



Goldman Sachs Group UK Limited

# Pillar 3 Disclosures

For the period ended June 30, 2017

## TABLE OF CONTENTS

	Page No.
Introduction .....	2
Capital Framework.....	5
Regulatory Capital .....	6
Capital Structure .....	6
Risk-Weighted Assets.....	6
Credit Risk .....	7
Market Risk .....	11
Leverage Ratio .....	13
Cautionary Note on Forward-Looking Statements .....	16

## INDEX OF TABLES

	Page No.
Table 1: Minimum Regulatory Capital Ratios .....	5
Table 2: Regulatory Capital Ratios.....	6
Table 3: Regulatory Capital Resources.....	6
Table 4: Risk Weighted Assets.....	6
Table 5: IRB Approach Exposure Class .....	9
Table 6: Credit Risk Wholesale Exposure by IRB exposure class and by PD Band.....	10
Table 7: Simple Risk Weights for Equity Exposures .....	10
Table 8: Market Risk Capital Requirement.....	12
Table 9: Leverage Ratio .....	13
Table 10: Summary Reconciliation of Accounting Assets and Leverage Ratio Exposures .....	13
Table 11: On-Balance Sheet Exposures .....	14
Table 12: Leverage Ratio Common Disclosure.....	15

## 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 investment banking, securities and investment management firm that provides a wide range of financial services to a substantial 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” and “the firm”, we mean Group Inc. and its consolidated subsidiaries and when we use the terms “GSGUK”, “we”, “us” and “our”, we mean GSGUKL and its consolidated subsidiaries.

The Board of Governors of the Federal Reserve System (Federal Reserve Board) is the primary regulator of Group Inc., a bank holding company under the Bank Holding Company Act of 1956 (BHC Act) and a financial holding company under amendments to the BHC Act. As a bank holding company, the firm is subject to consolidated regulatory capital requirements which are calculated in accordance with the revised risk-based capital and leverage regulations of the Federal Reserve Board, subject to certain transitional provisions.

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

The risk-based capital requirements are expressed as capital ratios that compare measures of regulatory capital to Risk-Weighted Assets (RWAs). Failure to comply with these requirements could result in restrictions being imposed by our regulators. GSGUK’s capital levels are also subject to qualitative judgements by our 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 most recent Quarterly Pillar 3 Disclosures and Quarterly Report on Form 10-Q. References in this document to the “Quarterly Pillar 3 Disclosures” are to the firm’s Pillar 3 Disclosures for the quarterly period ended June 30, 2017, references to the “Quarterly Report on Form 10-Q” are to the firm’s Quarterly Report on Form 10-Q for the quarterly

period ended June 30, 2017. All references to June 2017 refer to the period ended, or the date June 30, 2017 as the context requires. These forms can be accessed via the following links:

<http://www.goldmansachs.com/investor-relations/financials/current/other-information/2q-pillar3-2017.pdf>

<http://www.goldmansachs.com/investor-relations/financials/current/10q/second-quarter-2017-10-q.pdf>

The GSGUK consolidated regulatory capital requirement has been calculated in accordance with the Capital Requirements Directive (CRD) and the Capital Requirements Regulation (CRR), collectively known as CRD IV, which came into effect on January 1, 2014. These regulations 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”. Certain provisions of CRD IV are directly applicable in the UK and certain provisions have been implemented in the PRA and FCA Rulebooks.

These quarterly Pillar 3 disclosures set out the qualitative and quantitative elements of Part 8 of the CRR within CRD IV, as supplemented by the PRA and FCA Rulebooks, for which we have determined that more frequent disclosure is appropriate in accordance with the EBA Guidelines under Articles 431(1), 432(2) and 433 of CRR. GSGUK also publishes annual Pillar 3 disclosures. The latest available published annual Pillar 3 disclosures can be accessed via the following link:

<http://www.goldmansachs.com/disclosures/gsguk-2016-pillar-3.pdf>

Measures of exposures and other metrics disclosed in this report may not be based on UK generally accepted accounting principles (UK GAAP), 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.

