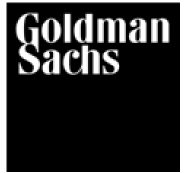

Annual Report
December 31, 2016

Goldman Sachs International (unlimited company)

Company Number: 02263951

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Introduction

Goldman Sachs International (GSI or the company) provides a wide range of financial services to clients located worldwide. The company also operates a number of branches across Europe, the Middle East and Africa (EMEA) to provide financial services to clients in those regions.

The company's primary regulators are the Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA).

The company's ultimate parent undertaking and controlling entity is The Goldman Sachs Group, Inc. (Group Inc.). Group Inc. is a bank holding company and a financial holding company regulated by the Board of Governors of the Federal Reserve System (Federal Reserve Board). Group Inc., together with its consolidated subsidiaries, form "GS Group" or "the group". GS Group 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. GS Group has a presence in EMEA through a number of subsidiaries, including GSI.

GSI seeks to be the advisor of choice for its clients and a leading participant in global financial markets. As part of GS Group, GSI also enters into transactions with affiliates in the normal course of business as part of its market-making activities and general operations. GSI, consistent with GS Group, reports its activities in four business segments: Investment Banking; Institutional Client Services; Investing & Lending; and Investment Management.

References to "the financial statements" are to the directors' report and audited financial statements as presented in Part II of this annual report. All references to 2016 and 2015 refer to the years ended, or the dates, as the context requires, December 31, 2016 and December 31, 2015, respectively.

Unless otherwise stated, all amounts in this annual report are prepared in accordance with United Kingdom Generally Accepted Accounting Practices (U.K. GAAP).

Certain disclosures required by U.K. GAAP in relation to the company's financial risk management and capital management have been presented alongside other risk management and regulatory information in the strategic report. Such disclosures are identified as audited. All other information in the strategic report is unaudited.

Executive Overview

Profit and Loss Account

The profit and loss account is set out on page 53 of this annual report. The company's profit for the financial year was $1.46 billion for 2016, a decrease of 37% compared with 2015.

Net revenues were $6.55 billion for 2016, 7% lower than 2015, primarily due to lower net revenues in Institutional Client Services. In addition, net revenues in Investment Management were significantly lower and net revenues in Investment Banking were lower. These results reflected the impact of a challenging operating environment during the first quarter of 2016, although the environment improved thereafter. These decreases were partially offset by significantly higher net revenues in Investing & Lending.

Administrative expenses were $4.27 billion for 2016, 5% higher than 2015, primarily reflecting an increase in the mark-to-market impact of share-based compensation. Excluding the mark-to-market impact of share-based compensation for both years, administrative expenses were $3.78 billion for 2016, 7% lower than 2015.

See "Results of Operations" below for information about the company's net revenues, segment reporting and administrative expenses.

Capital Ratios

The company maintained strong capital ratios. As of December 2016, the company's Common Equity Tier 1 ratio was 12.9% (under CRD IV as defined in "Equity Capital Management and Regulatory Capital — Regulatory Capital").

Liquidity

The company maintained strong liquidity. As of December 2016, the company's global core liquid assets were $59.51 billion. See "Risk Management — Liquidity Risk Management" for further information about the company's global core liquid assets.

Balance Sheet

The balance sheet is set out on page 54 of this annual report. In the subsequent paragraphs, total assets are the sum of "Fixed assets", "Current assets" and the company's "Pension surplus". Total liabilities are the sum of "Creditors: amounts falling due within one year" and "Creditors: amounts falling due after more than one year".

As of December 2016, total assets were $934.32 billion, an increase of $83.83 billion from December 2015, reflecting increases in financial instruments owned of $46.89 billion, collateralised agreements of $20.90 billion, debtors of $9.21 billion and cash at bank and in hand of $6.91 billion. Financial instruments owned increased primarily due to the impact of movements in interest rates on the fair value of derivative instruments. Collateralised agreements increased primarily due to changes in client activity. Debtors increased primarily due to an increase in cash collateral posted to counterparties. Cash at bank and in hand increased primarily due to an increase in cash deposits held as global core liquid assets.

As of December 2016, total liabilities were $906.79 billion, an increase of $82.65 billion from December 2015, reflecting increases in financial instruments sold, but not yet purchased of $58.26 billion and collateralised financings of $23.99 billion. Financial instruments sold, but not yet purchased increased primarily due to the impact of movements in interest rates on the fair value of derivative instruments. Collateralised financings increased primarily due to changes in client activity.

U.S. GAAP Results

The company also prepares results under United States Generally Accepted Accounting Principles (U.S. GAAP), which are included in the consolidated financial statements of GS Group.

The company's profit under U.S. GAAP differs from that under U.K. GAAP primarily due to timing differences in the recognition of certain revenues and expenses. Under U.S. GAAP, the company's profit for the financial year for 2016 was not significantly different from that reported under U.K. GAAP.

The company's total assets and total liabilities under U.S. GAAP differ from those reported under U.K. GAAP primarily due to the company presenting derivative balances gross under U.K. GAAP if they are not net settled in the normal course of business, even where it has a legally enforceable right to offset those balances. Under U.S. GAAP, as of December 2016, total assets were $360.64 billion, an increase of $22.79 billion from December 2015. This increase primarily reflected an increase in collateralised agreements due to changes in client activity. Total liabilities were $332.98 billion, an increase of $21.57 billion from December 2015. This increase primarily reflected an increase in collateralised financings due to changes in client activity.

Future Outlook

The directors consider that the year-end financial position of the company was satisfactory. No significant change in the company's principal business activities is currently expected.

Business Environment

Global

During 2016, real gross domestic product (GDP) growth appeared to slow in advanced economies and appeared mixed in emerging market economies compared with 2015. In advanced economies, growth was lower in the U.S., the Euro area, the U.K. and Japan. In emerging markets, growth slowed in China, while growth remained stable in India and appeared to contract less in Brazil and Russia than in 2015. Monetary policy divergence continued in 2016, as the U.S. Federal Reserve increased its target interest rate again, while monetary policy remained accommodative in Europe and Japan. In June, a referendum was passed for the U.K. to exit the European Union (Brexit), and in November, the U.S. held its presidential election. The market reaction to the outcomes of both events was generally more positive than expectations. The price of crude oil (WTI) increased by 45% in 2016 and, in the fourth quarter, OPEC members announced an agreement to reduce oil production. In investment banking, industry-wide mergers and acquisitions activity remained strong for 2016, but declined compared with the level of activity in 2015. Industry-wide volumes in equity underwriting declined compared with a strong 2015, while industry-wide debt underwriting volumes increased compared with the prior year.

Europe

In the Euro area, real GDP increased by 1.7% in 2016, compared with an increase of 1.9% in 2015. Growth in consumer spending declined, while growth in fixed investment and government consumption increased. Measures of inflation remained subdued, prompting the European Central Bank (ECB) to announce multiple easing measures in the first quarter, cutting the deposit rate by 10 basis points to (0.40)% and lowering the main refinancing operations rate by 5 basis points to 0.00%, as well as launching a new series of targeted longer-term refinancing operations, increasing the volume of monthly purchases of bonds, and adding investment grade, non-financial corporate bonds to the list of bonds purchased under its asset purchase programme. In December, the ECB announced an extension of its asset purchase programme through at least the end of 2017, although the pace of purchases will be lower. The Euro depreciated by 3% against the U.S. dollar. In the U.K., real GDP increased by 1.8% in 2016, compared with an increase of 2.2% in 2015. Following the passage of the U.K. referendum, the Bank of England announced a monetary easing package comprised of a 25 basis points cut to the official bank rate, £70 billion of asset purchases, and a Term Funding Scheme. The British pound depreciated by 16% against the U.S. dollar during 2016, reaching its lowest level against the U.S. dollar in over 30 years. Yields on 10-year government bonds in the region generally decreased during the year. In equity markets, the FTSE 100 Index, DAX Index, CAC 40 Index and Euro Stoxx 50 Index increased by 14%, 7%, 5% and 1%, respectively, during 2016.

Critical Accounting Policy

Fair Value

Fair Value Hierarchy. Financial instruments owned and Financial instruments sold, but not yet purchased (i.e., inventory), as well as certain other financial assets and financial liabilities, are reflected in the balance sheet at fair value (i.e., marked-to-market), with related gains or losses recognised in the profit and loss account. The use of fair value to measure financial instruments is fundamental to the company's risk management practices and is the company's most critical accounting policy.

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. Certain financial assets and financial liabilities are measured as a portfolio (i.e., based on its net exposure to market and/or credit risks). In determining fair value, the hierarchy under U.K. GAAP gives (i) the highest priority to unadjusted quoted prices in active markets for identical, unrestricted assets or liabilities (level 1 inputs), (ii) the next priority to inputs other than level 1 inputs that are observable, either directly or indirectly (level 2 inputs), and (iii) the lowest priority to inputs that cannot be observed in market activity (level 3 inputs). In evaluating the significance of a valuation input, the company considers, among other factors, a portfolio's net risk exposure to that input. Assets and liabilities are classified in their entirety based on the lowest level of input that is significant to their fair value measurement.

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

Instruments categorised within level 3 of the fair value hierarchy are those which require one or more significant inputs that are not observable. Total level 3 financial assets were $5.15 billion and $6.04 billion as of December 2016 and December 2015, respectively. See Note 24 to the financial statements for further information about level 3 financial assets, including changes in level 3 financial assets and related fair value measurement. Absent evidence to the contrary, instruments classified within level 3 of the fair value hierarchy are initially valued at transaction price, which is considered to be the best initial estimate of fair value. Subsequent to the transaction date, other methodologies are used to determine fair value, which vary based on the type of instrument. Estimating the fair value of level 3 financial instruments requires judgements to be made.

