



Goldman Sachs Group UK Limited

# Pillar 3 Disclosures

For the year ended December 31, 2015

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**Pillar 3 Disclosures****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, Quarterly Report on Form 10-Q and Annual Report on Form 10-K. References in this document to the “Quarterly Pillar 3 Disclosures” are to the firm’s Pillar 3 Disclosures for the quarterly period ended March 31, 2016, 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 March 31, 2016 and references to the “2015 Form 10-K” are to the firm’s Annual Report on Form 10-K for the year ended December 31, 2015. All references to March 2016 and December 2015 refer to the periods ended, or the dates March 31, 2016 and December 31, 2015, respectively, as the context requires. We make qualitative references to more recent disclosures in order to reflect current management practices, however quantitative data is presented as of 31 December 2015.

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 Pillar 3 disclosures have been published in conjunction with consolidated financial information for GSGUK for the year ended December 31, 2015 and set out the qualitative and quantitative disclosures required by Part 8 of the CRR within CRD IV, as supplemented by the PRA and FCA Rulebooks in relation to GSGUK. The annual consolidated financial information for GSGUK can be accessed via the following link:

<http://www.goldmansachs.com/disclosures/index.html>

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 GSGUK’s consolidated financial information, 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.

Information in the 2015 Form 10-K under the headings of Critical Accounting Policies, Equity Capital and Overview and Structure of Risk Management is also applicable to GSGUK as integrated subsidiaries of Group Inc. The 2015 Form 10-K can be accessed via the following link:

<http://www.goldmansachs.com/investor-relations/financials/current/10k/2015-10-k.pdf>

**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 six UK-regulated subsidiaries were included in the regulatory consolidation:

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

The scope of consolidation for regulatory capital purposes is consistent with the accounting basis for 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 the firm's UK registered bank. 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 to be 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 distributed from the UK parent level to subsidiary entities. Capital within GSGUK is considered transferable to other entities within the 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 "Equity 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 2015 Form 10-K.

**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 are expressed without the impact of additional buffers.

**Pillar 3 Disclosures****Capital Framework**

Under CRD IV, the minimum CET1, Tier 1 capital and Total capital ratios (collectively the Pillar 1 capital requirements) will be 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 the 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.
- 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 the 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 a bank should hold.

The U.K. Financial Policy Committee announced an increase in the countercyclical capital buffer rate for private U.K. counterparties and issuers from 0% to 0.5%. The rate becomes effective beginning March 29, 2017. Currently, GSGUK does not expect that this change will have a material impact on its capital 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 December 2015, as well as the minimum required ratios that became effective in January 2016.

**Table 1: Minimum Regulatory Capital Ratios**

	<b>January 2016 Minimum ratio<sup>1</sup></b>	<b>December 2015 Minimum ratio</b>
CET1 ratio	<b>6.5%</b>	<b>6.1%</b>
Tier 1 capital ratio	<b>8.5%</b>	<b>8.2%</b>
Total capital ratio	<b>11.2%</b>	<b>10.9%</b>

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 the company 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 above. The PRA buffer may be utilised during periods of market stress without requiring GSGUK to hold additional capital. As the capital conservation buffer phases in, as described above, it will fully or partially replace the PRA buffer.

As of December 31, 2015, all of GSGUK's regulated subsidiaries had capital levels in excess of their minimum regulatory capital requirement.

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

The inventory amounts reflected on our consolidated balance sheet 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 profit and loss account 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 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 2015 Form 10-K.

For additional information regarding the determination of fair value under UK GAAP and controls over valuation of inventory, please refer to “Note 1. Summary of Significant Accounting Policies” in GSGUK’s consolidated financial information.

**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 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 OTC derivatives counterparty or a borrower) or an issuer of securities or other instruments that we hold. See “Credit Risk” for additional details.

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. See “Market Risk” section for further details. Some trading book positions, such as derivatives, are also subject to counterparty credit risk regulatory capital requirements.

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

**Pillar 3 Disclosures****Regulatory Capital**

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

- CET1 capital, 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 includes long-term qualifying subordinated debt.

**Overview of Ratios**

The table below presents a breakdown of GSGUK's capital ratios under CRD IV as of December 31, 2015, including those for significant subsidiaries GSI and GSIB.

**Table 2: Regulatory Capital Ratios**

\$ in millions	as of December 2015		
	GSGUK	GSI	GSIB
CET1 Capital	\$ 28,577	\$ 24,941	\$ 2,654
Tier 1 Capital	28,577	24,941	2,654
Tier 2 Capital	9,634	8,958	676
<b>Total Capital</b>	<b>\$ 38,211</b>	<b>\$ 33,899</b>	<b>\$ 3,330</b>
<b>RWAs</b>	<b>\$ 207,381</b>	<b>\$ 192,793</b>	<b>\$ 10,220</b>
<b>CET1 Ratio</b>	<b>13.8%</b>	<b>12.9%</b>	<b>26.0%</b>
<b>Tier 1 Capital Ratio</b>	<b>13.8%</b>	<b>12.9%</b>	<b>26.0%</b>
<b>Total Capital Ratio</b>	<b>18.4%</b>	<b>17.6%</b>	<b>32.6%</b>

Certain CRD IV rules are subject to final technical standards and clarifications, which will be issued by the European Banking Authority (EBA) and adopted by the European Commission and PRA. All capital, RWAs and estimated ratios are based on current interpretation, expectations and understanding of CRD IV and may evolve as its interpretation and application is discussed with our regulators.

**Capital Structure**

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.

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. The capital resources of GSGUK are based on audited, consolidated non-statutory financial information and those of GSI and GSIB are based on audited statutory financial statements.

**Table 3: Regulatory Capital Resources**

\$ in millions	as of December 2015		
	GSGUK	GSI	GSIB
Ordinary Share Capital	\$ 4,893	\$ 582	\$ 63
Share Premium Account Including Reserves	659	4,881	2,094
Audited Retained Earnings	24,082	20,890	652
<b>CET1 Capital Before Deductions</b>	<b>29,634</b>	<b>26,353</b>	<b>2,809</b>
Net Pension Assets	(261)	(261)	-
CVA and DVA	(223)	(223)	(1)
Prudent Valuation Adjustments	(262)	(259)	(2)
Expected Loss Deduction and Loan Loss Provision	(200)	(169)	(33)
Other Adjustments	(111)	(500)	(119) <sup>1</sup>
Intangibles	-	-	-
<b>CET1 Capital After Deductions</b>	<b>28,577</b>	<b>24,941</b>	<b>2,654</b>
<b>Tier 1 Capital After Deductions</b>	<b>28,577</b>	<b>24,941</b>	<b>2,654</b>
Tier 2 Capital Before Deductions <sup>2</sup>	9,784	8,958	826
Other Adjustments	(150)	-	(150) <sup>1</sup>
<b>Tier 2 Capital After Deductions</b>	<b>9,634</b>	<b>8,958</b>	<b>676</b>
<b>Total Capital Resources</b>	<b>\$ 38,211</b>	<b>\$ 33,899</b>	<b>\$ 3,330</b>

1. Other Adjustments within the CET1 and Tier 2 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. The outstanding amount of subordinated debt qualifying for Tier 2 Capital is reduced, or discounted, upon reaching a remaining maturity of five years.

**Table 4: Reconciliation to Balance Sheet**

\$ in millions	as of December 2015		
	GSGUK	GSI	GSIB
Total Shareholders' Funds per Balance Sheet	\$ 29,634	\$ 26,353	\$ 2,809
Regulatory deductions	(1,057)	(1,412)	(155)
Tier 2 Capital After Deductions	9,634	8,958	676
<b>Total Capital Resources</b>	<b>\$ 38,211</b>	<b>\$ 33,899</b>	<b>\$ 3,330</b>



**Pillar 3 Disclosures**

GSGUKL has issued 489,258,869,041 ordinary A class shares at a par value of \$0.01 for a total value of \$4,892,588,690. GSI and GSIB have issued ordinary A class shares only to GSGUKL and are 100% wholly owned subsidiaries of GSGUKL. Neither GSGUKL, GSI nor GSIB has any other share classes in issue at this time. All other accounting shareholders' funds relates to share premium of the A class shares in issue, retained earnings and reserves. These items satisfy the conditions laid out under Article 26 of the CRR and are recognised as CET1 capital.

Neither GSGUKL, GSI nor GSIB has issued an instrument which would meet the definition of an Additional Tier 1 instrument under Article 52 of CRD IV.

Subordinated liabilities rank junior to senior obligations and generally count towards the capital base of GSGUK. Capital securities may be called and redeemed by the issuing entity, subject to notification and consent of the PRA.

The below table summarises the Tier 2 capital instruments issued by GSGUKL, GSI and GSIB. The terms of these instruments have been amended, where required, to meet the Tier 2 eligibility requirements of CRD IV under Articles 62-64.

**Table 5: Tier 2 Capital Instruments**

\$ in millions

as of December 2015

Entity	Date of Issuance	Final Maturity	Currency	Governing Law	Perpetual or Dated	Interest Rate <sup>1</sup>	Issued Value	Key Terms	CRD IV Compliant
GSGUKL	Mar 20, 2013	Jul 26, 2022	USD	English	Dated	CoF + LTDS + 100bps	450	Demand notice to be served on July 26, 2017	Yes
GSGUKL	Aug 1, 2005	Dec 14, 2021	USD	English	Dated	CoF + LTDS + 100bps	5,078	Repayable 5 years after demand notice	Yes
GSGUKL	Sep 9, 2015	Sep 9, 2025	USD	English	Dated	CoF + 341bps	826	Repayable 5 years after demand notice	Yes
GSGUKL	Apr 29, 2015	Apr 29, 2025	USD	English	Dated	CoF + 326bps	2,500	Repayable 5 years after demand notice	Yes
GSI	Aug 5, 2003	Dec 14, 2021	USD	English	Dated	CoF + LTDS + 100bps	5,078	Repayable 5 years after demand notice	Yes
GSI	Apr 29, 2015	Apr 29, 2025	USD	English	Dated	CoF + 326bps	2,500	Repayable 5 years after demand notice	Yes
GSI	Sep 24, 2012	Jun 26, 2022	USD	English	Dated	CoF + LTDS + 100bps	675	Repayable 5 years after demand notice	Yes
GSI	Nov 29, 1996	5 years from notice	USD	English	Perpetual	3m LIBOR + 150bps	255	Repayable 5 years after demand notice	Yes
GSI	Mar 20, 2013	Jun 26, 2022	USD	English	Dated	CoF + 100bps	450	Repayable 5 years after demand notice	Yes
GSIB	Sep 9, 2015	10 years from agreement	USD	English	Dated	CoF + 341bps	826	Repayable 5 years from drawdown date	Yes

1. 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).

**Pillar 3 Disclosures****Risk-Weighted Assets**

CRD IV RWAs are calculated based on measures of credit risk, operational risk and market risk. The table below presents a summary of the RWA components used to calculate GSGUK's, GSI's and GSIB's consolidated regulatory capital ratios.

