)	(0)	(1)
<b>060</b>	<b>Final stock of non-performing loans and advances</b>	<b>\$ 186</b>	<b>\$ 56</b>	<b>\$ 130</b>

## Pillar 3 Disclosures

Table 76: Quality of non-performing exposures by geography<sup>1</sup>

## GSGUK

\$ in millions		Gross carrying/nominal amount					As of December 2022	
			Of which non-performing		Of which subject to impairment	Accumulated impairment	Provisions on off-balance-sheet commitments and financial guarantees given	Accumulated negative changes in fair value due to credit risk on non-performing exposures
				Of which defaulted				
<b>010</b>	<b>On-balance-sheet exposures</b>	<b>\$ 345,352</b>	-	<b>\$ 216</b>	-	<b>\$ (109)</b>		<b>\$ (41)</b>
020	United States	166,173	-	-	-	(1)		-
030	Japan	46,043	-	-	-	(0)		-
040	United Kingdom	24,371	-	0	-	(13)		(0)
050	France	23,026	-	-	-	(4)		-
060	Cayman Islands	16,214	-	45	-	(3)		(18)
070	Other countries	69,525	-	171	-	(89)		(23)
<b>080</b>	<b>Off-balance-sheet exposures</b>	<b>\$ 3,836</b>	-	<b>\$ 39</b>			<b>\$ (23)</b>	
090	United Kingdom	1,106	-	39			(14)	
100	Germany	580	-	-			(2)	
110	Netherlands	389	-	-			(2)	
120	Luxembourg	272	-	-			(1)	
130	United States	242	-	-			(0)	
140	Other countries	1,247	-	-			(4)	
<b>150</b>	<b>Total</b>	<b>\$ 349,188</b>	-	<b>\$ 255</b>	-	<b>\$ (109)</b>	<b>\$ (23)</b>	<b>\$ (41)</b>

## GSI

\$ in millions		Gross carrying/nominal amount					As of December 2022	
			Of which non-performing		Of which subject to impairment	Accumulated impairment	Provisions on off-balance-sheet commitments and financial guarantees given	Accumulated negative changes in fair value due to credit risk on non-performing exposures
				Of which defaulted				
<b>010</b>	<b>On-balance-sheet exposures</b>	<b>\$ 317,028</b>	-	<b>\$ 83</b>	-	-		<b>\$ (40)</b>
020	United States	161,886	-	-	-	-		-
030	Japan	45,737	-	-	-	-		-
040	France	22,957	-	-	-	-		-
050	United Kingdom	20,722	-	0	-	-		(0)
060	Cayman Islands	15,816	-	19	-	-		(18)
070	Other countries	49,910	-	64	-	-		(22)
<b>080</b>	<b>Off-balance-sheet exposures</b>	<b>\$ 468</b>	-	-			-	
090	Japan	200	-	-			-	
100	United States	121	-	-			-	
110	Germany	73	-	-			-	
120	Australia	53	-	-			-	
130	Kuwait	15	-	-			-	
140	Other countries	6	-	-			-	
<b>150</b>	<b>Total</b>	<b>\$ 317,496</b>	-	<b>\$ 83</b>	-	-	-	<b>\$ (40)</b>