These judgements include:

- Determining the appropriate valuation methodology and/or model for each type of level 3 financial instrument;
- Determining model inputs based on an evaluation of all relevant empirical market data, including prices evidenced by market transactions, interest rates, credit spreads, volatilities and correlations; and
- Determining appropriate valuation adjustments, including those related to illiquidity or counterparty credit quality.

Regardless of the methodology, valuation inputs and assumptions are only changed when corroborated by substantive evidence.

Controls Over Valuation of Financial Instruments. Market makers and investment professionals in the company's revenue-producing units are responsible for pricing the company's financial instruments. The company's control infrastructure is independent of the revenue-producing units and is fundamental to ensuring that all of the company's financial instruments are appropriately valued at market-clearing levels. In the event that there is a difference of opinion in situations where estimating the fair value of financial instruments requires judgement (e.g., calibration to market comparables or trade comparison, as described below), the final valuation decision is made by senior managers in control and support functions. This independent price verification is critical to ensuring that the company's financial instruments are properly valued.

Price Verification. All financial instruments at fair value in levels 1, 2 and 3 of the fair value hierarchy are subject to the company's independent price verification process. The objective of price verification is to have an informed and independent opinion with regard to the valuation of financial instruments under review. Instruments that have one or more significant inputs which cannot be corroborated by external market data are classified within level 3 of the fair value hierarchy. Price verification strategies utilised by independent control and support functions include:

- **Trade Comparison.** Analysis of trade data (both internal and external where available) is used to determine the most relevant pricing inputs and valuations.
- **External Price Comparison.** Valuations and prices are compared to pricing data obtained from third parties (e.g., brokers or dealers, Markit, Bloomberg). Data obtained from various sources is compared to ensure consistency and validity. When broker or dealer quotations or third-party pricing vendors are used for valuation or price verification, greater priority is generally given to executable quotations.

- **Calibration to Market Comparables.** Market-based transactions are used to corroborate the valuation of positions with similar characteristics, risks and components.
- **Relative Value Analyses.** Market-based transactions are analysed to determine the similarity, measured in terms of risk, liquidity and return, of one instrument relative to another or, for a given instrument, of one maturity relative to another.
- **Collateral Analyses.** Margin calls on derivatives are analysed to determine implied values which are used to corroborate valuations.
- **Execution of Trades.** Where appropriate, trading desks are instructed to execute trades in order to provide evidence of market-clearing levels.
- **Backtesting.** Valuations are corroborated by comparison to values realised upon sales.

See Note 24 to the financial statements for further information about fair value measurement.

Review of Net Revenues. Independent control and support functions ensure adherence to the company's pricing policy through a combination of daily procedures, including the explanation and attribution of net revenues based on the underlying factors. Through this process the company independently validates net revenues, identifies and resolves potential fair value or trade booking issues on a timely basis and seeks to ensure that risks are being properly categorised and quantified.

Review of Valuation Models. GS Group's independent model risk management group (Model Risk Management), consisting of quantitative professionals who are separate from model developers, performs an independent model review and validation process of GS Group's valuation models. New or changed models are reviewed and approved prior to being put into use. Models are evaluated and re-approved annually to assess the impact of any changes in the product or market and any market developments in pricing theories. See "Risk Management — Model Risk Management" for further information about the review and validation of valuation models.

Results of Operations

The composition of the company's net revenues has varied over time as financial markets and the scope of its operations have changed. The composition of net revenues can also vary over the shorter term due to fluctuations in economic and market conditions. See "Principal Risks and Uncertainties" for further information about the impact of economic and market conditions on the company's results of operations. In addition to transactions entered into with third parties, the company also enters into transactions with affiliates in the normal course of business as part of its market-making activities and general operations.

Net Revenues

Net revenues include the net profit arising from transactions, with both third parties and affiliates, in securities, foreign exchange and other financial instruments, and fees and commissions. This is inclusive of associated interest and dividends. See "Segment Reporting" below for further details.

Segment Reporting

The table below presents the net revenues of the company's segments.

	Year Ended December	
$ in millions	**2016**	2015
Investment Banking		
Financial Advisory	**$ 563**	$ 590
Underwriting	**575**	689
Total Investment Banking	**$1,138**	$1,279
Institutional Client Services		
Fixed Income, Currency and Commodities Client Execution	**$2,523**	$2,549
Equities	**2,066**	2,353
Total Institutional Client Services	**$4,589**	$4,902
Investing & Lending	**$ 500**	$ 360
Investment Management	**$ 322**	$ 475
Total net revenues	**$6,549**	$7,016

Investment Banking

Investment Banking is comprised of:

Financial Advisory. Includes strategic advisory engagements with respect to mergers and acquisitions, divestitures, corporate defence activities, restructurings, spin-offs, risk management and derivative transactions directly related to these client advisory engagements.

Underwriting. Includes equity and debt underwriting of public offerings and private placements, including local and cross-border transactions and acquisition financing, of a wide range of securities and other financial instruments, including loans, and derivative transactions directly related to these client underwriting activities.

Operating Environment. In mergers and acquisitions, European industry-wide completed activity remained strong for 2016 and increased for the industry compared with the level of activity during 2015. Industry-wide announced activity in Europe continued to be robust for most of the year, but declined for the industry compared with the level of activity during 2015. In underwriting, European industry-wide equity underwriting volumes decreased significantly compared with 2015, due to challenging equity markets and macroeconomic concerns. This compares with strong activity levels in 2015, which benefited from favourable equity market conditions during the first half of the year. Industry-wide debt underwriting volumes during 2016 increased in Europe compared with 2015.

During 2015, Investment Banking operated in an environment characterised by strong European industry-wide mergers and acquisitions activity. Industry-wide activity in both debt and equity underwriting in Europe declined compared with 2014.

2016 versus 2015. Net revenues in Investment Banking were $1.14 billion for 2016, 11% lower than 2015.

Net revenues in Financial Advisory were $563 million, 5% lower than 2015, reflecting a decrease in client advisory activity. Net revenues in Underwriting were $575 million, 17% lower than 2015, due to significantly lower net revenues in equity underwriting, reflecting a decline in European secondary offerings. Net revenues in debt underwriting were higher, reflecting significantly higher net revenues from asset-backed activity partially offset by significantly lower net revenues from other structured finance and leveraged finance activity.

As of December 2016, the company's investment banking transaction backlog was lower compared with a strong level of backlog at the end of 2015, primarily due to significantly lower estimated net revenues from potential advisory transactions, reflecting a decrease in mergers and acquisitions activity. These declines were partially offset by higher estimated net revenues from both potential debt underwriting transactions and equity underwriting transactions.

The company's investment banking transaction backlog represents an estimate of future net revenues from investment banking transactions where the company believes that future revenue realisation is more likely than not. The company believes changes in its investment banking transaction backlog may be a useful indicator of client activity levels which, over the long term, impact net revenues. However, the time frame for completion and corresponding revenue recognition of transactions in the backlog varies based on the nature of the engagement, as certain transactions may remain in the backlog for longer periods of time and others may enter and leave within the same reporting period. In addition, the company's transaction backlog is subject to certain limitations, such as assumptions about the likelihood that individual client transactions will occur in the future. Transactions may be cancelled or modified, and transactions not included in the estimate may also occur.

Institutional Client Services

Institutional Client Services generates revenues in the following ways:

- In large, highly liquid markets, the company executes a high volume of transactions for clients;
- In less liquid markets, the company executes transactions for clients for spreads and fees that are generally somewhat larger than those charged in more liquid markets;
- The company also structures and executes transactions involving customised or tailor-made products that address clients' risk exposures, investment objectives or other complex needs; and
- The company provides financing to its clients for their securities trading activities, as well as securities lending and other prime brokerage services.

Institutional Client Services is comprised of:

- **Fixed Income, Currency and Commodities Client Execution.** Includes client execution activities related to making markets in both cash and derivative instruments for interest rate products, credit products, mortgages, currencies and commodities.
  - **Interest Rate Products.** Government bonds (including inflation-linked securities) across maturities, other government-backed securities, securities sold under agreements to repurchase (repurchase agreements), and interest rate swaps, options and other derivatives.
  - **Credit Products.** Investment-grade corporate securities, high-yield securities, credit derivatives, exchange-traded funds, bank and bridge loans, municipal securities, emerging market and distressed debt, and trade claims.
  - **Mortgages.** Commercial mortgage-related securities, loans and derivatives, residential mortgage-related securities, loans and derivatives, and other asset-backed securities, loans and derivatives.
  - **Currencies.** Currency options, spot/forwards and other derivatives on G-10 currencies and emerging-market products.
  - **Commodities.** Commodity derivatives and, to a lesser extent, physical commodities, involving crude oil and petroleum products, natural gas, base, precious and other metals, electricity, coal, agricultural and other commodity products.
- **Equities.** Includes client execution activities related to making markets in equity products and commissions and fees from executing and clearing institutional client transactions on major stock, options and futures exchanges worldwide, as well as over-the-counter (OTC) transactions. Equities also includes the securities services business, which provides financing, securities lending and other prime brokerage services to institutional clients, including hedge funds, mutual funds, pension funds and foundations, and generates revenues primarily in the form of interest rate spreads or fees.

As a market maker, the company facilitates transactions in both liquid and less liquid markets, primarily for institutional clients, such as corporations, financial institutions, investment funds and governments, to assist clients in meeting their investment objectives and in managing their risks. In this role, the company seeks to earn the difference between the price at which a market participant is willing to sell an instrument to the company and the price at which another market participant is willing to buy it from the company, and vice versa (i.e., bid/offer spread). In addition, the company maintains inventory, typically for a short period of time, in response to, or in anticipation of, client demand. The company also holds inventory to actively manage its risk exposures that arise from these market-making activities. The company's market-making inventory is recorded in financial instruments owned (long positions) or financial instruments sold, but not yet purchased (short positions) on its balance sheet.