**Pillar 3 Disclosures****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 five UK-regulated subsidiaries are included in the regulatory consolidation:

- Goldman Sachs International (GSI)
- Goldman Sachs International Bank (GSIB)
- Goldman Sachs Asset Management International
- Goldman Sachs Asset Management Global Services Limited
- Goldman Sachs MB Services Limited

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

CRD IV requires significant subsidiaries to make certain capital disclosures on an individual or subconsolidated basis. 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 and its risk profile is materially the same as GSGUK. GSIB is GSGUK's deposit-taking subsidiary. GSI and GSIB's results materially make up the results of GSGUK. 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 Pillar 3 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 provisions of applicable law and regulations restrict Group Inc.'s ability to withdraw capital from its regulated subsidiaries. Within GSGUK, capital is provided by the UK parent level to subsidiary entities. Capital within the GSGUK Group 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 I, Item 1 "Financial Statements" and "Risk Management – Liquidity Risk Management" and "Equity Capital Management and Regulatory Capital" in Part I, Item 2 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the firm's Quarterly Report on Form 10-Q.

**Definition of Risk-Weighted Assets**

The risk weights that are 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 RWAs are arrived at by multiplying capital requirements by 12.5. In this document, minimum capital requirements set out in Table 1 are expressed including the impact of additional buffers.

**Pillar 3 Disclosures****Fair Value**

The inventory amounts reflected in our consolidated statements of financial condition as “financial instruments owned” and “financial instruments sold, but not yet purchased” as well as certain other financial assets and financial liabilities, are accounted for at fair value (i.e., marked-to-market), with related gains or losses generally recognised in our consolidated financial position 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 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 financial exposures. The use of fair value is an important aspect to consider when evaluating our capital base and our capital ratios; it is also a factor used to determine the classification of positions into the banking book and trading book.

For additional information regarding the determination of fair value under accounting principles generally accepted in the United States (US GAAP) and controls over valuation of inventory, see “Note 3. Significant Accounting Policies” in Part I, Item 1 “Financial Statements” and “Critical Accounting Policies – Fair Value” in Part I, Item 2 “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the firm’s Quarterly Report on Form 10-Q.

**Banking Book / Trading Book Classification**

In order to determine the appropriate regulatory capital treatment for our exposures, positions must be first classified into either “banking book” or “trading book”. Positions are classified as banking book unless they qualify to be classified as trading book.

Banking book positions may be accounted for at amortised cost, fair value or under the equity method; they are not generally positions arising from client servicing and market making, positions 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>1</sup>. Banking book positions are subject to credit risk capital requirements. 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 that we hold.

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>1</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 the value of our inventory due to changes in market prices. Some trading book positions, such as derivatives, are also subject to counterparty credit risk capital requirements.

<sup>1</sup> As defined in point (85) of Article 4(1) in CRD IV.

## Capital Framework

### Capital Structure

For CRD IV regulatory purposes, a 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;
- Tier 2 capital, which is comprised of Tier 1 capital and includes long term qualifying subordinated debt and preference shares.

Certain components of our regulatory capital are subject to regulatory limits and restrictions under CRD IV. 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 CRD IV, the minimum CET1, Tier 1 capital and Total capital ratios (collectively the Pillar 1 capital requirements) are supplemented by:

- A capital conservation buffer, consisting entirely of capital that qualifies as CET1, that phases in beginning on January 1, 2016, in increments of 0.625% per year until it reaches 2.5% of RWAs on January 1, 2019.
- A countercyclical capital buffer of up to 2.5% (and also consisting entirely of CET1) in order to counteract excessive credit growth. The buffer only applies to GSGUK's exposures to certain types of counterparties based in jurisdictions which have announced a countercyclical buffer. Since these exposures are not currently material, the buffer adds less than 0.01% to the capital ratio and has an immaterial impact on the capital of GSGUK. The countercyclical capital buffer applicable to GSGUK could change in the future and, as a result, the minimum ratios could increase.

On March 29, 2016, the UK Financial Policy Committee (FPC) announced an increase in the countercyclical capital buffer rate for private UK counterparties and issuers from 0% to 0.5%, effective beginning March 29, 2017. On July 5, 2016, the FPC reduced this buffer from 0.5% to 0% with immediate effect.

- Individual capital guidance 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 guidance under Pillar 2A. This is a point in time assessment of the minimum amount of capital the PRA considers that an entity should hold.

### Overview of Ratios

The risk-based capital requirements are expressed as capital ratios that compare measures of regulatory capital to RWAs. The CET1 ratio is defined as CET1 divided by RWAs. The Tier 1 capital ratio is defined as Tier 1 capital divided by RWAs. The total capital ratio is defined as total capital divided by RWAs.