## Pillar 3 Disclosures

## GSIB

\$ in millions							As of December 2022	
		Gross carrying/nominal amount	Of which non-performing		Of which subject to impairment	Accumulated impairment	Provisions on off-balance-sheet commitments and financial guarantees given	Accumulated negative changes in fair value due to credit risk on non-performing exposures
				Of which defaulted				
<b>010</b>	<b>On-balance-sheet exposures</b>	<b>\$ 53,085</b>	-	<b>\$ 133</b>	-	<b>\$ (108)</b>		<b>\$ (1)</b>
020	United Kingdom	31,089	-	-	-	(13)		-
030	Jersey	9,467	-	-	-	(0)		-
040	Luxembourg	2,452	-	-	-	(5)		-
050	Singapore	2,031	-	-	-	(0)		-
060	United States	1,615	-	-	-	(1)		-
070	Other countries	6,431	-	133	-	(89)		(1)
<b>080</b>	<b>Off-balance-sheet exposures</b>	<b>\$ 3,368</b>	-	<b>\$ 39</b>			<b>\$ (23)</b>	
090	United Kingdom	1,105	-	39			(14)	
100	Germany	507	-	-			(2)	
110	Netherlands	389	-	-			(2)	
120	Luxembourg	272	-	-			(1)	
130	Switzerland	200	-	-			(0)	
140	Other countries	895	-	-			(4)	
<b>150</b>	<b>Total</b>	<b>\$ 56,453</b>	-	<b>\$ 172</b>	-	<b>\$ (108)</b>	<b>\$ (23)</b>	<b>\$ (1)</b>

- Higher of top 5 countries or countries representing greater than 50% of total exposure have been specifically reported above.

## Pillar 3 Disclosures

## Appendix III: Counterparty Credit Risk Tables

Table 77: IRB Approach - CCR Exposures by exposure class and PD Scale

## GSGUK

<i>\$ in millions</i>		As of December 2022						
	PD Scale	EAD post CRM	Average PD	Number of Obligors	Average LGD	Average Maturity	RWAs	RWA density
Sovereign	0.00 to <0.15	\$ 14,876	0.04%	78	50%	1	1,090	7%
	0.15 to <0.25	2,509	0.18%	15	50%	0	623	25%
	0.25 to <0.50	36	0.26%	14	50%	1	17	47%
	0.50 to <0.75	95	0.60%	5	50%	0	51	54%
	0.75 to <2.50	0	2.37%	2	50%	1	0	120%
	2.50 to <10.00	60	5.85%	4	50%	4	127	213%
	10.00 to <100.00	1	23.78%	3	50%	1	3	272%
	100.00 (Default)	-	0.00%	-	0%	-	-	0%
	<b>Subtotal</b>	<b>\$ 17,577</b>	<b>0.08%</b>	<b>121</b>	<b>50%</b>	<b>1</b>	<b>\$ 1,911</b>	<b>11%</b>
Institutions	0.00 to <0.15	\$ 41,539	0.06%	333	54%	2	14,755	36%
	0.15 to <0.25	6,822	0.17%	167	66%	2	5,306	78%
	0.25 to <0.50	703	0.26%	98	65%	1	506	72%
	0.50 to <0.75	4,848	0.67%	113	68%	2	4,625	95%
	0.75 to <2.50	317	1.66%	65	66%	1	508	160%
	2.50 to <10.00	1,793	7.22%	71	64%	3	4,796	268%
	10.00 to <100.00	232	23.78%	142	65%	1	883	380%
	100.00 (Default)	0	99.90%	4	66%	1	-	0%
	<b>Subtotal</b>	<b>\$ 56,254</b>	<b>0.32%</b>	<b>993</b>	<b>59%</b>	<b>3</b>	<b>\$ 31,379</b>	<b>56%</b>
Corporates	0.00 to <0.15	\$ 33,600	0.05%	5,031	61%	1	8,064	24%
	0.15 to <0.25	10,108	0.18%	1,970	64%	2	6,256	62%
	0.25 to <0.50	4,701	0.26%	1,042	61%	1	3,220	68%
	0.50 to <0.75	3,911	0.64%	1,333	69%	2	5,521	141%
	0.75 to <2.50	5,291	1.69%	3,306	69%	1	10,052	190%
	2.50 to <10.00	1,078	7.49%	563	67%	2	3,086	286%
	10.00 to <100.00	1,746	23.78%	1,185	64%	1	6,248	358%
	100.00 (Default)	2	99.90%	8	64%	3	0	1%
	<b>Subtotal</b>	<b>\$ 60,437</b>	<b>1.10%</b>	<b>14,438</b>	<b>62%</b>	<b>2</b>	<b>\$ 42,447</b>	<b>70%</b>
<b>Total (all portfolios)</b>	<b>\$ 134,268</b>	<b>0.59%</b>	<b>15,552</b>	<b>60%</b>	<b>2</b>	<b>\$ 75,737</b>	<b>56%</b>	