The company's results are influenced by a combination of interconnected drivers, including (i) client activity levels and transactional bid/offer spreads (collectively, client activity), and (ii) changes in the fair value of its inventory, and interest income and interest expense related to the holding, hedging and funding of its inventory (collectively, market-making inventory changes). Due to the integrated nature of the company's market-making activities, disaggregation of net revenues into client activity and market-making inventory changes is judgemental and has inherent complexities and limitations.

The amount and composition of the company's net revenues vary over time as these drivers are impacted by multiple interrelated factors affecting economic and market conditions, including volatility and liquidity in the market, changes in interest rates, currency exchange rates, credit spreads, equity prices and commodity prices, investor confidence, and other macroeconomic concerns and uncertainties.

In general, assuming all other market-making conditions remain constant, increases in client activity levels or bid/offer spreads tend to result in increases in net revenues, and decreases tend to have the opposite effect. However, changes in market-making conditions can materially impact client activity levels and bid/offer spreads, as well as the fair value of the company's inventory. For example, a decrease in liquidity in the market could have the impact of (i) increasing the company's bid/offer spread, (ii) decreasing investor confidence and thereby decreasing client activity levels, and (iii) wider credit spreads on the company's inventory positions.

Operating Environment. Challenging trends in the operating environment for Institutional Client Services that existed throughout the second half of 2015 continued during the first quarter of 2016, including concerns and uncertainties about global economic growth and central bank activity. These concerns contributed to significant price pressure across both equity and fixed income markets. Volatility peaked in February with the VIX reaching over 28, and global equity markets materially declined during the first half of the first quarter with the Euro Stoxx 50 Index and FTSE 100 Index down 18% and 11%, respectively, at their lowest points. Credit spreads for European high-yield issuers widened over 170 basis points early in the first quarter, driven by the energy sector, and oil and European natural gas prices continued their downward trend that began during the middle of 2015, reaching as low as $26 per barrel (WTI) and €11.75 per MWh, respectively. Concerns about global economic growth moderated at the beginning of the second quarter, however the market became increasingly focused on the political uncertainty and economic implications surrounding the potential exit of the U.K. from the European Union (E.U.). In response to the "leave vote", the FTSE 100 Index declined 6% in two days and volumes generally spiked, both of which largely reversed shortly thereafter. In addition, the Euro Stoxx 50 Index was down 12% during the first half of 2016. This challenging environment, including low interest rates, impacted client sentiment and risk appetite, and market-making conditions remained difficult.

During the second half of 2016, the operating environment improved, as European equity markets steadily increased, with the FTSE 100 Index up 10% and the Euro Stoxx 50 Index up 15% during the period. Average volatility in equity markets was lower during the second half of 2016 compared with the beginning of the year. In credit and commodity markets, European investment grade and high-yield credit spreads tightened by 12 basis points and 81 basis points, respectively, during the second half of 2016, and oil and European natural gas prices increased to approximately $54 per barrel (WTI) and €18.50 per MWh, respectively. These trends drove improved client sentiment and market-making conditions during the second half of 2016. See "Business Environment" above for further information about economic and market conditions in the global operating environment during the year.

During 2015, the operating environment for Institutional Client Services was positively impacted by diverging central bank monetary policies in the U.S. and the Euro area in the first quarter, as increased volatility levels contributed to strong client activity levels in currencies, interest rate products and equity products, and market-making conditions improved. However, during the remainder of 2015, concerns about global growth and uncertainty about the U.S. Federal Reserve's interest rate policy, along with lower global equity prices, widening high-yield credit spreads and declining commodity prices, contributed to lower levels of client activity, particularly in mortgages and credit, and more difficult market-making conditions.

2016 versus 2015. Net revenues in Institutional Client Services were $4.59 billion for 2016, 6% lower than 2015.

Net revenues in Fixed Income, Currency and Commodities Client Execution were $2.52 billion for 2016, essentially unchanged compared with 2015.

The following provides details of the company's Fixed Income, Currency and Commodities Client Execution net revenues by business, compared with 2015 results:

- Net revenues in interest rate products were significantly higher, reflecting higher client activity levels.
- Net revenues in commodities and mortgages were significantly higher, reflecting improved market-making conditions during the second quarter of 2016.
- Net revenues in currencies were significantly lower, reflecting less favourable market-making conditions in emerging markets products compared with 2015, which included a strong first quarter of 2015.
- Net revenues in credit products were significantly lower, reflecting the difficult market-making conditions particularly during the first quarter of 2016.

Net revenues in Equities were $2.07 billion for 2016, 12% lower than 2015, due to significantly lower net revenues in equities client execution across both cash products and derivatives.

Investing & Lending

Investing & Lending includes direct investments made by the company, which are typically longer-term in nature, and net revenues associated with providing investing services to other GS Group entities.

2016 versus 2015. Net revenues in Investing & Lending were $500 million for 2016, 39% higher than 2015, primarily due to generally more favourable market movements compared with 2015.

Investment Management

Investment Management provides investment management and wealth advisory services, including portfolio management and financial counselling, and brokerage and other transaction services to high-net-worth individuals and families. Investment Management also includes net revenues associated with providing investing services to funds managed by GS Group.

2016 versus 2015. Net revenues in Investment Management were $322 million for 2016, 32% lower than 2015, reflecting lower management and other fees, primarily due to a decrease in net revenues from providing investing services to funds managed by GS Group.

Geographic Data

See Note 4 to the financial statements for a summary of the company's net revenues by geographic region.

Administrative Expenses

Administrative expenses are primarily influenced by compensation (including the impact of the Group Inc. share price on share-based compensation), headcount and levels of business activity. Direct costs of employment include salaries, allowances, discretionary compensation, amortisation and mark-to-market of share-based compensation and other items such as benefits. Discretionary compensation is significantly impacted by, among other factors, the level of net revenues, overall financial performance, prevailing labour markets, business mix, the structure of share-based compensation programmes and the external environment.

The table below presents the company's administrative expenses and total staff (which includes employees, consultants and temporary staff).

	Year Ended December	
$ in millions	**2016**	2015
Direct costs of employment	**$2,974**	$2,834
Brokerage, clearing, exchange and distribution fees	**568**	550
Market development	**61**	95
Communications and technology	**85**	88
Depreciation and amortisation	**7**	4
Occupancy	**161**	173
Professional fees	**110**	147
Other expenses	**303**	186
Total non-compensation expenses	**1,295**	1,243
Total administrative expenses	**$4,269**	$4,077
Total staff at period-end	**5,903**	6,458

In the table above, direct costs of employment includes a charge of $488 million for 2016 and a charge of $6 million for 2015, relating to the mark-to-market of share based compensation.

2016 versus 2015. Administrative expenses were $4.27 billion for 2016, 5% higher than 2015. Direct costs of employment were $2.97 billion for 2016, 5% higher than 2015. Excluding the mark-to-market impact of share-based compensation for both years, direct costs of employment were $2.49 billion for 2016, 12% lower than 2015, reflecting a decrease in net revenues. Total staff decreased 9% during 2016.

Non-compensation expenses were $1.30 billion for 2016, 4% higher than 2015.

Interest Payable and Similar Charges

Interest payable and similar charges comprises interest on long-term subordinated loans from parent and group undertakings.

2016 versus 2015. Interest payable and similar charges was $346 million for 2016, 21% higher than 2015, reflecting an increase in the average long-term subordinated loans balance and an increase in average interest rates.

Tax on Profit on Ordinary Activities

The effective tax rate for 2016 was 25.1%, which compares to the U.K. corporate tax rate applicable to the company of 28.0% for 2016. The effective tax rate represents the company's tax on profit on ordinary activities divided by its profit on ordinary activities before taxation. The U.K. corporate tax rate applicable to the company increased from 20.25% for the full year of 2015 mainly due to the introduction of an 8 percentage point surcharge on banking profits.

In September 2016, a budget was enacted that will reduce the U.K. corporate tax rate by 1 percentage point effective April 1, 2020. The company remeasured its deferred tax asset accordingly but this change did not have a material impact on its effective tax rate for the year ended December 2016.

Balance Sheet and Funding Sources

Balance Sheet Management

One of the company's risk management disciplines is its ability to manage the size and composition of its balance sheet. GSI leverages the firmwide balance sheet management process performed at the GS Group level to manage these factors. While the asset base of Group Inc. and its subsidiaries changes due to client activity, market fluctuations and business opportunities, the size and composition of the company's balance sheet also reflects factors including (i) the overall risk tolerance of GS Group, (ii) the amount of equity capital held by GS Group and (iii) the funding profile of GS Group, among other factors. See "Equity Capital Management and Regulatory Capital — Equity Capital Management" for information about the company's equity capital management process.

In order to ensure appropriate risk management, GSI seeks to maintain a sufficiently liquid balance sheet and leverages GS Group's processes to dynamically manage its assets and liabilities which include (i) balance sheet planning, (ii) business-specific limits, (iii) monitoring of key metrics and (iv) scenario analyses.

Balance Sheet Planning. GS Group prepares a balance sheet plan that combines projected total assets and composition of assets with expected funding sources over a one-year time horizon. This plan is reviewed semi-annually and may be adjusted in response to changing business needs or market conditions. The objectives of this planning process are:

- To develop balance sheet projections, taking into account the general state of the financial markets and expected business activity levels, as well as regulatory requirements;
- To allow business risk managers and managers from independent control and support functions to objectively evaluate balance sheet limit requests from business managers in the context of overall balance sheet constraints, including GS Group's liability profile and equity capital levels, and key metrics; and
- To inform the target amount, tenor and type of funding to raise, based on projected assets and contractual maturities.

To prepare GS Group's balance sheet plan, business risk managers and managers from its independent control and support functions meet with business managers to review current and prior period information and discuss expectations for the following year. The specific information reviewed includes asset and liability size and composition, limit utilisation, risk and performance measures, and capital usage.