**Table 6: Risk-Weighted Assets**

\$ in millions	as of December 2015		
	GSGUK	GSI	GSIB
OTC Derivatives	\$ 65,026	\$ 64,507	\$ 231
Commitments, Guarantees and Loans <sup>1</sup>	5,365	1,338	4,027
Securities Financing Transactions <sup>2</sup>	4,735	4,735	-
Equity Investments	1,515	1,515	-
Credit Valuation Adjustment	23,944	23,775	169
Other <sup>3</sup>	11,093	8,825	109
<b>Credit RWAs</b>	<b>\$ 111,678</b>	<b>\$ 104,695</b>	<b>\$ 4,536</b>
Regulatory VaR	7,910	7,197	713
Stressed VaR	24,957	22,348	2,609
Incremental Risk	10,053	8,119	1,934
Comprehensive Risk	3,012	3,012	-
Standard Rules	22,076	20,747	189
Securitisation	14,372	14,372	-
<b>Market RWAs</b>	<b>\$ 82,380</b>	<b>\$ 75,795</b>	<b>\$ 5,445</b>
<b>Operational Risk RWAs</b>	<b>\$ 13,323</b>	<b>\$ 12,303</b>	<b>\$ 239</b>
<b>Large Exposure RWAs</b>	-	-	-
<b>Total RWAs</b>	<b>\$ 207,381</b>	<b>\$ 192,793</b>	<b>\$ 10,220</b>

1. Principally includes certain commitments to extend credit.
2. Represents resale and repurchase agreements and securities borrowed and loaned transactions.
3. Principally includes receivables from customers, certain loans, other assets, and cash and cash equivalents.

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, RWAs and capital requirements are used interchangeably and exclude the impact of additional capital buffers.

**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 also give rise to 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 collateral and hedging; and

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- 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, inspect 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.

The firm uses credit limits at various levels (counterparty, economic group, industry, country) to control the size of 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 risk tolerance and are designed to allow for regular monitoring, review, escalation and management of credit risk concentrations. The Risk Committee of the Goldman Sachs Board and the Firmwide Risk Committee approve

credit risk limits at the firmwide and business levels. Credit Risk Management sets credit limits for individual counterparties, economic groups, industries and countries. Policies authorised by the Firmwide Risk Committee and the Credit Policy Committee prescribe the level of formal approval required for the firm to assume credit exposure to a counterparty across all product areas, taking into account any applicable netting provisions, collateral or other credit risk mitigants. In addition, Credit Risk Management sets concentration limits at the GSI and GSIB entity levels for economic groups, industries and countries, under the policies authorised by the GSI Risk Committee and the GSIB Risk Committee respectively.

**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 the firm's securities financing transactions, see "Note 7. Derivatives and Hedging Activities" and "Note 10. Collateralized Agreements and Financings" in Part II, Item 8 "Financial Statements and Supplementary Data" and "Credit Risk Management" in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the firm's 2015 Form 10-K.

**Allowance for Losses on Loans and Lending Commitments**

For information on the firm's impaired loans and loans on non-accrual status, and allowance for losses on loans and lending commitments, see "Note 9. Loans Receivable" in Part II, Item 8 "Financial Statements and Supplementary Data" in the firm's 2015 Form 10-K.

**Credit Risk RWAs**

Credit RWAs are calculated based upon measures of credit exposure which are then risk weighted. 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, which are covered in later sections). 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, cleared and listed derivative and securities financing transactions.

**Pillar 3 Disclosures**

**Exposure at Default (EAD).** 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 CRD IV.

GSGUK uses the Internal Model Method (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, cleared and listed derivatives and securities financing transactions. 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.

The EAD detailed in the following tables represents the exposures used in computing capital requirements and is not a directly comparable metric to balance sheet amounts presented in the consolidated financial information of GSGUK for the year ended December 31, 2015 due to differences in measurement methodology, counterparty netting and collateral offsets used.

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 netting opinion. They do not include the effect of any credit protection purchased on counterparties.

**Advanced IRB Approach.** RWAs are calculated by multiplying EAD by the counterparty's risk weight. In accordance with 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 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 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, taking into account the existence of security where applicable.
- The definition of maturity depends on the nature of the exposure. For OTC, cleared and listed 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.

## Pillar 3 Disclosures

The following four tables represent a summary of GSGUK's, GSI's and GSIB's credit exposure by IRB exposure class, industry type, residual maturity and geography as at December 31, 2015.

Table 7: IRB Approach Exposure Class

\$ in millions	As of December 2015	
	EAD	RWA
Central Governments and Central Banks	\$ 20,037	\$ 4,438
Credit Institutions and Investment Firms	58,147	36,329
Corporates	59,879	37,418
Securitisation	65	49
Equity	409	1,515
Non-credit obligation assets	74	74
<b>GSGUK Total Credit Risk</b>	<b>\$ 138,611</b>	<b>\$ 79,823</b>
Central Governments and Central Banks	19,872	4,426
Credit Institutions and Investment Firms	57,416	35,971
Corporates	56,339	33,454
Securitisation	25	25
Equity	409	1,515
Non-credit obligation assets	67	67
<b>GSI Total Credit Risk</b>	<b>\$ 134,128</b>	<b>\$ 75,458</b>
Central Governments and Central Banks	165	12
Credit Institutions and Investment Firms	731	358
Corporates	3,540	3,964
Securitisation	40	24
Equity	-	-
Non-credit obligation assets	7	7
<b>GSIB Total Credit Risk</b>	<b>\$ 4,483</b>	<b>\$ 4,365</b>

Table 8: IRB EAD by Industry Type

\$ in millions	as of December 2015		
	GSGUK	GSI	GSIB
Agriculture, Forestry & Fishing	\$ 140	\$ 26	\$ 114
Construction	282	22	260
Finance Industry - Banks	26,647	26,065	582
Finance Industry - Non-Banks	65,393	63,849	1,544
Finance Industry - Pension Funds	13,297	13,297	-
Manufacturing	2,008	1,583	425
Mining & Quarrying	1,224	1,224	-
Real Estate	399	260	139
Retail / Wholesale trade	376	107	269
Services and others	12,022	11,279	743
Sovereigns	12,724	12,572	152
Transport, Utilities & Storage	4,099	3,844	255
<b>Total</b>	<b>\$ 138,611</b>	<b>\$ 134,128</b>	<b>\$ 4,483</b>

Table 9: IRB EAD by Residual Maturity

\$ in millions	As of December 2015			
	Less than One Year	One to Five Years	Over Five Years	Total
Central Governments and Central Banks	\$ 9,788	\$ 7,397	\$ 2,852	\$ 20,037
Credit Institutions and Investment Firms	10,954	34,573	12,620	58,147
Corporates	8,033	29,477	22,917	60,427
<b>GSGUK Total Exposures</b>	<b>\$ 28,775</b>	<b>\$ 71,447</b>	<b>\$ 38,389</b>	<b>\$ 138,611</b>
Central Governments and Central Banks	9,788	7,232	2,852	19,872
Credit Institutions and Investment Firms	10,954	33,862	12,600	57,416
Corporates	8,033	26,063	22,744	56,840
<b>GSI Total Exposures</b>	<b>\$ 28,775</b>	<b>\$ 67,157</b>	<b>\$ 38,196</b>	<b>\$ 134,128</b>
Central Governments and Central Banks	-	165	-	165
Credit Institutions and Investment Firms	-	711	20	731
Corporates	-	3,414	173	3,587
<b>GSIB Total Exposures</b>	<b>\$ -</b>	<b>\$ 4,290</b>	<b>\$ 193</b>	<b>\$ 4,483</b>

Table 10: IRB EAD by Geography

\$ in millions	As of December 2015			
	America	Asia	EMEA	Total
Central Governments and Central Banks	\$ 280	\$ 6,718	\$ 13,039	\$ 20,037
Credit Institutions and Investment Firms	16,274	13,530	28,343	58,147
Corporates	16,664	6,613	37,150	60,427
<b>GSGUK Total Exposures</b>	<b>\$ 33,218</b>	<b>\$ 26,861</b>	<b>\$ 78,532</b>	<b>\$ 138,611</b>
Central Governments and Central Banks	280	6,689	12,903	19,872
Credit Institutions and Investment Firms	16,003	13,385	28,028	57,416
Corporates	16,096	6,464	34,280	56,840
<b>GSI Total Exposures</b>	<b>\$ 32,379</b>	<b>\$ 26,538</b>	<b>\$ 75,211</b>	<b>\$ 134,128</b>
Central Governments and Central Banks	-	29	136	165
Credit Institutions and Investment Firms	271	145	315	731
Corporates	568	149	2,870	3,587
<b>GSIB Total Exposures</b>	<b>\$ 839</b>	<b>\$ 323</b>	<b>\$ 3,321</b>	<b>\$ 4,483</b>

## Pillar 3 Disclosures

Tables 11 and 12 below show our distribution of EAD and Exposure-Weighted Average Risk Weight by credit quality (PD band) as at December 31, 2015 across Wholesale exposure class and geography. EAD balances are shown post the application of Credit Risk Mitigation (CRM) as

discussed on the following page.

Table 13 shows the distribution of our equity exposures as measured by risk weight for regulatory capital purposes.