## Pillar 3 Disclosures

## GSI

\$ in millions							As of December 2022	
	PD Scale	EAD post CRM	Average PD	Number of Obligors	Average LGD	Average Maturity	RWAs	RWA density
Sovereign	0.00 to <0.15	\$ 14,876	0.04%	78	50%	1	\$ 1,090	7%
	0.15 to <0.25	2,509	0.18%	15	50%	0	623	25%
	0.25 to <0.50	36	0.26%	14	50%	1	17	47%
	0.50 to <0.75	95	0.60%	5	50%	0	51	54%
	0.75 to <2.50	0	2.37%	2	50%	1	0	120%
	2.50 to <10.00	60	5.85%	4	50%	4	127	213%
	10.00 to <100.00	1	23.78%	3	50%	1	3	272%
	100.00 (Default)	-	0.00%	-	0%	-	-	-
<b>Subtotal</b>	<b>\$ 17,577</b>	<b>0.08%</b>	<b>121</b>	<b>50%</b>	<b>1</b>	<b>\$ 1,911</b>	<b>11%</b>	
Institutions	0.00 to <0.15	\$ 40,921	0.06%	330	56%	2	\$ 14,166	35%
	0.15 to <0.25	6,774	0.17%	166	66%	2	5,286	78%
	0.25 to <0.50	703	0.26%	97	65%	1	506	72%
	0.50 to <0.75	4,835	0.67%	111	68%	2	4,600	95%
	0.75 to <2.50	314	1.65%	63	66%	1	503	160%
	2.50 to <10.00	1,793	7.22%	71	64%	3	4,796	268%
	10.00 to <100.00	232	23.78%	139	65%	1	883	380%
	100.00 (Default)	-	0.00%	-	0%	-	-	0%
<b>Subtotal</b>	<b>\$ 55,572</b>	<b>0.33%</b>	<b>977</b>	<b>61%</b>	<b>3</b>	<b>\$ 30,740</b>	<b>55%</b>	
Corporates	0.00 to <0.15	\$ 35,960	0.05%	4,985	61%	1	\$ 8,573	24%
	0.15 to <0.25	9,669	0.18%	1,455	62%	2	6,006	62%
	0.25 to <0.50	4,530	0.26%	1,033	59%	1	3,054	67%
	0.50 to <0.75	3,527	0.64%	1,323	66%	2	4,725	134%
	0.75 to <2.50	5,066	1.66%	3,288	68%	1	9,302	184%
	2.50 to <10.00	985	7.60%	560	64%	2	2,769	281%
	10.00 to <100.00	1,724	23.78%	1,124	64%	1	6,167	358%
	100.00 (Default)	2	99.90%	8	64%	3	0	1%
<b>Subtotal</b>	<b>\$ 61,463</b>	<b>1.09%</b>	<b>13,776</b>	<b>62%</b>	<b>2</b>	<b>\$ 40,596</b>	<b>66%</b>	
<b>Total (all portfolios)</b>	<b>\$ 134,612</b>	<b>0.60%</b>	<b>14,874</b>	<b>60%</b>	<b>2</b>	<b>\$ 73,247</b>	<b>54%</b>	