The consolidated balance sheet plan, including balance sheets by business, funding projections, and projected key metrics, is reviewed and approved by GS Group's Firmwide Finance Committee, a sub-committee of GS Group's Firmwide Risk Committee. See "Risk Management — Overview and Structure of Risk Management" for an overview of GS Group's and the company's risk management structure.

Business-Specific Limits. GS Group's Firmwide Finance Committee sets asset and liability limits for each business. These limits are set at levels which are close to actual operating levels, rather than at levels which reflect GS Group's maximum risk appetite, in order to ensure prompt escalation and discussion among business managers and managers in independent control and support functions on a routine basis. GS Group's Firmwide Finance Committee reviews and approves balance sheet limits on a semi-annual basis and may also approve changes in limits on a more frequent basis in response to changing business needs or market conditions. In addition, GS Group's Risk Governance Committee sets aged inventory limits for certain financial instruments as a disincentive to hold inventory over longer periods of time. Requests for changes in limits are evaluated after giving consideration to their impact on key GS Group metrics. Compliance with limits is monitored on a daily basis by business risk managers, as well as managers in independent control and support functions.

Monitoring of Key Metrics. Key balance sheet metrics are monitored daily both by business and on a GS Group basis, including asset and liability size and composition, limit utilisation and risk measures. Assets are allocated to businesses and movements resulting from new business activity as well as market fluctuations are reviewed and analysed.

Scenario Analyses. GS Group conducts scenario analyses for Group Inc. and its subsidiaries to determine how it would manage the size and composition of the balance sheet. These scenarios cover short-term and long-term time horizons using various macroeconomic and GS Group-specific assumptions, based on a range of economic scenarios. These analyses are used to assist in developing longer-term balance sheet management strategy, including the level and composition of assets, funding and equity capital. Additionally, these analyses help in the development of approaches for maintaining appropriate funding, liquidity and capital across a variety of situations, including a severely stressed environment.

Liquidity and Cash

The company maintains liquidity to meet a broad range of potential cash outflows and collateral needs in a stressed environment, referred to as Global Core Liquid Assets (GCLA). See "Risk Management — Liquidity Risk Management — Liquidity Risk Management Principles — Global Core Liquid Assets" for details about the composition and sizing of the company's GCLA.

Funding Sources

The company's primary sources of funding are secured financings, intercompany unsecured borrowings and external unsecured borrowings. GSI raises this funding through a number of different products, including:

- Collateralised financings, which are repurchase agreements and securities loaned;
- Intercompany unsecured loans from Group Inc. and other affiliates; and
- Debt securities issued to both external counterparties and affiliates, which includes securitised derivative products (including notes, certificates and warrants) and vanilla debt, as well as transfers of assets accounted for as financings rather than sales.

GSI generally distributes funding products through its own sales force and third-party distributors to a large, diverse creditor base in a variety of global markets. The company believes that its relationships with external creditors are critical to its liquidity. These creditors include banks, securities lenders, pension funds, insurance companies, mutual funds and individuals. GSI has imposed various internal guidelines to monitor creditor concentration across its external funding programmes.

Secured Funding. The company funds a significant amount of inventory on a secured basis, with external counterparties as well as with affiliates, including repurchase agreements, securities loaned and other secured financings. The company may also pledge its inventory as collateral for securities borrowed under a securities lending agreement or as collateral for derivative transactions. The company also uses its own inventory to cover transactions in which the company or its clients have sold securities that have not yet been purchased. Secured funding is less sensitive to changes in Group Inc. and/or GSI's credit quality than unsecured funding, due to the posting of collateral to lenders. Nonetheless, GSI continually analyses the refinancing risk of its secured funding activities, taking into account trade tenors, maturity profiles, counterparty concentrations, collateral eligibility and counterparty rollover probabilities. GSI seeks to mitigate its refinancing risk by executing term trades with staggered maturities, diversifying counterparties, raising excess secured funding, and pre-funding residual risk through the GCLA.

GSI seeks to raise secured funding with a term appropriate for the liquidity of the assets that are being financed, and seeks longer maturities for secured funding collateralised by asset classes that may be harder to fund on a secured basis, especially during times of market stress, such as: mortgage and other asset-backed loans and securities; non-investment-grade corporate debt securities; equities and convertible debentures; and emerging market securities. GSI's external secured funding, excluding funding collateralised by liquid government obligations, is primarily executed for tenors of one month or greater.

A majority of the company's secured funding for securities not eligible for inclusion in the GCLA is executed through term repurchase agreements and securities loaned contracts. The company also raises financing through debt securities.

The table below presents GSI's secured funding included in "Collateralised financings" and "Other creditors" on the balance sheet.

	As of December	
$ in millions	**2016**	2015
Repurchase agreements	**$ 84,581**	$ 38,578
Securities loaned	**53,060**	77,807
Debt securities issued	**2,747**	2,350
Short-term secured funding	**140,388**	118,735
Repurchase agreements	**5,734**	3,502
Securities loaned	**499**	–
Debt securities issued	**1,567**	1,908
Long-term secured funding	**7,800**	5,410
Total secured funding	**$148,188**	$124,145

In the table above:

- Short-term repurchase agreements and securities loaned as of December 2016 increased by $21.26 billion compared with December 2015, primarily due to changes in client activity. In addition, the company terminated $33.25 billion of intercompany securities loaned transactions and re-established them as repurchase agreements in order to achieve greater operational efficiency.
- Secured funding with external counterparties was $48.81 billion and $39.84 billion as of December 2016 and December 2015, respectively. Secured funding with affiliates was $99.38 billion and $84.31 billion as of December 2016 and December 2015, respectively.

The weighted average maturity of the company's external secured funding, included in "Collateralised financings" and "Other creditors" on the balance sheet, excluding funding that can only be collateralised by highly liquid securities eligible for inclusion in the GCLA, exceeded 120 days as of December 2016.

Intercompany Unsecured Borrowings. GSI sources funding through intercompany unsecured borrowings from Group Inc. and other affiliates. The majority of GS Group's unsecured funding is raised by Group Inc., which lends the necessary funds to its subsidiaries, including GSI, to meet asset financing, liquidity and capital requirements. The benefits of this approach to subsidiary funding are enhanced control and greater flexibility to meet the funding requirements of GSI and other subsidiaries. Intercompany unsecured borrowings also include debt securities issued.

The table below presents GSI's intercompany unsecured borrowings included in "Other creditors" on the balance sheet.

	As of December	
$ in millions	**2016**	2015
Amounts due to parent and group undertakings – unsecured borrowings	**$18,922**	$27,195
Debt securities issued	**2,080**	1,778
Short-term intercompany unsecured borrowings	**21,002**	28,973
Long-term subordinated loans	**8,958**	8,958
Amounts due to parent and group undertakings – unsecured borrowings	**16,882**	14,316
Debt securities issued	**886**	671
Long-term intercompany unsecured borrowings	**26,726**	23,945
Total intercompany unsecured borrowings	**$47,728**	$52,918

External Unsecured Borrowings. External unsecured borrowings include debt securities issued and bank loans and overdrafts.

The table below presents GSI's external unsecured borrowings included in "Other creditors" on the balance sheet.

	As of December	
$ in millions	**2016**	2015
Bank loans	**$ 164**	$ 63
Overdrafts	**7**	4
Debt securities issued	**7,992**	9,722
Short-term external unsecured borrowings	**8,163**	9,789
Bank loans	**–**	100
Debt securities issued	**8,704**	5,317
Long-term external unsecured borrowings	**8,704**	5,417
Total external unsecured borrowings	**$16,867**	$15,206

Total Shareholder's Funds

GSI held $27.53 billion and $26.35 billion of total shareholder's funds as of December 2016 and December 2015, respectively. See "Equity Capital Management and Regulatory Capital — Regulatory Capital" for further information about GSI's capital.

Equity Capital Management and Regulatory Capital

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

Equity Capital Management (Audited)

The company determines the appropriate level and composition of its equity capital by considering multiple factors including the company's current and future regulatory capital requirements, the results of the company's capital planning and stress testing process and other factors such as rating agency guidelines, the business environment and conditions in the financial markets.

The company's capital planning and stress testing process incorporates internally designed stress tests and those required under the PRA's Internal Capital Adequacy Assessment Process (ICAAP). It is also designed to identify and measure material risks associated with business activities, including market risk, credit risk, operational risk and other risks. The company's goal is to hold sufficient capital to ensure that it remains adequately capitalised after experiencing a severe stress event. The company's assessment of capital adequacy is viewed in tandem with its assessment of liquidity adequacy and is integrated into its overall risk management structure, governance and policy framework.

In addition, as part of the company's comprehensive capital management policy, a contingency capital plan is maintained that provides a framework for analysing and responding to a perceived or actual capital deficiency, including, but not limited to, identification of drivers of a capital deficiency, as well as mitigants and potential actions. It outlines the appropriate communication procedures to follow during a crisis period, including internal dissemination of information as well as timely communication with external stakeholders.

Regulatory Capital (Audited)

The company is subject to the revised capital framework for E.U.-regulated financial institutions (the fourth E.U. Capital Requirements Directive and E.U. Capital Requirements Regulation, collectively known as "CRD IV"). These capital regulations are largely based on the Basel Committee on Banking Supervision's (Basel Committee) final capital framework for strengthening international capital standards (Basel III). The Basel Committee is the primary global standard setter for prudential bank regulation, and its member jurisdictions implement regulations based on its standards and guidelines.

The risk-based capital requirements are expressed as capital ratios that compare measures of regulatory capital to risk-weighted assets (RWAs). The Common Equity Tier 1 (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.