**Table 11: Credit Risk Wholesale Exposure by IRB exposure class and by PD Band**

*\$ in millions* As of December 2015

PD Band Range	Sovereigns			Institutions			Corporates			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%	\$ 16,173	5%	\$ 853	\$ 13,706	42%	\$ 5,818	\$ 21,684	24%	\$ 5,231	\$ 100
0.05% to <0.25%	3,637	84%	3,049	38,132	52%	19,862	28,819	43%	12,294	1,676
0.25% to <0.75%	127	115%	145	5,091	138%	7,039	3,672	132%	4,858	576
0.75% to <5.0%	7	198%	13	742	214%	1,587	3,441	206%	7,088	215
5.0% to <20%	8	262%	21	118	321%	379	1,202	278%	3,347	251
20% to <100%	85	419%	357	358	460%	1,644	1,043	441%	4,600	12
100% (default)	-	-	-	-	1%	-	18	1%	-	-
<b>GSGUK Total</b>	<b>\$ 20,037</b>	<b>22%</b>	<b>\$ 4,438</b>	<b>\$ 58,147</b>	<b>62%</b>	<b>\$ 36,329</b>	<b>\$ 59,879</b>	<b>62%</b>	<b>\$ 37,418</b>	<b>\$ 2,830</b>

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

**Table 12: Credit Risk Wholesale Exposure by Region and by PD Band**

*\$ in millions* As of December 2015

PD Band Range	America			Asia			EMEA			Undrawn Commitments and Guarantees EAD
	EAD Post CRM \$m	Exposure-Weighted Average Risk Weight %	RWA Post CRM \$m	EAD Post CRM \$m	Exposure-Weighted Average Risk Weight %	RWA Post CRM \$m	EAD Post CRM \$m	Exposure-Weighted Average Risk Weight %	RWA Post CRM \$m	
0 to <0.05%	\$ 8,878	21%	\$ 1,859	\$ 8,788	9%	\$ 804	\$ 33,898	27%	\$ 9,238	\$ 100
0.05% to <0.25%	19,792	44%	8,642	16,828	49%	8,167	33,971	54%	18,396	1,676
0.25% to <0.75%	2,482	154%	3,834	763	118%	902	5,645	129%	7,306	576
0.75% to <5.0%	1,527	198%	3,027	163	211%	344	2,500	213%	5,319	215
5.0% to <20%	63	291%	184	58	279%	163	1,207	282%	3,400	251
20% to <100%	473	437%	2,066	131	413%	542	881	453%	3,993	12
100% (default)	-	1%	-	-	0%	-	18	1%	-	-
<b>GSGUK Total</b>	<b>\$ 33,215</b>	<b>59%</b>	<b>\$ 19,612</b>	<b>\$ 26,731</b>	<b>41%</b>	<b>\$ 10,922</b>	<b>\$ 78,120</b>	<b>61%</b>	<b>\$ 47,652</b>	<b>\$ 2,830</b>

**Table 13: Simple Risk Weights for Equity Exposures**

*\$ in millions* As of December 2015

	EAD			RWA			Total EAD	Total RWA
	America	Asia	EMEA	America	Asia	EMEA		
RW(290%)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
RW(370%)	9	130	270	33	482	1,000	409	1,515
<b>GSGUK Total<sup>1</sup></b>	<b>\$ 9</b>	<b>\$ 130</b>	<b>\$ 270</b>	<b>\$ 33</b>	<b>\$ 482</b>	<b>\$ 1,000</b>	<b>\$ 409</b>	<b>\$ 1,515</b>
RW(290%)	-	-	-	-	-	-	-	-
RW(370%)	9	130	270	33	482	1,000	409	1,515
<b>GSI Total</b>	<b>\$ 9</b>	<b>\$ 130</b>	<b>\$ 270</b>	<b>\$ 33</b>	<b>\$ 482</b>	<b>\$ 1,000</b>	<b>\$ 409</b>	<b>\$ 1,515</b>

1. GSIB did not have any equity exposures as at December 31, 2015

**Pillar 3 Disclosures****Governance and Validation of Risk Parameters**

Committees within Credit Risk Management that ultimately report to the firm's Chief Credit Risk Officer or the Credit Policy Committee oversee the methodology for determining PD and the performance of models used for both LGD and EAD.

To assess the performance of the PD parameters used, on an annual basis the firm performs a benchmarking and validation exercise which includes comparisons of realised annual default rates to the expected annual default rates for each credit rating band and comparisons of the internal realised long-term average default rates to the empirical long-term average default rates assigned to each credit rating band.

For the year ended December 2015, as well as in previous annual periods, the PDs used for regulatory capital calculations were higher (i.e., more conservative) than the firm's actual internal realised default rate.

During the year ended December 2015, the total number of counterparty defaults remained low, representing less than 0.5% of all counterparties, and such defaults primarily occurred within loans and lending commitments. Estimated losses associated with counterparty defaults were lower compared with the prior year and were not material.

To assess the performance of LGD parameters used, on an annual basis the firm performs a validation exercise, including comparisons of 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 remain higher than those implied by the LGD parameters used in regulatory capital calculations.

The models used to determine the EAD calculated in accordance with the IMM, as well as those used for CVA (see "Credit Valuation Adjustment Risk-Weighted Assets"), are subject to independent review and validation by Model Risk Management. For further information, see "Model Risk Management."

**Credit Risk Mitigation**

To reduce credit exposures on derivatives and securities financing transactions, the firm may enter into master netting agreements or similar arrangements (collectively, 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, together with securities consisting of high quality government bonds (mainly US and EU).

Our collateral is managed by an independent control function within the Operations Division. This function is responsible for reviewing exposure calculations, making margin calls with relevant counterparties, and ensuring 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.

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 2015 Form 10-K. See "Note 10. Collateralized Agreements and Financings" in Part II, Item 8 "Financial Statements and Supplementary Data" in the firm's 2015 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

**Pillar 3 Disclosures**

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. We may also mitigate our credit risk using credit derivatives or participation agreements.

**Credit Derivatives**

We enter into credit derivative transactions primarily to facilitate client activity and to manage the credit risk associated with market-making, including to hedge counterparty exposures arising from OTC derivatives (intermediation activities).

We also use credit derivatives to hedge counterparty exposure associated with investing and lending activities. Some of these hedges qualify as credit risk mitigants for regulatory capital purposes. Where the aggregate notional of credit derivatives hedging exposure to a loan obligor is less than the notional loan exposure, the substitution approach is only employed for the percentage of loan exposure covered by eligible credit derivatives.

For further information regarding the firm's credit derivative transactions, see "Note 7. Derivatives and Hedging Activities" in Part II, Item 8 "Financial Statements and Supplementary Data" in the firm's 2015 Form 10-K.

For information regarding credit risk concentrations, see "Note 26. Credit Concentrations" in Part II, Item 8 "Financial Statements and Supplementary Data" in the firm's 2015 Form 10-K.

**Wrong-way Risk**

We seek to minimise exposures where there is a significant positive correlation between the creditworthiness of our counterparties and the market value of the collateral we receive, which is known as "wrong-way risk". 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 our 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 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, cleared and listed derivatives. We calculate RWAs for CVA primarily using the Advanced CVA approach set out in CRD IV, 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 CRD IV), 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 excluded hedges are those used to hedge the market risk factors which drive our exposure to the counterparty (for example interest rates, equity prices or foreign exchange rates), or those that do not reference the specific exposures they are intended to mitigate, but are nevertheless highly correlated to the underlying credit risk.



**Pillar 3 Disclosures****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 CRD IV. 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 European Market Infrastructure Regulation (EMIR). CRD IV includes a transitional rule which allows all CCPs applying for authorisation or recognition under EMIR to be treated as QCCPs. The European Commission has adopted an implementing act that extends the transitional phase to December 15, 2016. Such exposures arise from OTC derivatives, exchange-traded derivatives, securities financing transactions and long settlement transactions and are required to be risk weighted at either 2% or 4% based on the specified criteria.

**Retail Exposures**

As of December 31, 2015, we did not have any 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).

**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 plus a percentage of the notional amount of off-balance-sheet exposures, and are typically risk weighted at 100%.

**Equity Exposures in the Banking Book**

The firm makes direct investments in public and private equity securities; it also makes investments, through funds that it manages (some of which are consolidated), in debt securities and loans, public and private equity securities and real estate entities. These investments are typically longer-term in nature and are primarily held for capital appreciation purposes; they are therefore classified for regulatory capital purposes as banking book equity investments. The firm also makes commitments to invest, primarily in private equity, real estate and other assets. Such commitments are made both directly and through funds that the firm raises and manages. Equity exposures held in GSGUK's banking book are included in the Credit RWAs in Table 6 and were not material as of December 31, 2015.

## Securitisations

### Overview

CRD IV defines certain activities as securitisation transactions which attract capital requirements under the “Securitisation Framework.” Under CRD IV rules, 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, corporate entities and limited liability companies) or through a resecuritisation. 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.

### Banking Book Activity

Within the banking book, GSGUK did not originate, or sponsor, any new securitisations in 2015 and exposures classified in the banking book were not material as at December 31, 2015.

The small amount of 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 commercial mortgage 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” 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 2015 Form 10-K.

**Pillar 3 Disclosures****Calculation of Risk-Weighted Assets**

Under the Ratings Based Approach (RBA), the risk weighted exposure amount of a rated securitisation position or resecuritisation position is calculated by applying to the exposure value a risk weight that depends on the associated external credit rating. The External Credit Assessment Institutions (ECAIs) used are S&P, Moody's and Fitch for all types of exposures.

The RWAs for trading book securitisation positions are calculated by multiplying the exposure amount by the specific risk-weighting factors assigned and then multiplying by the specified regulatory factor of 1.06. 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.

RWAs for banking book securitisation exposures (including counterparty credit risk exposures that arise from trading book derivative positions) are calculated using the RBA capped at the maximum amount that could be lost on the position.

The tables below show our securitisation exposures in the trading book by type of exposure and risk weight band as at December 31, 2015.

**Table 14: Securitisation Exposures by Type**

<i>\$ in millions</i>	As of December 2015		
	On-balance- sheet Exposures	Off-balance- sheet Exposures	Total Exposure Amount
	Traditional	Synthetic	
Residential mortgages	\$ 405	\$ 351	\$ 756
Commercial mortgages	412	0	412
Corporates	11	1,420	1,431
Asset-backed and other	914	4,274	5,188
<b>GSGUK Total</b>	<b>\$ 1,742</b>	<b>\$ 6,045</b>	<b>\$ 7,787</b>

**Table 15: Securitisation Exposures and Related RWAs by Risk Weight Bands**

<i>\$ in millions</i>	As of December 2015		
	Ratings Based Approach (RBA)		
	Long Exposure Amount	Short Exposure Amount	Total RWAs
0% - 25%	\$ 2,256	\$ 306	\$ 905
26% - 100%	460	117	789
101% - 250%	101	30	345
251% - 650%	204	34	1,156
651% - 1,250%	671	3,608	11,177
<b>GSGUK Total</b>	<b>\$ 3,692</b>	<b>\$ 4,095</b>	<b>\$ 14,372</b>

We account for a securitisation as a sale when we have relinquished control over the transferred 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, 2015 have material assets held with the intent to securitise.

## 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.

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, 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 at the firm. 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.

### 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 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 market risk limits set by our risk committees. 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 2015 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.

Where relevant, RWAs for market risk are computed 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 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 16: Market Risk Capital Requirement**

\$ in millions	as of December 2015		
	GSGUK	GSI	GSIB
Regulatory VaR <sup>1</sup>	\$ 448	\$ 402	\$ 46
Stressed VaR <sup>1</sup>	1,217	1,061	156
Incremental Risk Charge	804	650	154
Comprehensive Risk Measure	241	241	-
Other <sup>2</sup>	964	901	63
<b>Model-Based Rules</b>	<b>\$ 3,674</b>	<b>\$ 3,255</b>	<b>\$ 419</b>
Interest Rate Risk	1,031	1,031	-
Equity Risk	247	247	-
Collective Investment Scheme Risk	34	34	-
Commodity Risk	112	55	-
Foreign Exchange Risk	342	293	16
<b>Standardised Rules</b>	<b>\$ 1,766</b>	<b>\$ 1,660</b>	<b>\$ 16</b>
<b>Securitisation</b>	<b>\$ 1,150</b>	<b>\$ 1,150</b>	<b>\$ -</b>
<b>Total Market Risk Capital Requirement</b>	<b>\$ 6,590</b>	<b>\$ 6,065</b>	<b>\$ 435</b>

1. Regulatory VaR 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. See "Regulatory VaR Backtesting Results." This result is further multiplied by 12.5 to convert into RWAs.
2. Predominantly relates to the Risks not in VaR (RNIV) framework, which capitalises additional market risks not fully covered in the VaR model.