## Pillar 3 Disclosures

## GSIB

<i>\$ in millions</i>		As of December 2022						
	PD Scale	EAD post CRM	Average PD	Number of Obligors	Average LGD	Average Maturity	RWAs	RWA density
Sovereign	0.00 to <0.15	-	0.00%	-	0.00%	-	-	0%
	0.15 to <0.25	-	0.00%	-	0.00%	-	-	0%
	0.25 to <0.50	-	0.00%	-	0.00%	-	-	0%
	0.50 to <0.75	-	0.00%	-	0.00%	-	-	0%
	0.75 to <2.50	-	0.00%	-	0.00%	-	-	0%
	2.50 to <10.00	-	0.00%	-	0.00%	-	-	0%
	10.00 to <100.00	-	0.00%	-	0.00%	-	-	0%
	100.00 (Default)	-	0.00%	-	0.00%	-	-	0%
	<b>Subtotal</b>	-	<b>0.00%</b>	-	<b>0.00%</b>	-	-	<b>0%</b>
Institutions	0.00 to <0.15	1,978	0.06%	13	65%	1	52	3%
	0.15 to <0.25	48	0.17%	3	65%	0	20	42%
	0.25 to <0.50	-	0.00%	1	0%	0	-	0%
	0.50 to <0.75	5	0.60%	2	66%	1	6	116%
	0.75 to <2.50	4	2.37%	2	64%	1	5	153%
	2.50 to <10.00	-	0.00%	-	0%	-	-	0%
	10.00 to <100.00	-	0.00%	-	0%	-	-	0%
	100.00 (Default)	-	0.00%	-	0%	-	-	0%
	<b>Subtotal</b>	<b>\$ 2,035</b>	<b>0.07%</b>	<b>21</b>	<b>65%</b>	<b>1</b>	<b>\$ 83</b>	<b>4%</b>
Corporates	0.00 to <0.15	\$ 143	0.04%	49	62%	4	64	45%
	0.15 to <0.25	69	0.18%	514	70%	1	41	60%
	0.25 to <0.50	10	0.26%	8	66%	1	7	69%
	0.50 to <0.75	43	0.66%	7	66%	3	46	107%
	0.75 to <2.50	59	2.24%	22	67%	1	110	186%
	2.50 to <10.00	12	9.66%	2	67%	1	40	322%
	10.00 to <100.00	22	23.78%	63	64%	2	82	378%
	100.00 (Default)	-	0.00%	-	0%	-	-	0%
	<b>Subtotal</b>	<b>\$ 358</b>	<b>2.28%</b>	<b>665</b>	<b>67%</b>	<b>2</b>	<b>\$ 390</b>	<b>109%</b>
<b>Total (all portfolios)</b>	<b>\$ 2,393</b>	<b>0.40%</b>	<b>686</b>	<b>66%</b>	<b>2</b>	<b>\$ 473</b>	<b>20%</b>	

## Pillar 3 Disclosures

Table 78: Composition of Collateral for Exposures to CCR

## GSGUK

	\$ in millions						As of December 2022	
	Collateral used in derivative transactions				Collateral used in SFTs			
	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral		
	Segregated	Unsegregated	Segregated	Unsegregated				
Cash	\$ 21,387	\$ 60,956	\$ 1,478	\$ 63,085	\$ 2,090		\$ 2,267	
Debt	28,387	14,063	15,026	22,037	206,109		198,316	
Equities	4,907	1,860	552	-	80,601		63,323	
Others	129	417	33	-	11,517		5,171	
<b>Total</b>	<b>\$ 54,810</b>	<b>\$ 77,296</b>	<b>\$ 17,089</b>	<b>\$ 85,122</b>	<b>\$ 300,317</b>		<b>\$ 269,077</b>	

## GSI

	\$ in millions						As of December 2022	
	Collateral used in derivative transactions				Collateral used in SFTs			
	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral		
	Segregated	Unsegregated	Segregated	Unsegregated				
Cash	\$ 21,350	\$ 60,298	\$ 1,478	\$ 63,094	\$ 730		\$ 1,084	
Debt	28,385	13,988	15,026	22,086	449,271		344,985	
Equities	3,704	1,860	552	-	152,839		134,814	
Others	129	417	33	-	13,774		14,866	
<b>Total</b>	<b>\$ 53,568</b>	<b>\$ 76,563</b>	<b>\$ 17,089</b>	<b>\$ 85,180</b>	<b>\$ 616,614</b>		<b>\$ 495,749</b>	