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

- A capital conservation buffer, consisting entirely of capital that qualifies as CET1, began to phase in on January 1, 2016, and will continue to do so 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 company'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 CET1 ratio and has an immaterial impact on the capital of the company. The countercyclical capital buffer applicable to the company could change in the future and, as a result, the company's 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 company's 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 firm should hold.

The table below presents the company's minimum required ratios.

	December 2016 Minimum Ratio	December 2015 Minimum Ratio
CET1 ratio	6.5%	6.1%
Tier 1 capital ratio	8.5%	8.2%
Total capital ratio	11.1%	10.9%

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 shown above. As the capital conservation buffer phases in, as described above, it will fully or partially replace the PRA buffer.

During 2016 and 2015, GSI was in compliance with the capital requirements set by the PRA.

Regulatory Capital Ratios

The table below presents GSI's capital ratios under CRD IV.

	As of December	
	2016	2015
CET1 ratio	**12.9%**	12.9%
Total capital ratio	**17.2%**	17.6%

As of December 2016 and December 2015, GSI did not have any financial instruments which qualified as additional Tier 1 capital and the Tier 1 capital ratio was identical to the CET1 ratio disclosed above.

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 the company's regulators.

Capital Resources (Audited)

The table below presents GSI's capital components under CRD IV.

	As of December	
$ in millions	**2016**	2015
Called up share capital	**$ 582**	$ 582
Share premium account including capital reserves	**4,881**	4,881
Retained earnings	**22,070**	20,890
Total shareholder's funds	**27,533**	26,353
Deductions	**(1,080)**	(1,412)
Common Equity Tier 1 and Tier 1 capital	**$26,453**	$24,941
Tier 2 and Total capital		
Long-term subordinated loans	**$ 8,958**	$ 8,958
Deductions	**(48)**	–
Tier 2 capital	**8,910**	8,958
Total capital	**$35,363**	$33,899

Risk-Weighted Assets

The table below presents the components of RWAs within GSI's regulatory capital ratios under CRD IV.

	As of December	
$ in millions	**2016**	2015
RWAs		
Credit RWAs	**$114,420**	$104,695
Market RWAs	**77,367**	75,795
Operational RWAs	**13,305**	12,303
Total	**$205,092**	$192,793

Credit Risk. Credit RWAs are calculated based upon measures of exposure, which are then risk weighted. The exposure amount is generally based on the following:

- For on-balance-sheet assets, the carrying value; and
- For off-balance-sheet exposures, including commitments and guarantees, a credit equivalent exposure amount is calculated based on the notional amount of each exposure multiplied by a credit conversion factor.

Counterparty credit risk is a component of total credit risk, and includes credit exposure arising from derivatives, securities financing transactions and margin loans.

GSI has been approved by the PRA to use the Internal Models Methodology for the measurement of exposure on derivatives, securities financing transactions and margin loans. For substantially all of the counterparty credit risk arising from these products, internal models are used to calculate the exposure at default (EAD), which is an estimate of the amount that would be owed to the company at the time of a default. The EAD takes into account the impact of netting and collateral; however, it does not include the effect of any economic hedges.

All exposures are then assigned a risk weight. GSI has been approved by 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.

RWAs are calculated by multiplying EAD by the counterparty's risk weight. Under the AIRB approach, a counterparty's risk weight is a function of its probability of default (PD), loss given default (LGD) and the effective 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 — PD is derived from the use of internally determined equivalents of external credit assessment ratings; and
- LGD is an estimate of the economic loss rate if a default occurs during economic downturn conditions — LGD is determined based on industry data.

Wrong-way risk arises from positive expected correlation between EAD and PD to the same counterparty and the company seeks to avoid or appropriately mitigate this risk through collateral or other mitigants. Stress testing is utilised to identify any wrong-way risk in existing portfolios and risk mitigants and adjustments to capital may be employed to reflect any existing wrong-way risk.

The table below presents information on the components of the credit RWAs.

	As of December	
$ in millions	**2016**	2015
Credit RWAs		
Derivatives	**$ 95,836**	$ 88,282
Commitments, guarantees and loans	**956**	1,338
Securities financing transactions	**6,310**	4,735
Equity investments	**1,653**	1,515
Other	**9,665**	8,825
Total	**$114,420**	$104,695

Concentration Risk. Under CRD IV, institutions are required to monitor and control their large exposures. The large exposure framework is designed to limit the risk of over-reliance on an individual counterparty or a group of connected counterparties. There is a general limit applied to all of the institution's exposures to a single counterparty or groups of connected counterparties, which is set at 25% of eligible capital. The framework includes reporting requirements, hard limits and additional concentration capital charges for trading book large exposures. As of December 2016 and December 2015, the company had no concentration risk capital requirements.

Market Risk. Trading book positions are subject to market risk capital requirements which are based either on predetermined levels set by regulators or on internal models. The market risk regulatory capital rules require that a firm obtains the prior written approval of its regulators before using any internal model to calculate its risk-based capital requirement.

RWAs for market risk are computed based on measures of exposures which include the following internal models: Value-at-Risk (VaR); Stressed VaR (SVaR); Incremental Risk; and the Comprehensive Risk Measure (for PRA purposes this is the All Price Risk Measure and is subject to a floor). In addition, Standardised Rules, in accordance with 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.

- 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. For both risk management purposes and regulatory capital calculations the company uses a single VaR model which captures risks including those related to interest rates, equity prices, currency rates and commodity prices. 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.
- SVaR is the potential loss in value of inventory positions during a period of significant market stress.
- 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.
- All Price Risk is the potential loss in value, due to price risk and defaults, within the company's credit correlation trading positions.

The table below presents information on the components of the market RWAs.

	As of December	
$ in millions	**2016**	2015
Market RWAs		
VaR-based capital requirements	**$15,783**	$16,287
Stressed VaR	**15,891**	13,259
Incremental Risk	**10,642**	8,119
All Price Risk Measure	**2,223**	2,725
Standardised Rules	**22,939**	20,747
Securitisation	**9,889**	14,658
Total	**$77,367**	$75,795

Operational Risk. GSI's capital requirements for operational risk are currently calculated under the Standardised approach. The Standardised approach requires companies to divide their activities into eight defined business lines or categories. Each business line is assigned a beta factor which is applied to the three-year average revenues of that business line (with certain prescribed exceptions, such as extraordinary income). Expenses are not included in the calculation. The sum of the individual business line requirements is multiplied by 12.5 to derive the operational RWAs.

Leverage Ratio

The company is required to monitor and disclose its leverage ratio using CRD IV's definition of exposure as amended by the European Commission Leverage Ratio Delegated Act. This leverage ratio compares CRD IV's definition of Tier 1 capital to a measure of leverage exposure, defined as the sum of assets plus certain off-balance-sheet exposures (which include a measure of derivatives exposures, securities financing transactions and commitments), less Tier 1 capital deductions. Any required minimum ratio is expected to become effective for GSI no earlier than January 1, 2018.

The table below presents GSI's leverage ratio under CRD IV.

	As of December	
$ in millions	**2016**	2015
Tier 1 capital	**$ 26,453**	$ 24,941
Leverage exposure	**697,402**	684,449
Leverage ratio	**3.8%**	3.6%

This leverage ratio is based on the company's current interpretation and understanding of this rule and may evolve as the interpretation and application of this rule is discussed with GSI's regulators.

Regulatory Developments

GSI's businesses are subject to significant and evolving regulation. Reforms have been adopted or are being considered by regulators and policy makers worldwide. The expectation is that the principal areas of impact from regulatory reform for GSI will be increased regulatory capital requirements and increased regulation and restriction on certain activities. However, given that many of the new and proposed rules are highly complex, the full impact of regulatory reform will not be known until the rules are implemented and market practices develop under the final E.U. and/or U.K. regulations.

There is considerable uncertainty as to the regulatory regime that will be applicable in the U.K. post-Brexit and the regulatory framework that will govern transactions and business undertaken by the company in the remaining E.U. countries.

In addition, recent political developments, including the new presidential administration in the U.S., have added additional uncertainty to the implementation, scope and timing of regulatory reforms, including potential deregulation in some areas.

Capital Ratios

The Basel Committee has published final guidelines for calculating incremental capital ratio requirements for banking institutions that are systemically significant from a domestic but not global perspective (D-SIBs). If these guidelines are implemented by national regulators, they will apply to, among others, certain subsidiaries of global systemically important banks (G-SIBs). GS Group has been designated as a G-SIB. These guidelines are in addition to the framework for G-SIBs, but are more principles-based. CRD IV provides that institutions that are systemically important at the E.U. or member state level, known as other systemically important institutions (O-SIIs), may be subject to additional capital ratio requirements of up to 2% of CET1, according to their degree of systemic importance (O-SII buffers). O-SIIs are identified annually, along with their applicable buffers. During 2016, the PRA identified Goldman Sachs Group UK Limited (GSG UK), the immediate parent company of GSI, as an O-SII. GSG UK's O-SII buffer is currently set at zero percent.

The Basel Committee has issued a series of updates that propose other changes to capital regulations. In particular, in January 2016, the Basel Committee finalised a revised framework for calculating minimum capital requirements for market risk (known as the "Fundamental Review of the Trading Book" or "FRTB"), which is expected to increase market risk capital requirements for most banking organisations. The key features of FRTB include a revised boundary between the trading book and banking book, a revised internal models approach for market risk, a revised standardised approach for market risk, a shift from VaR to an expected shortfall measure of risk under stress and incorporation of the risk of market illiquidity.

The Basel Committee has also finalised a revised standard approach for RWAs for counterparty credit risk on derivatives exposures ("Standardised Approach for measuring Counterparty Credit Risk exposures", known as "SA-CCR") and published guidelines for measuring and controlling large exposures ("Supervisory Framework for measuring and controlling Large Exposures").

In November 2016, the European Commission proposed amendments to CRD IV to implement the above Basel revisions, and other revisions as noted below, for certain E.U. financial institutions, including GSI.