The following table presents GSGUK's minimum required ratios as of June 2017.

**Table 1: Minimum Regulatory Capital Ratios**

	June 2017 Minimum ratio <sup>1</sup>
CET1 ratio	7.2%
Tier 1 capital ratio	9.1%
Total capital ratio	11.8%

1. Includes the phase-in of the capital conservation buffer and countercyclical capital buffer described above.

These minimum ratios incorporate the Pillar 2A capital guidance received from the PRA and could change in the future. In addition to the Pillar 2A capital guidance, the PRA also defines forward looking capital guidance which represents the PRA's view of the capital that GSGUK would require to absorb losses in stressed market conditions. This is known as Pillar 2B or the "PRA buffer" and is not reflected in the minimum ratios shown in Table 1 above. As the capital conservation buffer phases in, as described, it will fully or partially replace the PRA buffer.

As of June 30, 2017, all of GSGUK's regulated subsidiaries had capital levels in excess of their minimum regulatory capital requirement.

## Pillar 3 Disclosures

## Regulatory Capital

The following table presents a breakdown of GSGUK's capital ratios under CRD IV as at June 30, 2017, including those for our significant subsidiaries GSI and GSIB.

Table 2: Regulatory Capital Ratios

\$ in millions	as of June 2017		
	GSGUK	GSI	GSIB
CET1 Capital	\$ 28,458	\$ 24,162	\$ 2,772
Tier 1 Capital	34,258	29,962	2,772
Tier 2 Capital	6,039	4,913	826
<b>Total Capital</b>	<b>40,297</b>	<b>34,875</b>	<b>3,598</b>
<b>RWAs</b>	<b>\$ 250,911</b>	<b>\$ 234,199</b>	<b>\$ 9,571</b>
<b>CET1 Ratio</b>	<b>11.3%</b>	<b>10.3%</b>	<b>29.0%</b>
<b>Tier 1 Capital Ratio</b>	<b>13.7%</b>	<b>12.8%</b>	<b>29.0%</b>
<b>Total Capital Ratio</b>	<b>16.1%</b>	<b>14.9%</b>	<b>37.6%</b>

In the table above, the CET 1 ratio and Total capital ratio include approximately 40 basis points attributable to GSGUK's interim results for the six month period ended June 2017, and 31 basis points and 59 basis points attributable to GSI's and GSIB's results respectively.

Assets that are deducted from capital in computing the numerator of the capital ratios are excluded from the computation of RWAs in the denominator of the ratios. The following tables contain information on the components of our regulatory capital structure based on CRD IV, as implemented by the PRA.

Table 3: Regulatory Capital Resources

\$ in millions	as of June 2017		
	GSGUK	GSI	GSIB
CET1 Capital Before Deductions	\$ 29,544	\$ 25,046	\$ 2,975
Regulatory Adjustments	(1,086)	(884)	(203) <sup>1</sup>
<b>CET1 Capital After Deductions</b>	<b>28,458</b>	<b>24,162</b>	<b>2,772</b>
Additional Tier 1 Instruments	5,800	5,800	-
<b>Tier 1 Capital After Deductions</b>	<b>34,258</b>	<b>29,962</b>	<b>2,772</b>
Tier 2 Capital Before Deductions	6,503	5,377	826
Regulatory Adjustments	(464) <sup>-</sup>	(464)	-
<b>Tier 2 Capital After Deductions</b>	<b>6,039</b>	<b>4,913<sup>2</sup></b>	<b>826</b>
<b>Total Capital Resources</b>	<b>\$ 40,297</b>	<b>\$ 34,875</b>	<b>\$ 3,598</b>

1. Other Adjustments within the CET1 capital of GSIB primarily represent the excess capital attributed to certain branch operations.
2. Tier 2 Capital represents subordinated debt with an original term to maturity of five years or greater and preference shares. The

outstanding amount of subordinated debt qualifying for Tier 2 Capital is reduced, or discounted, upon reaching a remaining maturity of five years.

## Capital Structure

During the period, the UK group executed a capital restructure involving the following elements.