**Regulatory VaR**

VaR is the potential loss in value of inventory positions, as well as certain other financial assets and financial liabilities, due to adverse market movements over a defined time horizon with a specified confidence level. The VaR model captures risks including 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.

For both risk management purposes (positions subject to VaR limits) and regulatory capital calculations we use a single VaR model. However, VaR used for regulatory capital requirements (Regulatory VaR) differs from risk management VaR due to different time horizons and confidence levels (10-day and 99% for regulatory VaR vs. one-day and 95% for risk management VaR), as well as differences in the scope of positions on which VaR is calculated.

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

The table below presents by risk category our period-end, high, low and mean of the daily GSGUK 99% one day Regulatory VaR.

**Table 17: Product Category VaR**

\$ in millions	As of December 2015	Year Ended December 2015		
		High	Low	Mean
<b>GSGUK</b>	<b>\$ 448</b>	<b>\$ 486</b>	<b>\$ 330</b>	<b>\$ 439</b>
Interest rates	353	368	263	339
Equity prices	238	270	194	238
Currency rates	125	127	69	96
Commodity prices	14	15	5	9
<i>Diversification</i> <sup>1</sup>	<b>\$ (282)</b>			

1. Diversification in the table above represents the difference between total VaR and the sum of the VaRs for the four risk categories. This effect arises because the four market risk categories are not perfectly correlated.

**Stressed VaR**

SVaR is the potential loss in value of inventory positions, as well as certain other financial assets and financial 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. We identify the stressed period by comparing VaR using market data inputs from different historical periods.

The table below presents our period-end, high, low and mean of the average weekly SVaR for the year ended December 2015. Average, per the market risk regulatory capital requirements, is determined based on the average weekly amount for the preceding 12 weeks.

**Table 18: Stressed VaR**

\$ in millions	As of December 2015	Year Ended December 2015		
		GSGUK	High	Low
<b>SVaR</b>	<b>\$ 406</b>	<b>\$ 406</b>	<b>\$ 298</b>	<b>\$ 336</b>
<b>SVaR x Multiplier</b>	<b>1,217<sup>1</sup></b>			
<b>RWAs</b>	<b>\$ 15,225</b>			

1. SVaR is subject to the same regulatory multiplier used for Regulatory VaR and is further multiplied by 12.5 to convert into RWAs

**Pillar 3 Disclosures****Incremental Risk**

Incremental risk is the potential loss in value of non-securitised inventory positions due to the default or credit migration of issuers of financial instruments over a one-year time horizon. As required by the CRD IV market risk regulatory capital rules, this measure is calculated at a 99.9% confidence level over a one-year time horizon. It uses a multi-factor model assuming a constant level of risk. When assessing the risk, we take into account market and issuer-specific concentration, credit quality, liquidity horizons and correlation of default and migration risk. The liquidity horizon is calculated based upon the size of exposures and the speed at which we can reduce risk by hedging or unwinding positions, given our experience during a historical stress period, and is subject to the prescribed regulatory minimum. Our average liquidity horizon as of December 31, 2015 was 3.1 months.

The table below presents our period-end, high, low and mean of the maximum of the average weekly Incremental risk measure or the point-in-time measure. Average, per the market risk regulatory capital requirements, is determined based on the average weekly amount over the preceding 12 weeks.

**Table 19: Incremental Risk**

\$ in millions	As of December 2015		Year Ended December 2015	
	GSGUK	High	Low	Mean
<b>Incremental Risk</b>	<b>\$ 804</b>	<b>\$ 1,254</b>	<b>\$ 687</b>	<b>\$ 866</b>
<b>RWAs</b>	<b>\$ 10,053</b>			

1. In order to convert the results of Incremental risk into RWAs, it is multiplied by 12.5.

**Comprehensive Risk**

Comprehensive risk is the potential loss in value, due to price risk and defaults, within our 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 exposures is based on the credit quality of a single company 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).

As required under the CRD IV 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

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.

As of December 2015, we had credit correlation positions, subject to the Comprehensive Risk Measure, with a fair value under US GAAP of \$71 million in net assets and \$166 million in net liabilities and under UK GAAP of \$879 million in net assets and \$522 million in net liabilities.

The table below presents our period-end, high, low and mean of the maximum of the average weekly Comprehensive risk measure or the point-in-time measure, inclusive of both modeled and non-modeled components for the year ended December 2015. Average, per the market risk regulatory capital requirements, is determined based on the average weekly amount for the preceding 12 weeks.

**Table 20: Comprehensive Risk**

\$ in millions	As of December 2015		Year End December 2015	
	GSGUK	High	Low	Mean
<b>Comprehensive Risk</b>	<b>\$ 241</b>	<b>\$ 522</b>	<b>\$ 208</b>	<b>\$ 305</b>
<b>RWAs</b>	<b>\$ 3,012</b>			

1. In order to convert the Comprehensive risk measure into RWAs, it is multiplied by 12.5.

**Model Review and Validation**

The models discussed above, which are used to determine Regulatory VaR, SVaR, Incremental risk and Comprehensive risk, are subject to review and validation by Model Risk Management. For more information, see "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 implementing significant changes to our assumptions and/or models, Model Risk Management performs model validations. Significant changes to models are reviewed with the Firm's Chief Risk Officer and Chief Financial Officer, and approved by the Firmwide Risk Committee.

**Pillar 3 Disclosures****Regulatory VaR Backtesting Results**

As required by the CRD IV 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 number of overshootings based on comparing the higher of 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 CRD IV market risk capital rules, positional 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 by their nature are more likely than not to be positive. In addition, positional 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 positional net revenues is used to evaluate the performance of the Regulatory VaR model and is not comparable to our actual daily trading 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 2015 Form 10-K.

Overall the backtesting results were within the expected threshold over the year. There was no change in the VaR multiplier used to calculate Market RWAs. 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.

**Stress Testing**

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

For a detailed description of the firm's stress testing practices, see "Risk Management – Market Risk Management – Market Risk Management Process – Stress Testing" in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the firm's 2015 10-K.

**Specific Risk**

The standard specific risk add-on for debt positions ranges from 0.25% to 12%, other than for certain sovereign and supranational positions which have a 0% add-on. The add-on for sovereigns, public sector entities, depository institutions and corporate entities that have issued public financial instruments is based on the public credit ratings and the remaining contractual maturity of the position. All other types of debt positions are subject to an 8% add-on. The standard specific risk add-on for equity positions will generally be 8%, but this could decrease to 2% for well-diversified portfolios of equities, certain indices, and certain futures-related arbitrage strategies.

The standard specific risk RWAs for debt and equity positions are calculated by multiplying the exposure amount by the appropriate standard specific risk add-on, and then multiplying by 12.5. The exposure amount is defined as the carrying value for securities and loans, or the market value of the effective notional of the instrument or indices underlying derivative positions. The specific risk capital requirements are capped at the maximum loss that could be incurred on any given position.

**Table 21: Specific Risk**

<i>\$ in millions</i>	<b>As of December 2015</b>
Securitisation positions <sup>1</sup>	<b>\$ 14,372</b>
Other specific risk positions <sup>2</sup>	<b>16,395</b>
<b>Model-Based Rules</b>	<b>\$ 30,767</b>

1. Securitisations in the above table represent positions outside the correlation trading portfolio subject to the RBA.
2. Other positions include Debt, Equity and Collective Investment Securities.

## Operational Risk

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and 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. 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

The firm maintains a comprehensive control framework designed to provide a well-controlled environment to minimise operational risks. The Firmwide Operational Risk Committee, along with the EMEA Operational Risk Committee, provide oversight of the ongoing development and implementation of operational risk policies and framework. Operational Risk Management is a risk management function independent of revenue-producing units, reports to the firm's Chief Risk Officer, and is responsible for developing and implementing policies, methodologies and a formalised framework for operational risk management with the goal of minimising the exposure to operational risk.

### Operational Risk Management Process

Managing operational risk requires timely and accurate information as well as a strong control culture. The firm seeks to manage its operational risk through:

- Training, supervision and development of people;
- Active participation of senior management in identifying and mitigating key operational risks across the firm;
- Independent control and support functions that monitor operational risk on a daily basis and implementation of extensive policies, procedures and controls designed to prevent the occurrence of operational risk events;
- Proactive communication between revenue-producing units and the firm's independent control and support functions; and

- A network of systems throughout the firm to facilitate the collection of data used to analyse and assess operational risk exposure.

The firm combines top-down and bottom-up approaches to manage and measure operational risk. From a top-down perspective, senior management assess firmwide and business level operational risk profiles. From a bottom-up perspective, revenue-producing units and independent control and support functions are responsible for risk management on a day-to-day basis, including identifying, mitigating, and escalating operational risks to senior management.

The firm's operational risk framework has evolved based on the changing needs of its businesses and regulatory guidance. The framework comprises the following practices:

- Risk identification and reporting;
- Risk measurement; and
- Risk monitoring.

Internal Audit performs an independent review of the firm's operational risk framework, including key controls, processes and applications, on an annual basis to assess the effectiveness of the framework.

### Risk Identification and Reporting

The core of the firm's operational risk management framework is risk identification and reporting. The firm has a comprehensive data collection process, including firmwide policies and procedures, for operational risk events.

The firm has established policies that require managers in the revenue-producing units and independent control and support functions to 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 systems and/or processes to further mitigate the risk of future events.

We have established thresholds to monitor the impact of an operational risk event, including single loss events and cumulative losses over a twelve-month period, as well as escalation protocols. We also provide periodic operational risk reports, which include incidents that breach escalation thresholds, to senior management, firmwide and divisional risk committees and the Risk Committee of the GSI and GSIB Boards.



**Pillar 3 Disclosures**

In addition, the firmwide systems capture internal operational risk event data, key metrics such as transaction volumes, and statistical information such as performance trends. The firm uses an internally-developed operational risk management application to aggregate and organise this information. Managers from both revenue-producing units and independent control and support functions analyse the information to evaluate operational risk exposures and identify businesses, activities or products with heightened levels of operational risk.

**Risk Measurement**

The firm measures operational risk exposure over a twelve-month time horizon using both statistical modeling and scenario analyses through a Scenario Based Approach (SBA), which involves qualitative assessments of the frequency and extent of potential operational risk losses, for each of our businesses. Operational risk measurement incorporates qualitative and quantitative assessments of factors including:

- Internal and external operational risk event data;
- Assessments of internal controls;
- Evaluations of the complexity of business activities;
- The degree of and potential for automation in processes;
- New product information;
- The legal and regulatory environment;
- Changes in the markets for products and services, including the diversity and sophistication of customers and counterparties; and
- Liquidity of the capital markets and the reliability of the infrastructure that supports the capital markets.