The Basel Committee has also issued consultation papers on, among other matters, a "Review of the Credit Valuation Adjustment Risk Framework", revisions to the Basel Standardised and model-based approaches for credit risk and operational risk capital and the design of a capital floor framework based on the revised Standardised approach.

The impact of the latest Basel Committee developments on the company (including RWAs and regulatory capital ratios) is subject to uncertainty until corresponding legislation is implemented in the E.U.

Leverage Ratio

In November 2016, the European Commission proposed amendments to CRD IV to implement a 3% minimum leverage ratio requirement for certain E.U. financial institutions, including GSI, which would implement the Basel III leverage ratio framework.

Resolution and Recovery Planning

GS Group is required by the Federal Reserve Board and the Federal Deposit Insurance Corporation (FDIC) to submit a periodic plan for its rapid and orderly resolution in the event of material financial distress or failure (resolution plan). GSI is considered to be a principal material operating entity for the purposes of the periodic resolution plan prepared by GS Group. GS Group is also required by the Federal Reserve Board to submit and has submitted, on a periodic basis, a global recovery plan that outlines the steps that management could take to reduce risk, maintain sufficient liquidity, and conserve capital in times of prolonged stress. The global recovery plan outlines actions that could be taken by the company's management as part of wider actions taken by GS Group.

In April 2016, the Federal Reserve Board and the FDIC provided feedback on the 2015 resolution plans of eight systemically important U.S. domestic banking institutions and provided guidance related to the 2017 resolution plan submissions. As a principal material operating entity for the purposes of GS Group's resolution plan, the feedback and additional guidance received is applicable to GSI. While GS Group's plan was not jointly found to be deficient (i.e., non-credible or to not facilitate an orderly resolution under the U.S. Bankruptcy Code), the FDIC identified deficiencies and both the FDIC and Federal Reserve Board also identified certain shortcomings. In response to the feedback received, in September 2016, GS Group submitted a status report on its actions to address these shortcomings and a separate public section that explains these actions, at a high level. GS Group's 2017 resolution plan, which is due by July 1, 2017, is also required to address the shortcomings and take into account the additional guidance.

The E.U. Bank Recovery and Resolution Directive (BRRD) establishes a framework for the recovery and resolution of credit institutions and investment firms in the E.U. The BRRD provides national supervisory authorities with tools and powers to pre-emptively address potential financial crises in order to promote financial stability and minimise taxpayers' exposure to losses. The BRRD requires E.U. member states to grant "bail-in" powers to E.U. resolution authorities to recapitalise a failing entity by writing down its unsecured debt or converting its unsecured debt into equity. Financial institutions in the E.U. (including GSI) must provide that new contracts enable such actions, and must also amend pre-existing contracts governed by non-E.U. law to enable such actions, if the financial institutions could incur liabilities under such pre-existing contracts.

The BRRD also subjects financial institutions to a minimum requirement for own funds and eligible liabilities (MREL) so that they can be resolved without causing financial instability and without recourse to public funds in the event of a failure. In November 2016, the E.U. Commission proposed changes to MREL rules through amendments to the BRRD and CRD IV. These changes and the Bank of England's rules on MREL are described below under "Total Loss-Absorbing Capacity".

The company and other GS Group entities, along with a number of other major global banking organisations, adhere to the International Swaps and Derivatives Association Resolution Stay Protocol (the ISDA Protocol) that was developed and updated in coordination with the Financial Stability Board (FSB). The FSB is an international body that sets standards and coordinates the work of national financial authorities and international standard-setting bodies. The ISDA Protocol imposes a stay on certain cross-default and early termination rights within standard ISDA derivatives contracts and securities financing transactions between adhering parties in the event that one of them is subject to resolution in its home jurisdiction, including a resolution under the orderly liquidation authority in the U.S. The ISDA Protocol is expected to be adopted more broadly in the future, following the adoption of regulations by banking regulators, and expanded to include instances where a U.S. financial holding company becomes subject to proceedings under the U.S. Bankruptcy Code.

Total Loss-Absorbing Capacity

In December 2016, the Federal Reserve Board adopted a final rule establishing loss-absorbency and related requirements for U.S. G-SIBs such as Group Inc. The rule will be effective in January 2019 with no phase-in period. The rule addresses U.S. implementation of the FSB's total loss-absorbing capacity (TLAC) principles and term sheet on minimum TLAC requirements for G-SIBs. The rule (i) establishes minimum TLAC requirements, (ii) establishes minimum "eligible long-term debt" (i.e., debt that is unsecured, has a maturity greater than one year from issuance and satisfies certain additional criteria) requirements, (iii) prohibits certain holding company transactions and (iv) caps the amount of G-SIB liabilities that are not eligible long-term debt.

In October 2016, the Basel Committee issued a final standard to implement capital deductions for banking organisations relating to TLAC holdings of other G-SIBs. This standard will inform how the deductions are implemented by national regulators.

The FSB issued a final TLAC standard requiring certain material subsidiaries of a G-SIB organised outside of the G-SIB's home country, such as GSI, to maintain amounts of TLAC to facilitate the transfer of losses from operating subsidiaries to the parent company. In December 2016, the FSB issued a consultative document that presents a set of guiding principles on the implementation of the TLAC requirements applicable to material subsidiaries. As an obligation of membership, the FSB's members, including the U.S. and the U.K., commit to implement international financial standards, including those of the FSB.

The BRRD subjects institutions to MREL, which is generally consistent with the FSB's TLAC standard. In November 2016, the Bank of England published its policy on setting MREL under which certain U.K. financial institutions will be required to maintain equity and liabilities sufficient to credibly bear losses in resolution. The Bank of England has not yet published its final policy on the calibration of MREL for entities that are parts of groups, such as GSI.

In November 2016, the European Commission proposed amendments to CRD IV and BRRD that are designed to implement the FSB's minimum TLAC requirement for G-SIBs commencing January 1, 2019. The proposal would require subsidiaries of a non-E.U. G-SIB that account for more than 5% of GS Group's RWAs, operating income or leverage exposure, such as GSI, to meet 90% of the requirement applicable to E.U. G-SIBs.

The company expects that in addition to its current levels of regulatory capital, a portion of its intercompany borrowings amended as needed to meet the subordination and maturity terms required under the final MREL rule, will serve to meet its MREL requirement.

Intermediate Holding Company

In November 2016, the European Commission proposed an amendment to CRD IV that would require a non-E.U. G-SIB, such as Group Inc., to establish an E.U. intermediate holding company (E.U. IHC) if the group contains two or more institutions subject to CRD IV. This includes broker-dealers and banks, such as GSI and its affiliate Goldman Sachs International Bank. This proposal must be approved by the European Parliament and European Council prior to implementation in national regulations by E.U. member states. The European Commission also proposed amendments to CRD IV that would require E.U. IHCs to satisfy capital, liquidity and MREL requirements.

Swaps and Derivatives Regulation

The E.U. has established regulatory requirements for OTC derivatives activities under the European Market Infrastructure Regulation, including requirements relating to portfolio reconciliation and reporting, clearing certain OTC derivatives and margining for uncleared derivatives. In December 2016, the final margin rules for uncleared derivatives were published in the Official Journal of the E.U. These rules will phase in from February 4, 2017.

As a registered "swap dealer" under the U.S. Commodity Futures Trading Commission (CFTC) rules, the company is also subject to the CFTC margin rules. In September 2016, the final margin rules issued by the U.S. federal bank regulatory agencies and the CFTC for uncleared swaps became effective. These rules will phase in through March 2017 for variation margin requirements and through September 2020 for initial margin requirements depending on the level of swaps, security-based swaps and/or exempt foreign exchange derivative transaction activity of the swap dealer and the relevant counterparty. The final rules of the U.S. federal bank regulatory agencies would generally apply to certain of the company's inter-affiliate transactions, with limited relief available from initial margin requirements for affiliates. Under the CFTC final rules, inter-affiliate transactions are exempt from initial margin requirements with certain exceptions but variation margin requirements still apply. The company expects that its margin requirements will continue to increase as the rules phase in.

In December 2016, the CFTC proposed revised capital regulations for swap dealers and major swap participants that are not subject to the capital rules of a prudential regulator deemed to be comparable, such as the Federal Reserve Board, as well as a liquidity requirement for those swap dealers. The CFTC has begun to decide which swaps must be cleared through central counterparties and executed on swap execution facilities or exchanges and is expected to continue to make such determinations during 2017.

In October 2016, the CFTC proposed rules addressing the extent to which swap dealers and major swap participants would be required to comply with the CFTC's business conduct standards in cross-border transactions. The proposal also would determine the circumstances under which U.S. and non-U.S. persons would be required to include their cross-border swap dealing transactions or swap positions in their calculations of the level of activity subject to CFTC jurisdiction for purposes of determining whether they are required to register as either a swap dealer or major swap participant.

The application of new derivatives rules across different national and regulatory jurisdictions has not yet been fully established and specific determinations of the extent to which regulators in each of the relevant jurisdictions will defer to regulations in other jurisdictions have not yet been completed. The full impact of the various U.S. and non-U.S. regulatory developments in this area will not be known with certainty until all the rules are finalised and implemented and market practices and structures develop under the final rules.

E.U. Market Reform

The E.U. is finalising implementing measures under the Markets in Financial Instruments Regulation and under a revision of the Markets in Financial Instruments Directive (collectively, MiFID II). MiFID II will become effective in January 2018. Although the implementing rules and technical standards were largely finalised by the European Commission and the European Securities and Markets Authority (ESMA) in the second half of 2016, significant legal uncertainty still remains in terms of commodities position limits and several market structure rules. In addition, legal uncertainty will remain until member states finalise their rules transposing MiFID II into their law, which they are required to do by July 2017.