- On 27 June 2017, GSGUKL issued \$3.0 billion of Additional Tier 1 (AT1) notes and \$0.3 billion of preferred shares to a fellow group undertaking, and utilised the proceeds to subscribe for \$3.3 billion of AT1 notes in GSI. The company also received a dividend of \$0.5 billion from GSI.
- On 28 June 2017, GSGUKL underwent a capital reduction of \$2.8 billion (share capital was reduced from 493,468,400,601 ordinary shares of \$0.01 each (total \$4.9 billion) to 213,468,400,605 ordinary shares of \$0.01 each (total \$2.1 billion). Subsequently, the company paid an interim distribution of \$2.8 billion to a fellow group undertaking and issued \$2.8 billion of AT1 notes to a fellow group undertaking. The company also received a dividend of \$2.5 billion from GSI and utilised the proceeds to subscribe for \$2.5 billion of AT1 notes in GSI.

On 18 May 2017, GSGUKL received a dividend of \$100,000,000 from subsidiary undertaking GSAMI.

## Risk-Weighted Assets

CRD IV RWAs are calculated based on measures of credit risk, operational risk and market risk. The table below represents a summary of the capital requirements for GSGUK, GSI and GSIB by type (capital requirements can be converted to RWAs, under regulatory convention, by multiplying by 12.5).

Table 4: Risk Weighted Assets

\$ in millions	as of June 2017		
	GSGUK	GSI	GSIB
Credit Risk-Weighted Assets	\$ 135,258	\$ 125,082	\$ 4,826
Market Risk-Weighted Assets	100,174	94,782	4,385
Operational Risk-Weighted Assets	15,479	14,335	360
<b>Total Risk-Weighted Assets</b>	<b>\$ 250,911</b>	<b>\$ 234,199</b>	<b>\$ 9,571</b>

**Pillar 3 Disclosures****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 Over-The-Counter (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 receivables from brokers, dealers, clearing organisations, customers and counterparties.

Credit Risk Management, 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. The Credit Policy Committee and the Firmwide Risk Committee establish and review credit policies and parameters. In addition, we hold other positions that give rise to credit risk (e.g., bonds held in our inventory). These credit risks are captured as a component of market risk measures, which are monitored and managed by Market Risk Management, consistent with other inventory positions. We also enter into derivatives to manage market risk exposures. Such derivatives give rise to counterparty credit risk which is monitored and managed by Credit Risk Management.

**Credit Risk Management Process**

Effective management of credit risk requires accurate and timely information, a high level of communication and knowledge of customers, countries, industries and products. The firm's process for managing credit risk includes:

- Approving transactions and setting and communicating credit exposure limits;
- Monitoring compliance with established credit exposure limits;
- Assessing the likelihood that a counterparty will default on its payment obligations;
- Measuring current and potential credit exposure and losses resulting from counterparty default;
- Reporting of credit exposures to senior management, the firm's Board and regulators;
- Use of credit risk mitigants, including netting and collateral agreements and hedging; and

- Communication and collaboration with other independent control and support functions such as operations, legal and compliance.

As part of the risk assessment process, Credit Risk Management performs credit reviews which include initial and ongoing analyses of the firm's counterparties. For substantially all credit exposures, the core of the process is an annual counterparty credit review. 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 within Credit Risk Management, with expertise in specific industries, monitor and approve credit reviews and internal credit ratings.

The firm's global credit risk management systems capture credit exposure to individual counterparties and on an aggregate basis to counterparties and their subsidiaries (economic groups). These systems also provide management with comprehensive information on the firm's aggregate credit risk by product, internal credit rating, industry, country and region.

**Credit Risk Measures and Limits**

The firm measures credit risk based on the potential loss in an 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 of credit risk is a function of the notional amount of the position.

Credit limits are used at various levels (counterparty, economic group, industry, country) to control the size of the company's credit exposures. Limits for counterparties and economic groups are 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 the company's risk tolerance and are designed to allow for regular monitoring, review, escalation and management of credit risk concentrations. For GS Group, the Risk Committee of the Board and the Risk Governance

## Pillar 3 Disclosures

Committee (through delegated authority from GS Group's Firmwide Risk Committee) approve credit risk limits at the GS Group, business and product levels. 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 Credit Committee and GSIB Chief Credit Officer respectively. Credit Risk Management sets credit limits for individual counterparties, economic groups, industries and countries. Policies authorised by GS Group's Firmwide Risk Committee, Risk Governance Committee and Credit Policy 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.