## GSIB

	\$ in millions						As of December 2022	
	Collateral used in derivative transactions				Collateral used in SFTs			
	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received	Fair value of posted collateral		
	Segregated	Unsegregated	Segregated	Unsegregated				
Cash	\$ 37	\$ 659	-	\$ 9	-		\$ 136	
Debt	2	74	-	49	41,292		15,661	
Equities	1,202	-	-	-	10,620		-	
Others	-	-	-	-	1,113		90	
<b>Total</b>	<b>\$ 1,241</b>	<b>\$ 733</b>	<b>-</b>	<b>\$ 58</b>	<b>\$ 53,025</b>		<b>\$ 15,887</b>	

## Pillar 3 Disclosures

Table 79: Standardised approach – CCR exposures by regulatory exposure class and risk weights

## GSGUK

Exposure classes		Risk weight											As of December 2022		
		0%	2%	4%	10%	20%	50%	70%	75%	100%	150%	Others	Total exposure value		
1	Central governments or central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Regional government or local authorities	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Public sector entities	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Multilateral development banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	International organisations	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Institutions	-	-	-	-	-	-	-	-	107	-	-	-	-	107
7	Corporates	-	-	-	-	-	123	-	-	75	-	-	-	-	198
8	Retail	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Other items	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	<b>Total exposure value</b>	-	-	-	-	-	\$ 123	-	-	\$ 182	-	-	-	-	\$ 305

## GSI

Exposure classes		Risk weight											As of December 2022		
		0%	2%	4%	10%	20%	50%	70%	75%	100%	150%	Others	Total exposure value		
1	Central governments or central banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	Regional government or local authorities	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Public sector entities	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Multilateral development banks	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	International organisations	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Institutions	-	-	-	-	-	-	-	-	107	-	-	-	-	107
7	Corporates	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Retail	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Other items	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	<b>Total exposure value</b>	-	-	-	-	-	-	-	-	\$ 107	-	-	-	-	\$ 107



## Pillar 3 Disclosures

## Appendix IV: Securitisation Tables

Table 80: Securitisation exposures in the non-trading book and associated regulatory capital requirements - institution acting as originator or as sponsor

## GSGUK

\$ in millions		Exposure values (by RW bands/deductions)					Exposure values (by regulatory approach)				RWA (by regulatory approach)				As of December 2022 Capital charge after cap			
		≤20 % RW	>20 % to 50% RW	>50 % to 100 % RW	>100% to <1250 % RW	1250% RW/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/ deductions
1	<b>Total exposures</b>	\$ 63	-	\$ 26	\$ 17	\$ 7	-	\$ 13	\$ 93	\$ 7	-	\$ 28	\$ 67	\$ 92	-	\$ 2	\$ 5	\$ 7
2	<b>Traditional transactions</b>	\$ 63	-	\$ 26	\$ 17	\$ 7	-	\$ 13	\$ 93	\$ 7	-	\$ 28	\$ 67	\$ 92	-	\$ 2	\$ 5	\$ 7
3	<b>Securitisation</b>	\$ 63	-	\$ 26	\$ 17	\$ 7	-	\$ 13	\$ 93	\$ 7	-	\$ 28	\$ 67	\$ 92	-	\$ 2	\$ 5	\$ 7
4	Retail underlying	63	-	24	15	7	-	9	93	7	-	14	67	90	-	1	5	7
5	Of which STS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Wholesale	-	-	2	2	0	-	4	-	0	-	14	-	2	-	1	-	0
7	Of which STS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Synthetic transactions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