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 ultimately are used in the determination of the appropriate level of operational risk capital to hold.

**Risk Monitoring**

The firm evaluates changes in the operational risk profile of businesses, including changes in business mix or jurisdictions in which the firm operates, by monitoring the factors noted above. The firm has both preventive and detective internal controls, which are designed to reduce the frequency and severity of operational risk losses and the probability of operational risk events. The firm monitors the results of assessments and independent internal audits of these internal controls.

The Scenario-Based Approach model which calculates the operational risk capital requirement is subject to review and validation by Model Risk Management. For additional information, see “Model Risk Management.”

**Capital Requirements**

The consolidated operational risk capital requirements for GSGUK are currently calculated under the Standardised Approach in accordance with CRD IV. GSI also follows this method. GSIB applies the Basic Indicator Approach in accordance with CRD IV.

**Table 22: Operational Risk Capital Requirement**

<i>\$ in millions</i>	<b>as of December 2015</b>		
	<b>GSGUK</b>	<b>GSI</b>	<b>GSIB</b>
Standardised Approach	<b>\$ 1,066</b>	<b>\$ 984</b>	-
Basic Indicator Approach	-	-	<b>\$ 19</b>

## **Model Risk Management**

### **Overview**

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

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 Risk Committee and the Firmwide Model Risk Control Committee oversee the model risk management framework. Model Risk Management, which is independent of model developers, model owners and model users, reports to the firm's Chief Risk Officer, is responsible for identifying and reporting significant risks associated with models, 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.

## **Model Review and Validation**

Model Risk Management 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, independent testing, an assessment of the appropriateness of the methodology used, and verification of compliance with model development and implementation standards. Model Risk Management reviews all existing models on an annual basis, as well as new models or significant changes to models.

The model validation process incorporates a review of models and trade and risk parameters across a broad range of scenarios (including extreme conditions) in order to critically evaluate and verify:

- The model's conceptual soundness, including the reasonableness of model assumptions, and suitability for intended use;
- The testing strategy utilised by the model developers to ensure that the models function as intended;
- The suitability of the calculation techniques incorporated in the model;
- The model's accuracy in reflecting the characteristics of the related product and its significant risks;
- The model's consistency with models for similar products; and
- The model's sensitivity to input parameters and assumptions.

For more information regarding the use of models within these areas, see "Critical Accounting Policies – Fair Value – Review of Valuation Models," "Risk Management – Liquidity Risk Management," "Risk Management – Market Risk Management," "Risk Management – Credit Risk Management" and "Risk Management – Operational Risk Management" in Part II, Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the firm's 2015 Form 10-K and "Credit Risk," "Market Risk," and "Operational Risk" in this document.

## Interest Rate Sensitivity

### Interest Rate Risk in the Trading Book

Our exposure to interest rate risk in our trading book arises mostly from inventory held to support client market-making activities. This inventory is accounted for at fair value and interest rate risk is monitored as a component of Market risk. For additional information regarding interest rate risk, 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 2015 Form 10-K.

### Interest Rate Risk in the Banking Book

Our exposure to interest rate risk in our banking book activities arises from differences in interest earned or paid as interest rates change and in repricing characteristics of our assets and liabilities. However, apart from our fixed-rate debt positions, a significant portion of both our assets and liabilities reprice frequently in relation to interest rates which limits our exposure to movements in interest rates. Consequently, our banking book activities have immaterial exposure to movements in interest rates.

For further information regarding asset-liability management, see “Risk Management – Liquidity Risk Management” in Part II, Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the firm’s 2015 Form 10-K.

## 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 firm) and collateral swaps. The remaining encumbrance is driven by derivatives trading. 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 year ended December 31, 2015. All numbers in the tables are based on UK GAAP and median values computed over the preceding 12 months. This disclosure is being made in accordance with the format required by EBA Guidelines EBA/GL/2014/03 on the disclosure of encumbered and unencumbered assets.

**Table 23: Total On-Balance-Sheet Assets**

<i>\$ in millions</i>	Carrying Amount of Encumbered Assets	Fair Value of Encumbered Assets	Carrying Amount of Unencumbered assets	Fair Value of Unencumbered Assets
Assets of the Reporting Institution <sup>1</sup>	\$ 101,020	N/a <sup>2</sup>	\$ 841,988	N/a <sup>2</sup>

**Table 24: Components of On-Balance-Sheet Assets**

<i>\$ in millions</i>	Carrying Amount of Encumbered Assets	Fair Value of Encumbered Assets	Carrying Amount of Unencumbered assets	Fair Value of Unencumbered Assets
Equity Instruments <sup>3</sup>	\$ 26,837	\$ 26,837	\$ 7,908	\$ 7,908
Debt Securities <sup>3</sup>	26,685	26,685	9,330	9,330
Other Assets	2,486 <sup>4</sup>	N/a <sup>2</sup>	630,047 <sup>5</sup>	N/a <sup>2</sup>

- The figures in Table 24 are a subset of Assets of the Reporting Institution in Table 23
- Cells are marked N/a to indicate those components which are not reportable under EBA Guidelines
- Fair value is the same as carrying value for Equity Instruments and Debt Securities
- Encumbered Other Assets includes on-balance-sheet cash that has been segregated under the FCA’s Client Assets Sourcebook (CASS)
- The majority of unencumbered Other Assets relate to derivative instruments

**Pillar 3 Disclosures**

We receive 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 25: Total Collateral Received**

<i>\$ in millions</i>	<b>Fair Value of Encumbered Collateral Received or Own Debt Securities Issued</b>	<b>Fair Value of Collateral Received or Own Debt Securities Issued Available for Encumbrance</b>
Collateral Received by the Reporting Institution <sup>1,2</sup>	<b>\$ 285,960</b>	<b>\$ 78,450</b>

**Table 26: Components of Collateral Received**

<i>\$ in millions</i>	<b>Fair Value of Encumbered Collateral Received or Own Debt Securities Issued</b>	<b>Fair Value of Collateral Received or Own Debt Securities Issued Available for Encumbrance</b>
Equity Instruments	<b>\$ 108,304</b>	<b>\$ 14,172</b>
Debt Securities	<b>175,161</b>	<b>61,729</b>
Other Collateral Received	-	-
Own Debt Securities Issued other than Own Covered Bonds or ABSs	-	-

1. The figures shown in Table 26 are a subset of Collateral Received by the Reporting Institution in Table 25
2. Collateral Received by the Reporting Institution does not include cash collateral which is included as an on-balance-sheet asset in Tables 23 and 24

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

**Table 27: Encumbered assets/collateral received and associated liabilities**

<i>\$ in millions</i>	<b>Matching Liabilities, Contingent Liabilities or Securities Lent<sup>2</sup></b>	<b>Assets, Collateral Received and Own Debt Securities Issued other than Covered Bonds and ABSs Encumbered</b>
Carrying amount of selected financial liabilities <sup>1</sup>	<b>\$ 718,787</b>	<b>\$ 170,918</b>

1. Selected financial liabilities include derivatives, securities sold under agreement to repurchase and stock loans
2. There may be a mismatch between liabilities and encumbered assets and collateral received driven by the GAAP presentation of derivatives

**Asset Encumbrance Commentary**

We view GSGUK's level of asset encumbrance as being higher than the level of asset encumbrance implied in the preceding tables due to differences in GAAP presentation of derivatives and encumbrance methodology. In this disclosure, derivative instruments are reported in accordance with UK GAAP. In addition, total assets include collateralised lending where the receivable is reported as a balance sheet asset in Tables 23 and 24 and the underlying collateral received is reported in Tables 25 and 26 resulting in double counting of these assets. Due to these differences, GSGUK's actual level of asset encumbrance is higher than the ratio of encumbered assets to total assets implied from the tables above.

A minor portion of the encumbrance takes place between Goldman Sachs International and Goldman Sachs International Bank. This activity is primarily driven by re-investment of excess liquidity and collateral financing (mainly in relation to European government bonds).

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.

## Pillar 3 Disclosures

## Leverage Ratio

CRD IV, as amended by the European Commission Delegated Act (the Delegated Act), introduced a new leverage ratio, which compares CRD IV's definition of Tier 1 capital to a measure of leverage exposure, defined as the sum of assets less Tier 1 capital deductions plus certain off-balance-sheet exposures, including a measure of derivatives exposures, securities financing transactions and commitments. The Delegated Act does not currently include a minimum leverage ratio requirement; however, the Basel Committee has proposed a minimum requirement of 3%. Any required minimum ratio is expected to become effective for GSGUK on January 1, 2018. As of December 2015, GSGUK had a leverage ratio of 4.1%. 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.

Table 28: Leverage Ratio

\$ in millions	as of December 2015		
	GSGUK	GSI	GSIB
Tier 1 Capital	\$ 28,577	\$ 24,941	\$ 2,654
Leverage Ratio Exposure	705,026	684,449	20,633
<b>Leverage Ratio</b>	<b>4.1%</b>	<b>3.6%</b>	<b>12.9%</b>

The following tables present further information on the leverage ratio. Table 29 reconciles the exposure measure to the balance sheets of GSGUK, GSI and GSIB. Table 30 breaks down the exposures from on-balance sheet assets by trading and banking book. Table 31 gives further details on the adjustments and drivers of the leverage ratio.

Table 29: Summary Reconciliation of Accounting Assets and Leverage Ratio Exposures

\$ in millions	as of December 2015		
	GSGUK	GSI	GSIB
<b>Total assets as per balance sheet</b>	<b>\$ 861,723</b>	<b>\$ 850,492</b>	<b>\$ 40,933</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>	(180,192)	(177,521)	(3,220)
Adjustments for securities financing transactions <sup>1</sup>	20,174	20,174	-
Adjustment for off-balance sheet items <sup>1</sup>	6,259	4,208	2,051
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>	-	(9,998)	(18,847)
Adjustment for exposures excluded from the leverage ratio exposure measure in accordance with Article 429 (14) of Regulation (EU) No 575/2013	-	-	-
Other adjustments	(2,938)	(2,906)	(284)
<b>Total leverage ratio exposure</b>	<b>\$ 705,026</b>	<b>\$ 684,449</b>	<b>\$ 20,633</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 31.