### Credit Risk RWAs

Credit RWAs are calculated based upon measures of credit exposure which are then risk weighted. Set out below is a description of the methodology used to calculate RWAs for Wholesale exposures, which generally include credit exposures to corporates, sovereigns or government entities (other than securitisation or equity exposures). We have approval from the PRA 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, and the Internal Model Method (IMM) for the measurement of exposure on OTC derivative and securities financing transactions.

**Exposure at Default (EAD).** The exposure amount for on-balance-sheet assets, such as receivables and cash, is generally based on the balance sheet 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 CRD IV.

GSGUK uses the IMM and the Mark To Market (MTM) methods to measure exposure for counterparty credit risk. For substantially all of the counterparty credit risk arising from OTC derivatives and securities financing transactions, internal models calculate the distribution of exposure upon which the EAD calculation is based, in accordance with the IMM. The models estimate Expected Exposures (EE) at various points in the future using risk factor simulations. The model parameters are derived from historical data using the most recent 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 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 basis where there is a legally enforceable collateral and netting opinion.

**Advanced IRB Approach.** RWAs are calculated by multiplying EAD by the counterparty's risk weight. Under the Advanced IRB 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, where:

- 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.

Internal credit rating grades each have external public rating agency equivalents. The scale that is employed for internal credit ratings corresponds to those used by the major rating agencies and 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 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 recognised vendor models, but exposure-specific estimates of LGD are employed where the recovery prospects of an exposure are more accurately captured by an analysis incorporating information about the specific collateral, structure or type of client.

**Pillar 3 Disclosures**

- 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). 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. For other products, the maturity is based on the contractual maturity.

The below table represent a summary of GSGUK's, GSI's and GSIB's credit exposure by IRB exposure class, as at June 30, 2017.

**Table 5: IRB Approach Exposure Class**

<i>\$ in millions</i>	<b>As of June 2017</b>	
	<b>EAD</b>	<b>RWA</b>
Central Governments and Central Banks	<b>\$ 43,113</b>	<b>\$ 10,316</b>
Credit Institutions and Investment Firms	<b>65,766</b>	<b>45,178</b>
Corporates	<b>67,163</b>	<b>39,836</b>
Securitisation	<b>703</b>	<b>457</b>
Equity	<b>340</b>	<b>1,258</b>
Non-credit obligation assets	<b>68</b>	<b>68</b>
<b>GSGUK Total Credit Risk</b>	<b>177,153</b>	<b>97,113</b>
Central Governments and Central Banks	<b>39,614</b>	<b>9,978</b>
Credit Institutions and Investment Firms	<b>65,101</b>	<b>44,872</b>
Corporates	<b>63,332</b>	<b>36,203</b>
Securitisation	<b>7</b>	<b>15</b>
Equity	<b>340</b>	<b>1,258</b>
Non-credit obligation assets	<b>63</b>	<b>63</b>
<b>GSI Total Credit Risk</b>	<b>168,457</b>	<b>92,389</b>
Central Governments and Central Banks	<b>3,499</b>	<b>338</b>
Credit Institutions and Investment Firms	<b>666</b>	<b>306</b>
Corporates	<b>3,830</b>	<b>3,633</b>
Securitisation	<b>696</b>	<b>442</b>
Equity	<b>-</b>	<b>-</b>
Non-credit obligation assets	<b>5</b>	<b>5</b>
<b>GSIB Total Credit Risk</b>	<b>8,696</b>	<b>4,724</b>

**Pillar 3 Disclosures**

Table 6 below shows our distribution of EAD and exposure-weighted average risk weight by credit quality (PD band) as at June 30, 2017 across Wholesale exposure class and geography. EAD balances are shown post the application of Credit Risk Mitigation (CRM).

Table 7 below shows the distribution of our equity exposures as measured by risk weight for regulatory capital purposes.