MiFID II includes extensive market structure reforms, such as the establishment of new trading venue categories for the purposes of discharging the obligation to trade OTC derivatives on a trading platform, and enhanced pre- and post-trade transparency covering a wider range of financial instruments. In equities, MiFID II introduces volume caps on non-transparent liquidity trading for trading venues, limits the use of broker-dealer crossing networks and creates a new regime for systematic internalisers, which execute client transactions outside a trading venue.

Additional controls will be introduced for algorithmic trading, high frequency trading and direct electronic access. Commodities trading firms will be required to calculate their positions and adhere to specific limits. Other reforms introduce enhanced transaction reporting, the publication of best execution data by investment firms and trading venues, investor protection-related and organisational requirements, transparency on costs and charges of service to investors, changes to the way investment managers can pay for the receipt of investment research and mandatory unbundling for broker-dealers between execution and other major services.

The E.U. and national financial legislators and regulators in the E.U. have proposed or adopted numerous further market reforms that may impact the company's businesses, including heightened corporate governance standards for financial institutions, rules on key information documents for packaged retail and insurance-based investment products and rules on indices that are used as benchmarks for financial instruments or funds. In addition, the European Commission, the ESMA and the EBA have announced or are formulating regulatory standards and other measures which will impact the company's European operations.

The European Commission has published a proposal for a common system of financial transactions tax which would be implemented in certain E.U. member states willing to engage in enhanced cooperation in this area. The proposed financial transactions tax is broad in scope and would apply to transactions in a wide variety of financial instruments and derivatives. The European Commission has also published a draft proposal for structural reform of E.U. banks, which would prohibit certain banks from proprietary trading and would require separating certain trading activities from deposit-taking entities.

Principal Risks and Uncertainties

GSI faces a variety of risks that are substantial and inherent in its businesses including market, liquidity, credit, operational, model, legal, regulatory and reputational risks and uncertainties. The following are some of the more important factors that could affect the company's businesses.

Economic and Market Conditions

GSI's businesses, by their nature, do not produce predictable earnings and are materially affected by conditions in the global financial markets and economic conditions generally, both directly and through their impact on client activity levels. These conditions can change suddenly and negatively.

The company's financial performance is highly dependent on the environment in which its businesses operate. A favourable business environment is generally characterised by, among other factors, high global GDP growth, regulatory and market conditions which result in transparent, liquid and efficient capital markets, low inflation, high business and investor confidence, stable geopolitical conditions, clear regulations and strong business earnings. Unfavourable or uncertain economic and market conditions can be caused by: concerns about sovereign defaults; uncertainty in U.S. federal and E.U. fiscal or monetary policy; extent of and uncertainty about the timing and nature of regulatory reforms; declines in economic growth, business activity or investor or business confidence; limitations on the availability or increases in the cost of credit and capital; illiquid markets; increases in inflation, interest rates, exchange rate or basic commodity price volatility, or default rates; outbreaks of hostilities or other geopolitical instability or uncertainty, such as Brexit; corporate, political or other scandals that reduce investor confidence in capital markets; extreme weather events or other natural disasters or pandemics; or a combination of these or other factors.

The financial services industry and the securities markets have been materially and adversely affected in the past by significant declines in the values of nearly all asset classes and by a serious lack of liquidity. In addition, concerns about European sovereign debt risk and its impact on the European banking system, about the impact of Brexit, and about changes in interest rates and other market conditions or actual changes in interest rates and other market conditions, including market conditions in China, have resulted, at times, in significant volatility while negatively impacting the levels of client activity.

General uncertainty about economic, political and market activities, and the scope, timing and final implementation of regulatory reform, as well as weak consumer, investor and chief executive officer (CEO) confidence resulting in large part from such uncertainty, continues to negatively impact client activity, which adversely affects many of the company's businesses. Periods of low volatility and periods of high volatility, combined with a lack of liquidity, have at times had an unfavourable impact on the company's market-making businesses.

The company's revenues and profitability and those of its competitors have been and will continue to be impacted by requirements relating to capital, additional loss-absorbing capacity, leverage, minimum liquidity and long-term funding levels, requirements related to resolution and recovery planning, derivatives clearing and margin rules and levels of regulatory oversight, as well as limitations on which and, if permitted, how certain business activities may be carried out by financial institutions. Although interest rates are at or near historically low levels, financial institution returns have also been negatively impacted by increased funding costs due in part to the withdrawal of perceived government support of such institutions in the event of future financial crises. In addition, liquidity in the financial markets has also been negatively impacted as market participants and market practices and structures adjust to new regulations.

The degree to which these and other changes resulting from the financial crisis will have a long-term impact on the profitability of financial institutions will depend on the final interpretation and implementation of new regulations, the manner in which markets, market participants and financial institutions adapt to the new landscape, and the prevailing economic and financial market conditions. However, there is a significant risk that such changes will, at least in the near-term, continue to negatively impact the absolute level of revenues, profitability and return on equity of the company and other financial institutions.

Regulation

As a participant in the financial services industry and a subsidiary of a systemically important financial institution, the company is subject to extensive regulation principally in the U.K. and the E.U. more generally but also in the U.S. as a subsidiary of GS Group and in certain other jurisdictions. The company faces the risk of significant intervention by regulatory and tax authorities in all jurisdictions in which it conducts its businesses. In many cases, the company's activities may be subject to overlapping and divergent regulation in different jurisdictions. Among other things, as a result of regulators or private parties challenging the company's compliance with laws and regulations, it could be fined, prohibited from engaging in certain business activities, subject to limitations or conditions on its business activities including higher capital requirements, or subjected to new or substantially higher taxes or other governmental charges in connection with the conduct of its businesses or with respect to its employees. Such limitations or conditions may limit business activities and negatively impact the company's profitability.

The company is subject to E.U. legal and regulatory requirements, based on directly binding regulations of the E.U. and the implementation of E.U. directives by the U.K. The company benefits from non-discriminatory access to E.U. clients and infrastructure based on E.U. treaties and E.U. legislation, including cross-border "passporting" arrangements and specific arrangements for the establishment of E.U. branches. There is considerable uncertainty as to the regulatory regime that will be applicable in the U.K. post-Brexit and the regulatory framework that will govern transactions and business undertaken by the company in the remaining E.U. countries.

Separate and apart from the impact on the scope and profitability of the company's business activities, day-to-day compliance with laws and regulations, in particular those laws and regulations adopted since 2008, has involved and will continue to involve significant amounts of time, including that of the company's senior leaders and that of an increasing number of dedicated compliance and other reporting and operational personnel, all of which may negatively impact the company's profitability.

If there are new laws or regulations or changes in the enforcement of existing laws or regulations applicable to the company's businesses or those of the company's clients, including capital, liquidity, leverage, long-term debt, loss absorbing capacity and margin requirements, restrictions on other business practices, reporting requirements, requirements relating to the implementation of BRRD, tax burdens and compensation restrictions, that are imposed on a limited subset of financial institutions (either based on size, activities, geography or other criteria) which may include the company or Group Inc., compliance with these new laws and regulations, or changes in the enforcement of existing laws or regulations, could adversely affect the company's ability to compete effectively with other institutions that are not affected in the same way. In addition, regulation imposed on financial institutions or market participants generally, such as taxes on financial transactions, could adversely impact levels of market activity more broadly, and thus impact the company's businesses.

These developments could impact the company's profitability in the affected jurisdictions, or even make it uneconomic to continue to conduct all or certain businesses in such jurisdictions, or could result in the company incurring significant costs associated with changing business practices, restructuring businesses, moving all or certain businesses and employees to other locations or complying with applicable capital requirements, including liquidating assets or raising capital in a manner that adversely increases the company's funding costs or otherwise adversely affects its shareholder and creditors.

Regulatory developments, in particular MiFID II, Basel III and the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), have significantly altered the regulatory framework within which the company operates and may adversely affect the company's competitive position and profitability.

The E.U. and national financial legislators and regulators have proposed or adopted numerous market reforms that have impacted and may continue to impact the company's businesses. These include stricter capital and liquidity requirements, including legislation (in the form of CRD IV) to implement Basel III requirements for GSI. In addition, the E.U. has finalised MiFID II, which is scheduled to become effective in January 2018.

Additional market reforms also include rules on the recovery and resolution of E.U. institutions, rules on the separation of certain trading activities from deposit taking, rules on the cross-border provision of services from countries outside the European Economic Area, authorisations for regulators to impose position limits, requirements to execute certain transactions only on certain regulated venues, reporting requirements (including requirements to publish information about transactions), restrictions on short selling and credit default swaps, additional obligations and restrictions on the management and marketing of funds in the E.U., sanctions for regulatory breach and further revised organisational, market structure, conduct of business and market abuse rules. The implementation of these reforms may adversely affect the company's profitability and competitive position, particularly if these requirements do not apply, or do not apply equally, to the company's competitors or are not implemented uniformly across jurisdictions.

The implementation of higher capital requirements, the liquidity coverage ratio, the net stable funding ratio, requirements relating to long-term debt and total loss-absorbing capacity and the prohibition on proprietary trading and the sponsorship of, or investment in, covered funds by the Volcker Rule may adversely affect the company's profitability and competitive position, particularly if these requirements do not apply, or do not apply equally, to the company's competitors or are not implemented uniformly across jurisdictions.

The company is also subject to laws and regulations relating to the privacy of the information of clients, employees or others, and any failure to comply with these regulations could expose the company to liability and/or reputational damage. In addition, the company's businesses are increasingly subject to laws and regulations relating to surveillance, encryption and data on-shoring in the jurisdictions in which the company operates. Compliance with these laws and regulations may require the company to change its policies, procedures and technology for information security, which could, among other things, make the company more vulnerable to cyber attacks and misappropriation, corruption or loss of information or technology.