Table 30: On-Balance Sheet Exposures

\$ in millions	as of December 2015		
	GSGUK	GSI	GSIB
<b>Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:</b>	<b>\$ 138,573</b>	<b>\$ 128,798</b>	<b>\$ 11,576</b>
<b>Trading book exposures</b>	<b>\$ 121,479</b>	<b>\$ 114,093</b>	<b>\$ 9,638</b>
<b>Banking book exposures, of which:</b>	<b>\$ 17,094</b>	<b>\$ 14,705</b>	<b>\$ 1,938</b>
Covered bonds	-	-	-
Exposures treated as sovereigns	6,059	5,893	152
Exposures to regional governments, MDB, international organisations and PSE not treated as sovereigns	-	-	-
Institutions	3,936	3,510	993
Secured by mortgages of immovable properties	-	-	-
Retail exposures	-	-	-
Corporate	6,011	4,221	786
Exposures in default	-	-	-
Other exposures	\$ 1,088	\$ 1,081	\$ 7

## Pillar 3 Disclosures

Table 31: Leverage Ratio Common Disclosure

\$ in millions

as of December 2015

	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)	\$ 147,601	\$ 137,770	\$ 11,576
Asset amounts deducted in determining Tier 1 capital	(724)	(689)	(35)
<b>Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets)</b>	<b>\$ 146,877</b>	<b>\$ 137,080</b>	<b>\$ 11,541</b>
<b>Derivative exposures</b>			
Replacement cost associated with all derivatives transactions (ie net of eligible cash variation margin)	46,615	46,468	401
Add-on amounts for PFE associated with all derivatives transactions (mark-to-market method)	257,467	256,278	1,194
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	(17,209)	(17,192)	(278)
Exempted CCP leg of client-cleared trade exposures	(6,621)	(6,621)	-
Adjusted effective notional amount of written credit derivatives	1,080,141	1,080,141	-
Adjusted effective notional offsets and add-on deductions for written credit derivatives	(987,631)	(987,631)	-
<b>Total derivative exposures</b>	<b>\$ 372,762</b>	<b>\$ 371,443</b>	<b>\$ 1,317</b>
<b>Securities financing transaction exposures</b>			
Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	188,582	191,147	24,843
Netted amounts of cash payables and cash receivables of gross SFT assets	(27,414)	(27,391)	(23)
Counterparty credit risk exposure for SFT assets	20,174	20,174	-
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>\$ 181,342</b>	<b>\$ 183,930</b>	<b>\$ 24,820</b>
<b>Other off-balance sheet exposures</b>			
Off-balance sheet exposures at gross notional amount	46,426	41,425	5,001
Adjustments for conversion to credit equivalent amounts	(40,167)	(37,217)	(2,950)
<b>Other off-balance sheet exposures</b>	<b>\$ 6,259</b>	<b>\$ 4,208</b>	<b>\$ 2,051</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)	(2,214)	(12,212)	(19,096)
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	28,577	24,941	2,654
<b>Total leverage ratio exposures</b>	<b>\$ 705,026</b>	<b>\$ 684,449</b>	<b>\$ 20,633</b>
<b>Leverage ratio</b>			
Leverage ratio	4.1%	3.6%	12.9%
<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(11) of Regulation (EU) No 575/2013	-	-	-

## Capital Adequacy

### Overview

Capital adequacy is of critical importance to us. We have 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 level and composition of capital by considering multiple factors including current and future consolidated regulatory capital requirements, our Internal Capital Adequacy Assessment Process (ICAAP), results of stress tests, and other factors such as rating agency guidelines, subsidiary capital requirements and the business and financial market environment. We maintain a capital plan which projects sources and uses of capital given a range of business environments, and a contingency capital plan which provides a framework for analysing and responding to an actual or perceived capital shortfall.

### 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 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 and our regulatory capital ratios, supplemented with the results of stress tests. 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 the overall risk management structure, governance and policy framework of the firm. For further details please refer to the 'Risk Management' pages in this document.

## Risk Management

### Overview

Effective risk management plays a key role in the overall success of the firm and of GSGUK. Accordingly, we have comprehensive risk management processes through which we monitor, evaluate and manage the risks we assume in conducting our activities. These include market, credit, liquidity, operational, legal, regulatory and reputational risk exposures. The following section covers our philosophy in respect of risk management.

### Risk Profile and Strategy

In the normal course of activities in serving clients, we commit capital, engage in derivative 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.

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 GSGUK. GSGUKL's principal subsidiaries, 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 GSI and GSIB Boards of Directors both have their own Board Risk Committees, with the responsibility of assisting each Board in overseeing the implementation of the companies' risk appetite and strategy. Each committee held two scheduled meetings in 2015.

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 our risk profile. Risk appetite statements are reviewed in the first instance by the respective company's Risk Committee, followed by the Board Risk Committees and finally, are 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.

Our 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.

### Structure

The oversight of risk is ultimately the responsibility of the Boards of Directors, who oversee risk both directly and through delegation to various committees. These committees (including their subcommittees), meet regularly and consist of senior members of both our revenue-producing units and departments that are independent of our revenue-producing units. Below is a summary of the key committees responsible for monitoring risk exposures and for general oversight of our risk management process.

**European Management Committee (EMC).** The EMC oversees all activities in the region. Its membership includes executive Directors of GSI and GSIB and senior managers from the revenue-producing divisions and control and support functions. The EMC reports to the GSI and GSIB Boards of Directors.

**EMEA Audit, Business Standards & Compliance Committee (EABSCC).** The EABSCC assists the Directors and senior management in the oversight of business standards, compliance, operational and reputational risks and in the review of processes for ensuring the suitability and effectiveness of the systems and controls in the region. Its membership includes senior managers from the revenue-producing divisions and independent control and support functions. The EABSCC also has responsibility for overseeing the external audit arrangements and review of internal audit activities. The EABSCC reports to the EMC and to the GSI and GSIB Boards of Directors.

In 2016, the EABSCC has been succeeded by the EMEA Conduct Risk Committee, which will focus on the oversight of business standards and conduct risk, and newly constituted Audit Committees for the GSI and GSIB Boards of Directors.



**Pillar 3 Disclosures****GSI and GSIB Risk Committees (GSI and GSIB RCs).**

The GSI and GSIB RCs are responsible for the ongoing monitoring and control of all key risks associated with the activities of each entity.

Their duties and responsibilities include:

- Ensuring each entity implements its risk management strategy, including but not limited to, taking steps reasonably designed to ensure adherence to risk tolerance levels and establishing appropriate risk limit frameworks;
- Reviewing key financial and risk metrics including but not limited to profit & loss, capital (including ICAAP), funding, liquidity, credit risk, market risk, operational risk, price verification and stress tests;
- Reviewing and approving each entity's liquidity levels and related policies, and monitoring relevant metrics to ensure these policies and strategies are implemented as specified;
- Fulfilling the overall risk governance requirements for each entity; and
- Consideration of reputational risks, although this is not exclusively the mandate of the Risk Committees.

**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 defending the capital target expressed in the risk appetite statements. Risk may be monitored against firmwide, product, divisional or business level thresholds or against a combination of such attributes. These risks are tracked, monitored and reported to the relevant 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 and operational risk.

In addition to these committees and governance bodies, functions that are independent of the revenue-producing units, such as compliance, finance, legal, internal audit and operations perform risk management functions, which include monitoring, analysing and evaluating risk.

**GSGUK Risk Management**

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 arrangements in place are adequate with regard to our profile and strategy.

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 2015 Form 10-K.

**Pillar 3 Disclosures****Governance Arrangements**

Directors of GSI and GSIB 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 25% of the members of the Boards of Directors of the regulated entities in our UK group are women.

As at December 31, 2015, 26% of the members of the Boards of Directors of the regulated entities in our UK group were women, the Board of GSIB comprised 25% female directors and the Board of GSI did not have any female directors.

Below we set out information on the members of the Boards of Directors of GSI and GSIB as at December 31, 2015, together with the number of directorships they held at that date. 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 Senior Management Arrangements, Systems and Controls (SYSC) handbook under requirement 4.3A.7.

**Table 32: GSI Board of Directors<sup>1</sup>**

<b>Name</b>	<b>Role</b>	<b>Background</b>	<b>Director -ships</b>
C. A. G. Dahlbäck	Non-executive director and chairman	Claes joined the Board of Directors of The Goldman Sachs Group, Inc. in 2003 and was appointed director of GSI in 2012. He is also a senior advisor at Investor AB, where he has worked for more than 30 years. Claes is a member of the Wallenberg Foundation's Investment Committee, a member of the Royal Swedish Academy of Engineering Sciences and Royal Swedish Society of Naval Sciences. Claes retired from the Goldman Sachs Group Inc. Board of Directors in May 2015, but continues to serve on the Board of GSI and has been acting Chairman since 1 July 2015.	<b>3</b>
M. S. Sherwood	Executive director and co-chief executive officer	Michael is vice chairman of The Goldman Sachs Group, Inc. as well as co-chief executive officer of GSI. He also has responsibility for coordinating the firm's business and activities around the growth markets. Michael is a member of the firm's Management Committee, co-chairman of the European Management Committee and chairman of the firm's Growth Markets Executive Committee. Michael joined Goldman Sachs in 1986.	<b>2</b>
R. J. Gnodde	Executive director and co-chief executive officer	Richard is co-chief executive officer of GSI and co-head of the firm's Investment Banking Division. He has been a member of the firm's Management Committee since 2003. Richard also serves on the Firmwide Client and Business Standards Committee and co-chairs the European Management Committee. He served on the firm's Partnership Committee from 1999 to 2004. Richard joined Goldman Sachs in 1987.	<b>1</b>
Lord Anthony Grabiner	Non-executive director	Lord Grabiner joined the Board of Directors of GSI in June 2015. He is a leading barrister, having worked for more than 40 years on high-profile commercial litigation. He sits as a deputy High Court Judge and is head of Chambers at One Essex Court in the Temple. Lord Grabiner also serves as non-executive director of The University of Law Limited.	<b>3</b>
Lord Griffiths of Fforestfach	Non-executive director	Lord Griffiths joined the firm in 1990 and is an International Advisor to the firm concerned with strategic issues relating to the UK and Asian operations, business development activities worldwide, and private equity. He also is chairman of the EMEA Audit, Business Standards & Compliance Committee. Prior to 1990, Lord Griffiths was a director of the Bank of England from 1983 until 1985 and served at Number 10 Downing Street as Head of the Prime Minister's Policy Unit from 1985 until 1990.	<b>2</b>
R. A. Vince <sup>2</sup>	Non-executive director	Robin served as chief operating officer and head of the support functions for the firm's businesses in EMEA from 2011 until August 2015 and as the chief executive officer of GSIB until June 2015, when it was announced that Robin would become global treasurer of Goldman Sachs Group. He serves as co-chair of the Firmwide New Activity Committee and as a member of the Firmwide Risk Committee, Firmwide Finance Committee, Firmwide Client and Business Standards Committee and the European Management Committee. Robin joined Goldman Sachs in 1994.	<b>3</b>

1. Susan Kilsby was appointed as a non-executive director in May 2016 and Mark Winkelman was appointed as a non-executive director in June 2016. Isabelle Ealet was appointed as an executive director in June 2016.