**Table 6: Credit Risk Wholesale Exposure by IRB exposure class and by PD Band**

\$ in millions

As of June 2017

PD Band Range	Sovereigns			Institutions			Corporates <sup>2</sup>			Undrawn Commitments and Guarantees EAD
	EAD Post CRM \$m <sup>1</sup>	Exposure-Weighted Average Risk Weight %	RWA Post CRM \$m	EAD Post CRM \$m <sup>1</sup>	Exposure-Weighted Average Risk Weight %	RWA Post CRM \$m	EAD Post CRM \$m <sup>1</sup>	Exposure-Weighted Average Risk Weight %	RWA Post CRM \$m	
0 to <0.05%	\$ 39,075	17%	\$ 6,519	\$ 10,771	23%	\$ 2,442	\$ 24,561	19%	\$ 4,688	\$ 45
0.05% to <0.25%	3,907	91%	3,566	45,590	52%	23,839	33,335	46%	15,272	2,628
0.25% to <0.75%	96	107%	102	5,019	149%	7,466	4,179	124%	5,184	623
0.75% to <5.0%	0	173%	1	2,667	175%	4,661	2,720	220%	5,972	69
5.0% to <20%	18	307%	54	179	310%	555	1,313	317%	4,167	267
20% to <100%	17	424%	74	1,508	412%	6,215	1,001	455%	4,553	25
100% (default)	-	0%	-	32	1%	0	54	1%	0	
<b>GSGUK Total</b>	<b>43,113</b>	<b>24%</b>	<b>10,316</b>	<b>65,766</b>	<b>69%</b>	<b>45,178</b>	<b>67,163</b>	<b>59%</b>	<b>39,836</b>	<b>3,657</b>

1. Collateral is generally factored into the EAD for OTC derivatives and securities financing transactions using the IMM.

2. Exposures to Qualifying Central Counterparties (QCCPs) with an EAD of \$13.1bn have been included in the Corporates exposure class.

**Table 7: Simple Risk Weights for Equity Exposures**

\$ in millions

As of June 2017

	Total EAD	Total RWA
RW (370%)	340	1,258
<b>GSGUK Total</b>	<b>\$ 340</b>	<b>\$ 1,258</b>

## Market Risk

### Overview

Market risk is the risk of loss in the value of inventory, as well as certain other financial assets and financial liabilities, 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, mortgage 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 Management, 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. The firm monitors and controls risks through strong firmwide oversight and independent control and support functions across global businesses.

Managers in revenue-producing units and Market Risk Management discuss market information, positions and estimated risk and 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 manages market risk by diversifying exposures, controlling position sizes and establishing economic hedges in related securities or derivatives. This process includes:

- Accurate and timely exposure information incorporating multiple risk metrics;
- A dynamic limit setting framework; and
- Constant communication among revenue-producing units, risk managers and senior management.

Market Risk Management 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 additional information regarding 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 2016 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, or they are based on internal models which are subject to various qualitative and quantitative parameters. The CRD IV market risk capital rules require that a firm obtains prior written permission from its regulators before using any internal model to calculate its risk-based capital requirement. As our permission applies to GSI and GSIB separately, we calculate model-based requirements as the sum across those entities.

RWAs for market risk are calculated based on measures of exposure which include 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 CRD IV, are used to compute RWAs 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. RWAs for market risk are the sum of each of these measures multiplied by 12.5.

**Pillar 3 Disclosures****Table 8: Market Risk Capital Requirement**

<i>\$ in millions</i>	<i>as of June 2017</i>		
	<b>GSGUK</b>	<b>GSI</b>	<b>GSIB</b>
Regulatory VaR <sup>1</sup>	\$718	\$684	\$34
Stressed VaR <sup>2</sup>	3,060	2,935	125
Incremental Risk Charge	1,088	914	174
Comprehensive Risk Measure	107	107	-
<b>Model-Based Rules</b>	<b>\$4,973</b>	<b>\$4,640</b>	<b>\$333</b>
Interest Rate Risk	1,243	1,243	-
Equity Risk	354	354	-
Collective Investment Scheme Risk	130	130	-
Commodity Risk	73	64	-
Foreign Exchange Risk	487	398	18
<b>Standardised Rules<sup>3</sup></b>	<b>\$2,287</b>	<b>\$2,189</b>	<b>\$18</b>
<b>Securitisation</b>	<b>754</b>	<b>754</b>	<b>-</b>
<b>Total Market Risk Capital Requirement</b>	<b>\$8,014</b>	<b>\$7,583</b>	<b>\$351</b>

1. Regulatory VaR Comprises the 60 day average VaR, and VaR RNIV which is subject to a regulatory multiplier that is set at a minimum of three and can be increased up to four, depending upon the number of backtesting exceptions.
2. Stressed VaR includes Stressed VaR, SVaR RNIV, and Stress Test RNIV.
3. GSGUK totals may include capital from other entities in the group in addition to GSI and GSIB.