## GSIB

\$ in millions		Exposure values (by RW bands/deductions)					Exposure values (by regulatory approach)				RWA (by regulatory approach)				As of December 2022 Capital charge after cap			
		≤20 % RW	>20 % to 50% RW	>50 % to 100 % RW	>100% to <1250 % RW	1250% RW/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/ deductions
1	<b>Total exposures</b>	\$ 25	-	\$ 2	\$ 15	\$ 4	-	\$ 10	\$ 32	\$ 4	-	\$ 23	\$ 40	\$ 55	-	\$ 2	\$ 3	\$ 4
2	<b>Traditional transactions</b>	\$ 25	-	\$ 2	\$ 15	\$ 4	-	\$ 10	\$ 32	\$ 4	-	\$ 23	\$ 40	\$ 55	-	\$ 2	\$ 3	\$ 4
3	<b>Securitisation</b>	\$ 25	-	\$ 2	\$ 15	\$ 4	-	\$ 10	\$ 32	\$ 4	-	\$ 23	\$ 40	\$ 55	-	\$ 2	\$ 3	\$ 4
4	Retail underlying	25	-	-	13	4	-	6	32	4	-	9	40	53	-	1	3	4
5	Of which STS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Wholesale	-	-	2	2	0	-	4	-	0	-	14	-	2	-	1	-	0
7	Of which STS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Synthetic transactions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Pillar 3 Disclosures**

**Table 81: Securitisation exposures in the non-trading book and associated regulatory capital requirements - institution acting as investor**

**GSGUK**

\$ in millions		Exposure values (by RW bands/deductions)					Exposure values (by regulatory approach)				RWA (by regulatory approach)				As of December 2022 Capital charge after cap			
		≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW/deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/deductions
1	<b>Total exposures</b>	\$ 659	-	\$ 51	\$ 46	\$ 6	-	\$ 57	\$ 699	\$ 6	-	\$ 65	\$ 429	\$ 73	-	\$ 5	\$ 13	\$ 6
2	<b>Traditional transactions</b>	\$ 659	-	\$ 51	\$ 46	\$ 6	-	\$ 57	\$ 699	\$ 6	-	\$ 65	\$ 429	\$ 73	-	\$ 5	\$ 13	\$ 6
3	<b>Securitisation</b>	\$ 659	-	\$ 51	\$ 46	\$ 6	-	\$ 57	\$ 699	\$ 6	-	\$ 65	\$ 429	\$ 73	-	\$ 5	\$ 13	\$ 6
4	Retail underlying	503	-	-	40	-	-	-	543	-	-	-	406	-	-	-	11	-
5	Of which STS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Wholesale	156	-	51	6	6	-	57	156	6	-	65	23	73	-	5	2	6
7	Of which STS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Synthetic transactions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**GSIB**

\$ in millions		Exposure values (by RW bands/deductions)					Exposure values (by regulatory approach)				RWA (by regulatory approach)				As of December 2022 Capital charge after cap			
		≤20% RW	>20% to 50% RW	>50% to 100% RW	>100% to <1250% RW	1250% RW/deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250%/deductions
1	<b>Total exposures</b>	\$ 659	-	\$ 51	\$ 46	\$ 6	-	\$ 57	\$ 699	\$ 6	-	\$ 65	\$ 429	\$ 73	-	\$ 5	\$ 13	\$ 6
2	<b>Traditional transactions</b>	\$ 659	-	\$ 51	\$ 46	\$ 6	-	\$ 57	\$ 699	\$ 6	-	\$ 65	\$ 429	\$ 73	-	\$ 5	\$ 13	\$ 6
3	<b>Securitisation</b>	\$ 659	-	\$ 51	\$ 46	\$ 6	-	\$ 57	\$ 699	\$ 6	-	\$ 65	\$ 429	\$ 73	-	\$ 5	\$ 13	\$ 6
4	Retail underlying	503	-	-	40	-	-	-	543	-	-	-	406	-	-	-	11	-
5	Of which STS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Wholesale	156	-	51	6	6	-	57	156	6	-	65	23	73	-	5	2	6
7	Of which STS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Synthetic transactions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

## Pillar 3 Disclosures

Table 82: Exposures securitised by the institution - Exposures in default and specific credit risk adjustments