2. Robin Vince resigned as a director of GSI in May 2016.

**Pillar 3 Disclosures****Table 33: GSIB Board of Directors**

<b>Name</b>	<b>Role</b>	<b>Background</b>	<b>Director -ships</b>
E. G. Corrigan <sup>1</sup>	Non-executive director and chairman	E. Gerald (“Jerry”) Corrigan is the Chairman of GSIB and also the Chairman of New York based Goldman Sachs Bank USA. Jerry joined Goldman Sachs in early 1994, shortly after he had retired from his 25 year tenure at the Federal Reserve which included positions as President of the Federal Bank of Minneapolis, President as the Federal Reserve Bank of New York and Special Interest Assistant to the Chairman of the Federal Reserve. Since joining Goldman Sachs, Jerry has been engaged in a wide range of activities including extended tenures as a member of the Firmwide Risk Committee, the Firmwide Commitments Committee, the Firmwide Client and Business Standards Committee and the 2010/11 Business Standards Committee.	<b>1</b>
D. W. McDonogh	Executive director and chief executive officer	Dermot is CEO of GSIB and the firm’s international controller and the EMEA Chief Financial Officer. He serves on the Firmwide New Activity Committee, Firmwide Risk Committee, the firm’s Structured Products Committee and the EMEA Audit, Business Standards & Compliance Committee. Additionally, Dermot chairs the Regional New Activity Committee for EMEA and co-chairs the GSI and GSIB Risk Committees and the EMEA Operational Risk Committee. Dermot joined Goldman Sachs in 1994.	<b>1</b>
E. H. Leouzon	Executive director	Eugène is the firm’s global chief underwriting officer and leads the firm’s Debt Underwriting Group. Eugène is co-chair of the Asia Pacific Capital Committee and serves on the Firmwide Capital Committee, Firmwide Commitments Committee, Firmwide Suitability Committee, Firmwide Risk Committee, Asia Pacific Commitments Committee and the EMEA Audit, Business Standards & Compliance Committee. Prior to joining Goldman Sachs in 1999, he was a vice president in the Global Syndicated Finance group at Chase Investment Bank in New York and London for nine years. Prior to that, he worked at Hambros Bank and Continental Bank.	<b>1</b>
Lord Griffiths of Forestfach	Non-executive director	Please see entry in Table 32.	<b>2</b>
Therese Miller	Non-executive director	Therese (“Terry”) Miller was General Counsel for the London Organising Committee of the Olympic Games and Paralympic Games (“LOCOG”) from 2006 to 2013. Before joining LOCOG in October 2006, Terry spent seventeen years at Goldman Sachs, where she was a partner and served as International General Counsel of GSI. She was appointed an Officer of the Order of the British Empire in the New Year’s Honours List, for her services to the London 2012 Games. Terry served as a director of the organising committee for the 2014 Invictus Games, and is now a trustee of the Invictus Games Foundation. She is also a non-executive director of Galliford Try plc and the British Olympic Association.	<b>2</b>
D. G. J. Paterson	Non-executive director	Douglas has been a non-executive director of GSIB since 2002. He has held a number of other non-executive directorships including with Close Brothers Group plc. Prior to 2002, Douglas was a partner at PricewaterhouseCoopers LLP in the Banking and Capital Markets division. He is currently a director of Butterfield Bank (UK) Limited.	<b>3</b>
E. E. Stecher <sup>1</sup>	Non-executive director	Esta chairs the Management Committee of Goldman Sachs Bank USA and is the Bank’s CEO. She is a member of the firm’s Management Committee and co-chairs the firm’s Compensation Policy Committee. Esta also serves on the Firmwide Client and Business Standards Committee and the Steering Committee on Regulatory Reform as well as the Firmwide Reputational Risk Committee. Esta joined Goldman Sachs in 1994, prior to which she was a partner at Sullivan & Cromwell.	<b>1</b>
D. D. Wildermuth	Non-executive director	David is the firm’s chief Credit Risk Officer and global head of Credit Risk Management & Advisory. He is chairman of the firm’s Credit Policy Committee and serves on the Firmwide Risk Committee, the Firmwide Reputational Risk Committee, the Firmwide Capital Committee and the firm’s Model Risk Control Committee. David is co-chairman of the firm’s Structured Products Committee and of the Goldman Sachs Bank USA Capital Committee.	<b>1</b>
Lord Anthony Grabiner	Non-executive director	Please see entry in Table 32.	<b>3</b>

1. E. Gerald Corrigan retired from Goldman Sachs in June 2016.

2. Esta Stecher has been appointed to succeed Jerry Corrigan as the new chair of both Goldman Sachs Bank USA and GSIB subject to regulatory approval. Esta stood down as CEO of Goldman Sachs Bank USA in June 2016.

## **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 our 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 our 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 2015 Form 10-K.

## Glossary

- **Advanced Internal Ratings-Based (AIRB).** The AIRB approach of CRD IV 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. This comprises a modeled measure which is calculated at a 99.9% confidence level over a one-year time horizon plus a surcharge 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 a single company 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 under 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 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 inventory 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 under CRD IV rules 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, as well as certain other financial assets and financial liabilities, due to changes in market conditions.
- **Operational Risk.** The risk of loss resulting from inadequate or failed internal processes, people and 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.
- **Ratings Based Approach.** Under the ratings based method, the risk weighted exposure amount of a rated securitisation position or resecuritisation position are calculated by applying to the exposure value the risk weight associated with the credit quality step as prescribed in CRD IV multiplied by 1.06.
- **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 loss results to the Regulatory VaR measure calculated as of the prior business day.
- **Resecuritisation Position.** Represents an on or off-balance sheet transaction in which the risk associated with an underlying pool of exposures is tranching and at least one of the underlying exposures is a securitisation position.
- **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 inventory positions 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 inventory positions, as well as certain other financial assets and financial liabilities, 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).

## UK Remuneration Disclosures

The following disclosures are made by Goldman Sachs Group UK Limited in accordance with Article 450 of the EU Capital Requirements Regulation No. 575/2013 (CRR) in respect of Goldman Sachs International and Goldman Sachs International Bank and in accordance with the Prudential Sourcebooks of the Financial Conduct Authority in respect of Goldman Sachs Asset Management International and Montague Place Custody Services (together, the “UK Companies”<sup>1</sup>).

### 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 The Goldman Sachs Group, Inc. (GS Group), as posted on the Goldman Sachs public website:

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

The firm’s Compensation Principles were approved by shareholders at the 2010 annual shareholders’ meeting. 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; and
- (v) Align aggregate remuneration for the firm with performance over the cycle.

## Remuneration Governance

### *The Compensation Committee*

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

- Review and approval of (or recommendation to the Board to approve) the firm’s variable remuneration structure, including the portion to be paid as equity-based awards, all year-end equity-based grants for eligible employees (including those employed by the UK Companies), and the terms and conditions of such awards.
- Assisting the 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.

The Compensation Committee held 8 meetings in 2015 to discuss and make determinations regarding remuneration.

The members of the Compensation Committee at the end of 2015 were James A. Johnson (Chair), M. Michele Burns, William W. George, Lakshmi N. Mittal, Debora L. Spar and Adebayo O. Ogunlesi (ex-officio). None of the members of the Compensation Committee were 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 firm’s Director Independence Policy.

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

**Pillar 3 Disclosures*****Role of the Relevant Stakeholders***

In carrying out the responsibilities of the Compensation Committee, individual members of the Compensation Committee met multiple times with senior management during the year. In addition, the Chair of the Compensation Committee met frequently with the firm's Chief Financial Officer (CFO) and other members of senior management.

The firm's Chief Risk Officer (CRO) presented an annual compensation-related risk assessment to the Compensation Committee, meeting jointly with the Risk Committee of the Board, to assist the Compensation Committee in its assessment of the effectiveness of the firm's remuneration programme in addressing risk, and particularly, whether the programme is consistent with regulatory guidance that financial services firms ensure variable remuneration does not encourage employees to expose the firm to imprudent risk.

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 divisions and regions, which occurs prior to the Compensation Committee's review and approval. The process involves divisional compensation managers, divisional compensation committees, division heads, HCM, the firmwide Management Committee (the firm's most senior executives), senior management (e.g., the firm's Chief Executive Officer (CEO), the Chief Operating Officer (COO), the CFO and the Head of HCM) and/or the Compensation Committee, 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 divisional management to take into consideration any compliance, risk or control matters when determining remuneration of individuals. Before any remuneration decisions are finalised, Employee Relations and the Employment Law Group assess the recommended remuneration for these individuals in the context of overall performance and other factors, and recommendations are reviewed with respect to comparators.

***External Consultants***

The Compensation Committee has for several years recognised the importance of using an independent remuneration consultant that is appropriately qualified and that provides services solely to the Compensation Committee and not to the firm. The Compensation Committee continued to retain Semler Brossy Consulting Group LLC (Semler Brossy) as its independent remuneration consultant in 2015. Consistent with past practice, the Compensation Committee asked Semler Brossy to assess the remuneration programme for Participating Managing Directors (PMDs), the firm's approximately 450 most senior employees as at December 31, 2015.

In connection with its work for the Compensation Committee, Semler Brossy reviewed the information provided to the Compensation Committee by the CFO, HCM, and the firm's remuneration consultants. In its assessment of the 2015 remuneration programme for PMDs, Semler Brossy confirmed that, consistent with prior years, the programme has been aligned with, and is sensitive to, firm performance, contains features that reinforce significant alignment with shareholders and a long-term focus, and utilises policies and procedures, including subjective determinations that facilitate the firm's approach to risk-taking and risk management by supporting the mitigation of known and perceived risks.

Semler Brossy also reviewed and participated in the CRO's annual compensation-related risk assessment that was presented to the Compensation Committee, meeting jointly with the Risk Committee of the Board, in December 2015.



**Pillar 3 Disclosures****Link Between Pay and Performance**

In 2015, annual remuneration for employees generally 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. 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, division 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 entirely to avoid misaligning remuneration and performance, and guaranteed remuneration in employment contracts should be used only in exceptional circumstances (for example, for certain new hires).

**Performance Measurement**

In connection with making remuneration decisions for 2015, the Compensation Committee reviewed with the CFO certain firmwide financial metrics and year-on-year changes, including the following:

- Return on average common shareholders' equity (ROE);
- Diluted earnings per common share;
- Book value per share (BVPS);
- Net earnings;
- Net revenues;
- Remuneration and benefits expense;
- Ratio of remuneration and benefits to net revenues; and
- Non-remuneration expense

No specific goals for these metrics were used, nor were any specific weights ascribed to them, in making remuneration determinations.

Additionally, each revenue-producing division, in coordination with the CRO, identified the quantitative and/or qualitative metrics (none of which are given specific weight in determining remuneration) specific to the division, its business units and, where applicable, desks to be used to evaluate the performance of the division and its employees. Metrics included, but were not limited to:

- For the *Investment Bank*: Pre-tax income, return on attributed equity, lost business, revenue and backlog, client team and activity, relationship lending history, principalling, key transactions, as well as franchise accretion.
- For the *Investment Manager*: Revenues, pre-tax profit, pre-tax margin, assets under supervision and net sales (including gross contributions and redemptions), as well as business-specific measures such as client metrics for distribution channels and investment performance and risk measures for the portfolio management business units.