**Pillar 3 Disclosures****Leverage Ratio**

The company is required to monitor and disclose its leverage ratio using CRD IV's definition of exposure as amended by the European Commission Leverage Ratio Delegated Act. In November 2016, the European Commission proposed amendments to CRD IV to implement a 3% minimum leverage ratio requirement for certain E.U. financial institutions, including GSI. This leverage ratio compares CRD IV's definition of 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 exposures, securities financing transactions and commitments), less Tier 1 capital deductions. Any required minimum ratio is expected to become effective for the company no earlier than January 1, 2018. As of June 30, 2017, GSGUK had a leverage ratio of 4.4%. This leverage ratio is based on our current interpretation and understanding of this rule and may evolve as its

interpretation and application is discussed with our regulators. The table below presents the company's leverage ratio under CRD IV.

**Table 9: Leverage Ratio**

<i>\$ in millions</i>	as of June 2017		
	GSGUK	GSI	GSIB
Tier 1 Capital	\$ 34,258	\$ 29,962	\$ 2,772
Leverage Ratio Exposure	780,105	752,655	25,256
<b>Leverage Ratio</b>	<b>4.4%</b>	<b>4.0%</b>	<b>11.0%</b>

The following tables present further information on the leverage ratio. Table 10 reconciles the exposure measure to the balance sheets of GSGUK, GSI and GSIB. Table 11 breaks down the exposures from on-balance sheet assets by trading and banking book. Table 12 gives further details on the adjustments and drivers of the leverage ratio.

**Table 10: Summary Reconciliation of Accounting Assets and Leverage Ratio Exposures**

<i>\$ in millions</i>	as of June 2017		
	GSGUK	GSI	GSIB
<b>Total assets as per balance sheet</b>	<b>\$ 940,560</b>	<b>\$ 934,423</b>	<b>\$ 60,414</b>
Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	-	-	-
Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting framework but excluded from the leverage ratio exposure measure in accordance with Article 429(13) of Regulation (EU) No 575/2013 "CRR"	-	-	-
Adjustments for derivative financial instruments <sup>1</sup>	(193,837)	(191,198)	(1,330)
Adjustments for securities financing transactions <sup>1</sup>	24,731	25,210	-
Adjustment for off-balance sheet items <sup>1</sup>	9,552	6,392	3,160
Adjustment for intragroup exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (7) of Regulation (EU) No 575/2013 <sup>1</sup>	-	(19,035)	(36,719)
Adjustment for exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (14) of Regulation (EU) No 575/2013	-	-	-
Other adjustments	(901)	(3,137)	(269)
<b>Total leverage ratio exposure</b>	<b>\$ 780,105</b>	<b>\$ 752,655</b>	<b>\$ 25,256</b>

1. Differences between the accounting values recognised as assets on the balance sheet and the leverage ratio exposure values. A further breakdown of these amounts can be found in Table 12.

**Pillar 3 Disclosures****Table 11: On-Balance Sheet Exposures***\$ in millions*

as of June 2017

	GSGUK	GSI	GSIB
<b>Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:</b>	<b>\$ 153,554</b>	<b>\$ 136,074</b>	<b>\$ 14,935</b>
<b>Trading book exposures</b>	<b>\$ 104,559</b>	<b>\$ 95,805</b>	<b>\$ 10,038</b>
<b>Banking book exposures, of which:</b>	<b>\$ 48,995</b>	<b>\$ 40,269</b>	<b>\$ 4,897</b>
Covered bonds	-	-	-
Exposures treated as sovereigns	27,468	23,959	3,499
Exposures to regional governments, MDB, international organisations and PSE not treated as sovereigns	-	-	-
Institutions	8,849	8,203	157
Secured by mortgages of immovable properties	-	-	-
Retail exposures	-	-	-
Corporate	10,243	6,786	486
Exposures in default	293	239	54
Other exposures	\$ 2,142	\$ 1,082	\$ 701