## GSGUK

\$ in millions		As of December 2022		
		Exposures securitised by the institution - Institution acts as originator or as sponsor		
		Total outstanding nominal amount	Of which exposures in default	Total amount of specific credit risk adjustments made during the period
1	<b>Total exposures</b>	\$ 1,827	\$ 77	-
2	<b>Retail (total)</b>	\$ 1,750	-	-
3	residential mortgage	\$ 1,750	-	-
4	credit card	-	-	-
5	other retail exposures	-	-	-
6	re-securitisation	-	-	-
7	<b>Wholesale (total)</b>	\$ 77	\$ 77	-
8	loans to corporates	-	-	-
9	commercial mortgage	77	77	-
10	lease and receivables	-	-	-
11	other wholesale	-	-	-
12	re-securitisation	-	-	-

## GSIB

\$ in millions		As of December 2022		
		Exposures securitised by the institution - Institution acts as originator or as sponsor		
		Total outstanding nominal amount	Of which exposures in default	Total amount of specific credit risk adjustments made during the period
1	<b>Total exposures</b>	\$ 948	\$ 77	-
2	<b>Retail (total)</b>	\$ 871	-	-
3	residential mortgage	871	-	-
4	credit card	-	-	-
5	other retail exposures	-	-	-
6	re-securitisation	-	-	-
7	<b>Wholesale (total)</b>	\$ 77	\$ 77	-
8	loans to corporates	-	-	-
9	commercial mortgage	77	77	-
10	lease and receivables	-	-	-
11	other wholesale	-	-	-
12	re-securitisation	-	-	-

## Pillar 3 Disclosures

## Appendix V: Index of Tables to PRA Templates

Ref.	PRA Template	Full name	Table	Page no.
1	UK KM1	Key metrics template	1	14
2	UK OV1	Overview of risk weighted amounts	5	18
3	UK LI1	Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories	59	102
4	UK LI3	Outline of the differences in the scopes of consolidation (entity by entity) <sup>1</sup>	N/A	N/A
5	UK LI2	Main sources of differences between regulatory exposure amounts and carrying values in financial statements	60	105
6	UK PV1	Prudent valuation adjustments (PVA)	51	82
7	UK INS1	Insurance participations <sup>2</sup>	N/A	N/A
8	UK INS2	Financial conglomerates information on own funds and capital adequacy ratio <sup>2</sup>	N/A	N/A
9	UK CC1	Composition of regulatory own funds	45	70
10	UK CC2	Reconciliation of regulatory own funds to balance sheet in the audited financial statements	46	72
11	UK CCyB1	Geographical distribution of credit exposures relevant for the calculation of the countercyclical buffer	48	75
12	UK CCyB2	Amount of institution-specific countercyclical capital buffer	47	75
13	UK LR1	Summary reconciliation of accounting assets and leverage ratio exposures	42	66
14	UK LR2	Leverage ratio common disclosure	44	67
15	UK LR3	Split-up of on balance sheet exposures (excluding derivatives, SFTs and exempted exposures)	43	66
16	UK LIQ1	Quantitative information of LCR	35	59
17	UK LIQ2	Net Stable Funding Ratio	38	63
18	UK CQ3	Credit quality of performing and non-performing exposures by past due days <sup>1</sup>	69	119
19	UK CR1-A	Maturity of exposures	67	118
20	UK CR2	Changes in the stock of non-performing loans and advances	75	136
21	UK CR1	Performing and non-performing exposures and related provisions	70	122
22	UK CQ1	Credit quality of forborne exposures	72	128
23	UK CQ4	Quality of non-performing exposures by geography	76	137
24	UK CQ5	Credit quality of loans and advances to non-financial corporations by industry	71	125
25	UK CQ7	Collateral obtained by taking possession and execution processes	68	118
26	UK CR2a	Changes in the stock of non-performing loans and advances and related net accumulated recoveries <sup>3</sup>	N/A	N/A
27	UK CQ2	Quality of forbearance <sup>3</sup>	N/A	N/A
28	UK CQ6	Collateral valuation – loans and advances <sup>3</sup>	N/A	N/A
29	UK CQ8	Collateral obtained by taking possession and execution processes – vintage breakdown <sup>3</sup>	N/A	N/A
30	UK CR3	CRM techniques overview: Disclosure of the use of credit risk mitigation techniques	11	27
31	UK CR4	Standardised approach – Credit risk exposure and CRM effects	62	107
32	UK CR5	Standardised approach	63	109
33	UK CR6-A	Scope of the use of IRB and SA approaches	64	110
34	UK CR6	IRB approach – Credit risk exposures by exposure class and PD range	74	133
35	UK CR7	IRB approach – Effect on the RWAs of credit derivatives used as CRM techniques	12	28
36	UK CR7A	IRB approach – Disclosure of the extent of the use of CRM techniques	73	130
37	UK CR8	RWA flow statements of credit risk exposures under the IRB approach	10	25
38	UK CR9	IRB approach – Back-testing of PD per exposure class (fixed PD scale)	65	112
39	UK CR9.1	IRB approach – Back-testing of PD per exposure class (only for PD estimates according to point (f) of Article 180(1) CRR)	66	115
40	UK CR10	Specialised lending and equity exposures under the simple riskweighted approach <sup>4</sup>	61	107