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 for 2015. The performance evaluations for 2015 included assessments of risk management and firm reputation, culture, judgement and compliance with firm policies, as well as teamwork, citizenship and communication.

**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 into account in setting the amount and form of variable remuneration for employees. 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 and compliance risks. Guidelines are provided to assist compensation managers when applying discretion during the remuneration process to promote consistent 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.

**Pillar 3 Disclosures**

For 2015, all employees with total remuneration above a particular threshold were subject to deferral of part of their variable remuneration in the form of an equity-based award. As in prior years, all 2015 equity-based awards were 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 2015 annual compensation-related risk assessment presented to the Compensation Committee, meeting jointly with the Risk Committee of the Board, the CRO presented his view that the various components of the firm’s remuneration programmes and policies (for example, process, structure and governance) worked together to balance 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.
- (iv) *Governance*: the oversight of the Board, management structure and the associated processes all contribute to a strong control environment and control functions have input into remuneration structure and design

**Structure of Remuneration**

The shareholders of Goldman Sachs Group UK Limited have resolved that, with effect from performance years beginning on or after 1 January 2014, the variable component of remuneration paid to Code Staff of Goldman Sachs International and Goldman Sachs International Bank shall not exceed 200% of the fixed component.

***Fixed Remuneration***

In fiscal year 2010, the firm introduced a global salary approach to ensure greater consistency in salary levels and to achieve an appropriate balance between fixed and variable remuneration.

For certain employees, identified as Code Staff in accordance with Commission Delegated Regulation (Regulation 604/2015) 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 Article 94(2) of Directive 2013/36/EU, additional fixed remuneration is awarded in the form of an allowance generally paid in cash except for certain employees whose awards included an equity-based element. Recipients and the value of allowances are determined as a result of an evaluation of the professional experience and level of organisational responsibility of employees, as well as the nature of their role and the terms on which they are employed.

***Variable Remuneration***

For employees with total remuneration and variable remuneration above specific thresholds, variable remuneration is generally paid in a combination of cash and equity-based remuneration. In general, the portion paid in the form of an equity-based award increases as variable remuneration increases and, for Code Staff, is set to ensure compliance with Principles 12(f) and 12(g) 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).

***Equity 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 equity-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 behavior and the financial performance of the firm.

## Pillar 3 Disclosures

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 policies, coupled with the practice of paying senior employees a significant portion of variable remuneration in the form of equity-based awards, leads to a considerable investment in shares of GS Group over time.

In addition, from time to time, the firm may make awards consisting of unfunded, unsecured promises to deliver other instruments on terms and conditions that are substantially similar to those applicable to Restricted Stock Units (RSUs) described below.

- **Deferral Policy:** The deferred portion of fiscal year 2015 annual variable remuneration was generally awarded in the form of RSUs. An RSU is an unfunded, unsecured promise to deliver a share on a predetermined date. RSUs awarded in respect of fiscal year 2015 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.
- **Transfer Restrictions:** The firm generally requires all individuals to hold, until the expiration of a period of up to five years from grant, a material portion of the shares they receive in respect of RSUs granted as part of their annual 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 Code Staff in relation to their variable remuneration are subject to retention in accordance with Principle 12(f) of the Remuneration Code. In addition, for 2015, the firm required the CEO of GS Group, for so long as he holds such position, to retain sole beneficial ownership (including, in certain cases, ownership through his spouse or estate planning entities established by them) of a number of shares equal to at least 75% of certain shares received (net of payment of any option exercise price and taxes) as remuneration since becoming a senior executive. The firm required the CFO, COO and Vice Chairmen to retain a number of shares equal to at least 50% of certain shares received. The firm imposes a similar retention requirement, equal to 25%, on other PMDs. These shares are referred to as "retention shares".
- **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 determines that during 2015 the employee participated (which could include, depending on the circumstances, participation in a supervisory role) 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 determines 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 improper risk analysis upon the occurrence of certain pre-determined events (for example, in the event of annual firmwide, divisional, business unit or individual losses). The review of whether forfeiture or recapture is appropriate includes input

**Pillar 3 Disclosures**

from the CRO, as well as representatives from Finance, Legal and Compliance. 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 Code Staff in relation to variable remuneration are generally subject to forfeiture until delivery of the underlying shares if GS Group is determined by US bank regulators to be “in default” or “in danger of default” as defined under the US Dodd-Frank Wall Street Reform and Consumer Protection Act 2010, or fails to maintain for 90 consecutive business days, the required “minimum tier 1 capital ratio” (as defined under Federal Reserve Board regulations). RSUs awarded in relation to variable remuneration are also subject to forfeiture if the firm or the relevant business unit suffers a material downturn in financial performance.

All variable remuneration granted to Code Staff 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 7 year period after grant (equity-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 Code Staff accountable in whole or in part for “serious misconduct” related to compliance, control or risk that occurred during 2015 by an individual for whom the Code Staff had supervisory responsibility as a result of direct or indirect reporting lines or management responsibility for an office, division or business.

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.

The Sarbanes Oxley (SOX) clawback provisions apply to all variable compensation (whether cash- or equity-based) paid to any senior executives. The SOX provisions provide the following: If GS Group is required to prepare an accounting restatement due to material noncompliance, as a result of misconduct, with any financial reporting requirement under the securities laws described in Section 304 of the Sarbanes-Oxley Act of 2002, the grantee will be required to forfeit or repay awards received during the 12-months after the initial incorrect filing.

- **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 and shares that are subject to transfer restrictions and, in the case of PMDs, retention shares. In addition, executive officers of GS Group 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”. In addition, a change in control alone is not sufficient to trigger acceleration of any 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.

***Long-Term Performance Incentive Plan (LTIP)***

In January 2015, the Compensation Committee approved a limited number of awards under the LTIP to certain executive officers of GS Group, which allows the Compensation Committee to award remuneration based on specific performance metrics. The LTIP is intended to incentivise long-term performance in a manner that does not encourage imprudent risk-taking. Awards are not considered part of annual remuneration.

Both the performance metrics and thresholds of awards made under this plan are meant to provide an appropriate focus on long-term shareholder returns over a multi-year period.

**Pillar 3 Disclosures****Quantitative Disclosures**

The following tables show aggregate quantitative remuneration information for 512 employees, categorised as Code Staff 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.

Code Staff 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 by business area**

The amounts below include fixed and variable remuneration paid or awarded for the financial year ended December 31, 2015:

	Investment Bank <sup>1</sup>	Investment Manager	Control Function	Total
Non-equity remuneration (\$ in millions)	528.1	62.3	63.4	653.8
Restricted Stock Units (number of RSUs in 000s)	2,294	438	236	2,968

1. Reflects Code Staff in the Investment Banking Division, Merchant Banking Division, Securities Division and Global Investment Research Division

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

Remuneration paid or awarded for the financial year ended December 31, 2015 comprised fixed remuneration (salaries, allowances and director fees) and variable remuneration. The figures in the table below are split into “Senior Management” and “Other Code Staff” 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 Goldman Sachs International Bank, the head of each revenue-producing division in the EMEA region and heads of significant business lines in the EMEA region who perform a significant management function corresponding to PRA controlled function CF29.
- **Other Code Staff:** other employees whose activities have a material impact on the risk profile of the firm.

As required by Article 450(2) of CRR, the quantitative information referred to in Article 450(1)(h) of CRR has also been provided at the level of the management body of Goldman Sachs International. Amounts disclosed in this respect are also included in the amounts for senior management.

Form of Remuneration	Senior Management	Other Code Staff	Total	Management Body <sup>1</sup>
<i>Fixed, of which:</i>				
Non-equity remuneration (\$ in millions)	181.1	380.9	562	20.9
Restricted Stock Units (number of RSUs in 000s)	55	32	87	36
<i>Variable, of which:</i>				
Non-equity remuneration (\$ in millions)	28	63.7	91.7	7.3
Restricted Stock Units (number of RSUs in 000s)	1,107	1,774	2,881	139

1. Reflects internal and independent members of the Board of Directors of Goldman Sachs International

**Deferred Remuneration**

The table below includes remuneration subject to the deferral requirements in Principle 12 of the Remuneration Code. The amounts relate only to those employees who were Code Staff at the end of the fiscal year, December 31, 2015.

Restricted Stock Units (number of RSUs in 000s)	Senior Management	Other Code Staff	Total	Management Body
Outstanding unvested as at 1 January 2015 <sup>1</sup>	1,630	1,306	2,936	199
Awarded during 2015 <sup>1</sup>	1,062	1,454	2,516	155
Paid out during 2015	(806)	(496)	(1,302)	(115)
Reduced through performance adjustments during 2015	-	-	-	-
Outstanding unvested as at 31 December 2015 <sup>1</sup>	1,886	2,264	4,150	239

<sup>1</sup> Amounts disclosed above do not include awards made under the Long-Term Performance Incentive Plan described on page 43 because the forward-looking period for calculating the metrics against which any payouts are assessed is ongoing.

**Pillar 3 Disclosures****Sign-on and Severance Payments**

Three sign-on payments were awarded to Code Staff during 2015. Six Code Staff were awarded severance payments during 2015.

	Senior Management	Other Code Staff	Total	Highest Individual Award
Severance payment - Cash awards (\$ in millions)	-	1.7	1.7	0.5
Sign-on award – Restricted Stock Units (number of RSUs in 000s)	-	12	12	5

No sign-on or severance payments were awarded to members of the Management body.

**Code Staff with Total Compensation above One Million Euros**

The following table shows the number of Code Staff with total compensation above EUR 1 million arranged by remuneration band for the financial year ended December 31, 2015.

Total Compensation Band (EUR <sup>1</sup> )	Number of Individuals
≥ 1,000,000 to < 1,500,000	103
≥ 1,500,000 to < 2,000,000	62
≥ 2,000,000 to < 2,500,000	27
≥ 2,500,000 to < 3,000,000	21
≥ 3,000,000 to < 3,500,000	13
≥ 3,500,000 to < 4,000,000	10
≥ 4,000,000 to < 4,500,000	9
≥ 4,500,000 to < 5,000,000	3
≥ 5,000,000 to < 6,000,000	8
≥ 6,000,000 to < 7,000,000	12
≥ 7,000,000 to < 8,000,000	3
≥ 8,000,000 to < 9,000,000	4
≥ 9,000,000	11
<b>Total</b>	<b>286</b>

1. The compensation of our most senior employees is denominated in USD and was converted to EUR for the purpose of these disclosures. The following exchange rates were used: FY2015 disclosure: 1 USD = 0.8980 EUR; FY2014 disclosure: 1 USD = 0.7462 EUR