## Pillar 3 Disclosures

Table 12: Leverage Ratio Common Disclosure

\$ in millions

as of June 2017

	GSGUK	GSI	GSIB
<b>On-balance sheet exposures (excluding derivatives and SFTs)</b>			
On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	\$ 183,962	\$ 167,938	\$ 17,681
Asset amounts deducted in determining Tier 1 capital	(901)	(798)	(104)
<b>Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets)</b>	<b>\$ 183,061</b>	<b>\$ 167,140</b>	<b>\$ 17,577</b>
<b>Derivative exposures</b>			
Replacement cost associated with all derivatives transactions (ie net of eligible cash variation margin)	33,589	33,713	151
Add-on amounts for PFE associated with all derivatives transactions (mark-to-market method)	308,595	310,200	465
Exposure determined under Original Exposure Method	-	-	-
Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	-	-	-
Deductions of receivables assets for cash variation margin provided in derivatives transactions	(28,773)	(28,746)	(27)
Exempted CCP leg of client-cleared trade exposures	(4,626)	(4,626)	-
Adjusted effective notional amount of written credit derivatives	772,276	772,276	-
Adjusted effective notional offsets and add-on deductions for written credit derivatives	(716,887)	(716,887)	-
<b>Total derivative exposures</b>	<b>\$ 364,174</b>	<b>\$ 365,930</b>	<b>\$ 589</b>
<b>Securities financing transaction exposures</b>			
Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	258,463	269,289	40,814
Netted amounts of cash payables and cash receivables of gross SFT assets	(59,875)	(59,875)	-
Counterparty credit risk exposure for SFT assets	24,730	25,210	-
Derogation for SFTs: Counterparty credit risk exposure in accordance with Article 429b (4) and 222 of Regulation (EU) No 575/2013	-	-	-
Agent transaction exposures	-	-	-
Exempted CCP leg of client-cleared SFT exposure	-	-	-
<b>Total securities financing transaction exposures</b>	<b>\$ 223,318</b>	<b>\$ 234,624</b>	<b>\$ 40,814</b>
<b>Other off-balance sheet exposures</b>			
Off-balance sheet exposures at gross notional amount	71,979	63,916	8,063
Adjustments for conversion to credit equivalent amounts	(62,427)	(57,525)	(4,903)
<b>Other off-balance sheet exposures</b>	<b>\$ 9,552</b>	<b>\$ 6,391</b>	<b>\$ 3,160</b>
<b>Exempted exposures in accordance with CRR Article 429 (7) and (14) (on and off balance sheet)</b>			
Exemption of intragroup exposures (solo basis) in accordance with Article 429(7) of Regulation (EU) No 575/2013 (on and off balance sheet)	-	(21,430)	(36,884)
Exposures exempted in accordance with Article 429 (14) of Regulation (EU) No 575/2013 (on and off balance sheet)	-	-	-
<b>Capital and total exposures</b>			
Tier 1 capital	34,258	29,962	2,772
<b>Total leverage ratio exposures</b>	<b>\$ 780,105</b>	<b>\$ 752,655</b>	<b>\$ 25,256</b>
<b>Leverage ratio</b>			
Leverage ratio	4.4%	4.0%	11.0%
<b>Choice on transitional arrangements and amount of derecognised fiduciary items</b>			
Choice on transitional arrangements for the definition of the capital measure	-	-	-
Amount of derecognised fiduciary items in accordance with Article 429(13) of Regulation (EU) No 575/2013	-	-	-

**Pillar 3 Disclosures****Factors impacting the Leverage Ratio**

The leverage ratio has increased in the period from 4.3% in December to 4.4% in June primarily due to the issuance of AT1 notes which increased the company's Tier 1 capital. This was partially offset by an increase in leverage exposure.

**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. The GSI and GSIB ALCOs are delegated specific responsibility by the GSI and GSIB Risk Committees 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 GSGUK, 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 Controllers, Corporate Treasury and other managers from independent control and support functions.

**Cautionary Note on Forward-Looking Statements**

We have included or incorporated by reference in these disclosures, and from time to time our management may make, statements that may constitute "forward-looking statements." Forward-looking statements are not historical facts, but instead represent only our beliefs regarding future events, many of which, by their nature, are inherently uncertain and outside our control. These statements include statements other than historical information or statements of current condition.

It is possible that actual results and financial condition may differ, possibly materially, from the anticipated results and financial condition indicated in these forward-looking statements. Important factors that could cause actual results and financial condition to differ from those indicated in the forward-looking statements include, among others, those discussed under "Risk Factors" in Part I, Item 1A in the firm's Annual Report of Form 10-K for the year ended December 31, 2016. This can be accessed via the following link:

<http://www.goldmansachs.com/investor-relations/financials/current/10k/2016-10-k.pdf>