**Pillar 3 Disclosures**

41	UK CCR1	Analysis of CCR exposure by approach	6	23
42	UK CCR2	Transactions subject to own funds requirements for CVA risk	8	24
43	UK CCR3	Standardised approach – CCR exposures by regulatory exposure class and risk weights	79	143
44	UK CCR4	IRB approach – CCR exposures by exposure class and PD scale	77	139
45	UK CCR5	Composition of collateral for CCR exposures	78	142
46	UK CCR6	Credit derivatives exposures	13	28
47	UK CCR7	RWA flow statements of CCR exposures under the IMM	9	25
48	UK CCR8	Exposures to CCPs	7	24
49	UKSEC1	Securitisation exposures in the non-trading book	14	33
50	UKSEC2	Securitisation exposures in the trading book	15	34
51	UKSEC3	Securitisation exposures in the non-trading book and associated regulatory capital requirements - institution acting as originator or as sponsor	80	144
52	UKSEC4	Securitisation exposures in the non-trading book and associated regulatory capital requirements - institution acting as investor	81	145
53	UKSEC5	Exposures securitised by the institution - Exposures in default and specific credit risk adjustments	82	146
54	UK MR1	Market risk under the standardised approach	20	40
55	UK MR2A	Market risk under the internal Model Approach (IMA)	17	37
56	UK MR2B	RWA flow statements of market risk exposures under the IMA	18	38
57	UK MR3	IMA values for trading portfolios	16	37
58	UK MR4	Comparison of VaR estimates with gains/losses	19	39
59	UK OR1	Operational risk own funds requirements and risk-weighted exposure amounts	23	44
60	UK REM1	Remuneration awarded for the financial year	54	96
61	UK REM2	Special payments to staff whose professional activities have a material impact on institutions' risk profile (identified staff)	55	96
62	UK REM3	Deferred remuneration	56	97
63	UK REM4	Remuneration of 1 million EUR or more per year	57	98
64	UK REM5	Information on remuneration of staff whose professional activities have a material impact on institutions' risk profile (identified staff)	58	98
65	UK AE1	Encumbered and unencumbered assets	24	47
66	UK AE2	Collateral received and own debt securities issued	27	51
67	UK AE3	Sources of encumbrance	28	52
68	UK IRRBB1	Interest Rate Risks of non-trading book activities	21	41

- Information pertaining to this template has been disclosed within the Basis of Consolidation section of the document.
- Template UK INS1 and UK INS2 (Insurance participations (UK INS1) and Financial conglomerates information on own funds and capital adequacy ratio (UK INS2)) has not been disclosed as GSGUK and its subsidiaries do not have material holdings of own funds instruments of an insurance undertaking, re-insurance undertaking or an insurance holding company.
- These templates has not been disclosed pursuant to guidance on disclosure as per CRR Disclosure requirement set out in PRA Rulebook.
- The specialised lending section of Template UK CR10 (Specialised lending and equity exposures under the simple riskweighted approach) has not been disclosed as GSGUK and its subsidiaries does not have specialised lending exposure.