Increasingly, regulators and courts have sought to hold financial institutions liable for the misconduct of their clients where such regulators and courts have determined that the financial institution should have detected that the client was engaged in wrongdoing, even though the financial institution had no direct knowledge of the activities engaged in by its client. Regulators and courts have also increasingly found liability as a "control person" for activities of entities in which financial institutions or funds controlled by financial institutions have an investment, but which they do not actively manage. In addition, regulators and courts continue to seek to establish "fiduciary" obligations to counterparties to which no such duty had been assumed to exist. To the extent that such efforts are successful, the cost of, and liabilities associated with, engaging in brokerage, clearing, market-making, prime brokerage, investing and other similar activities could increase significantly. To the extent that the company has fiduciary obligations in connection with acting as a financial adviser, investment adviser or in other roles for individual, institutional, sovereign or investment fund clients, any breach, or even an alleged breach, of such obligations could have materially negative legal, regulatory and reputational consequences.

For information about the extensive regulation to which the company's businesses are subject, see "Regulatory Developments".

Market Volatility

Certain market-making activities depend on market volatility to provide trading and arbitrage opportunities to clients and decreases in volatility may reduce these opportunities and adversely affect the results of these activities. In contrast, increased volatility, whilst it can increase trading volumes and spreads, also increases risk as measured by VaR and may expose the company to increased risks in connection with market-making activities or cause the company to reduce its market-making inventory to avoid increasing VaR. Limiting the size of such market-making positions can adversely affect the company's profitability. In periods when volatility is increasing, but asset values are declining significantly, it may not be possible to sell assets at all or it may only be possible to do so at steep discounts. In such circumstances, the company may be forced to either take on additional risk or to realise losses in order to decrease its VaR. In addition, increases in volatility increase the level of the company's RWAs, which increases the company's capital requirements.

The company's businesses have been and may be adversely affected by declining asset values. This is particularly true for those businesses in which the company has net "long" positions, receives fees based on the value of assets managed, or receives or posts collateral. Many of the company's businesses have net "long" positions in debt securities, loans, derivatives, mortgages, equities (including private equity and real estate) and most other asset classes. These include positions taken when the company acts as a principal to facilitate clients' activities, including exchange-based market-making activities, or commits large amounts of capital to maintain positions in interest rate and credit products, as well as through currencies, commodities and equities and mortgage-related activities. Because substantially all of these investing and market-making positions are marked-to-market on a daily basis, declines in asset values directly and immediately impact earnings, unless exposures have been effectively hedged.

In certain circumstances (particularly in the case of credit products and private equities or other securities that are not freely tradable or lack established and liquid trading markets), it may not be possible or economic to hedge such exposures and to the extent that this is done the hedge may be ineffective or may greatly reduce the company's ability to profit from increases in the values of the assets. Sudden declines and significant volatility in the prices of assets may substantially curtail or eliminate the trading markets for certain assets, which may make it difficult to sell, hedge or value such assets. The inability to sell or effectively hedge assets reduces the ability to limit losses in such positions and the difficulty in valuing assets may negatively affect the company's capital, liquidity or leverage ratios, increase its funding costs and generally require maintaining additional capital.

In the company's exchange-based market-making activities, the company is obligated by stock exchange rules to maintain an orderly market, including by purchasing securities in a declining market. In markets where asset values are declining and in volatile markets, this results in losses and an increased need for liquidity.

Asset-based management fees are received based on the value of clients' portfolios managed by the company and, in some cases, incentive fees are also received based on increases in the value of such investments. Declines in asset values reduce the value of clients' portfolios which in turn reduce the fees earned for managing such assets.

Collateral is posted to support obligations of the company and received to support the obligations of clients and counterparties in connection with client execution businesses. When the value of the assets posted as collateral declines or the credit ratings of the party posting collateral decline, the party posting the collateral may need to provide additional collateral or, if possible, reduce its trading position. An example of such a situation is a margin call in connection with a brokerage account. Therefore, declines in the value of asset classes used as collateral mean that either the cost of funding positions is increased or the size of positions is decreased. If the company is the party providing collateral, this can increase costs and reduce profitability and if the company is the party receiving collateral, this can also reduce profitability by reducing the level of business done with clients and counterparties. In addition, volatile or less liquid markets increase the difficulty of valuing assets which can lead to costly and time-consuming disputes over asset values and the level of required collateral, as well as increased credit risk to the recipient of the collateral due to delays in receiving adequate collateral. In cases where the company forecloses on collateral, it may be subject to claims that the foreclosure was not permitted under the legal documents, was conducted in an improper manner or caused a client or counterparty to go out of business.

Liquidity

Liquidity is essential to the company's businesses. The company's liquidity could be impaired by an inability to access secured and/or unsecured debt markets, an inability to access funds from Group Inc. or other affiliates, an inability to sell assets or redeem investments or unforeseen outflows of cash or collateral. This situation may arise due to circumstances that the company may be unable to control, such as a general market disruption or an operational problem that affects third parties or the company or its affiliates or even by the perception amongst market participants that the company, or other market participants, are experiencing greater liquidity risk.

The company employs structured products to benefit its clients and hedge its own risks. The financial instruments that the company holds and the contracts to which it is a party are often complex, and these complex structured products often do not have readily available markets to access in times of liquidity stress. The company's investing activities may lead to situations where the holdings from these activities represent a significant portion of specific markets, which could restrict liquidity for the company's positions.

Further, the company's ability to sell assets may be impaired if there is not generally a liquid market for such assets, as well as in circumstances where other market participants are seeking to sell similar assets at the same time, as is likely to occur in a liquidity or other market crisis or in response to changes to rules or regulations. In addition, financial institutions with which the company interacts may exercise set-off rights or the right to require additional collateral, including in difficult market conditions, which could further impair the company's liquidity.

The company is an indirect, wholly-owned operating subsidiary of Group Inc. and depends on Group Inc. for capital and funding. The credit ratings of GSI and those of Group Inc. are important to the company's liquidity. A reduction in GSI's and/or Group Inc.'s credit ratings could adversely affect the company's liquidity and competitive position, increase borrowing costs, limit access to the capital markets or funding from Group Inc. or trigger obligations under certain provisions in some trading and collateralised financing contracts. Under these provisions, counterparties could be permitted to terminate contracts with GSI or Group Inc. or require additional collateral. Termination of trading and collateralised financing contracts could cause losses and impair liquidity by requiring Group Inc. or GSI to find other sources of financing or to make significant cash payments or securities movements.

GSI's and Group Inc.'s cost of obtaining long-term unsecured funding is directly related to both the credit spreads of GSI and Group Inc. Increases in the credit spreads of GSI and/or Group Inc. can significantly increase the cost of this funding. Changes in credit spreads are continuous, market-driven, and subject at times to unpredictable and highly volatile movements. The credit spreads of GSI and/or Group Inc. are also influenced by market perceptions of GSI's and/or Group Inc.'s creditworthiness. In addition, the credit spreads of GSI and/or Group Inc. may be influenced by movements in the costs to purchasers of credit default swaps referenced to Group Inc.'s long-term debt. The market for credit default swaps has proven to be extremely volatile and at times has lacked a high degree of transparency or liquidity.

Regulatory changes relating to liquidity may also negatively impact the company's results of operations and competitive position. Recently, numerous regulations have been adopted or proposed, and additional regulations are under consideration, to introduce more stringent liquidity requirements for large financial institutions. These regulations and others being considered address, among other matters, liquidity stress testing, minimum liquidity requirements, wholesale funding, restrictions on short-term debt and structured notes issued by top-tier holding companies and prohibitions on parent guarantees that are subject to cross-defaults. These may overlap with, and be impacted by, other regulatory changes, including new rules relating to minimum long-term debt requirements and TLAC, guidance on the treatment of brokered deposits and the capital, leverage and resolution and recovery frameworks applicable to large financial institutions. Given the overlap and complex interactions among these new and prospective regulations, they may have unintended cumulative effects, and their full impact will remain uncertain until implementation of post-financial crisis regulatory reform is complete.

Resolution and Recovery Planning

The circumstances in which a resolution authority would exercise its "bail-in" powers to recapitalise a failing entity by writing down its unsecured debt or converting it into equity are uncertain. If these powers were to be exercised (or if there was a suggestion that they could be exercised) in respect of GSI, such exercise would likely have a material adverse effect on the value of debt investments in GSI, including a potential loss of some or all of such investment. Furthermore, the suggestion that such powers were to be exercised could also have an adverse impact on the value of such investments.

Credit Markets

Widening credit spreads for the company or Group Inc., as well as significant declines in the availability of credit, have in the past adversely affected the company's ability to borrow on a secured and unsecured basis and may do so in the future. GSI obtains the majority of its unsecured funding from Group Inc., which funds itself on an unsecured basis by issuing long-term debt, by accepting deposits at its bank subsidiaries, by issuing hybrid financial instruments, or by obtaining bank loans or lines of credit. The company seeks to finance many of its assets on a secured basis. Any disruptions in the credit markets may make it harder and more expensive to obtain funding for businesses. If the company's available funding is limited or the company is forced to fund operations at a higher cost, these conditions may require curtailment of business activities and increase the cost of funding, both of which could reduce profitability, particularly in businesses that involve investing and market making.

Clients engaging in mergers and acquisitions often rely on access to the secured and unsecured credit markets to finance their transactions. A lack of available credit or an increased cost of credit can adversely affect the size, volume and timing of clients' merger and acquisition transactions, particularly large transactions, and adversely affect the company's financial advisory and underwriting businesses.

The company's credit businesses have been and may in the future be negatively affected by a lack of liquidity in credit markets. A lack of liquidity reduces price transparency, increases price volatility and decreases transaction volumes and size, all of which can increase transaction risk or decrease the profitability of such businesses.

Concentration of Risk

Concentration of risk increases the potential for significant losses in market-making, underwriting, and investing activities. The number and size of such transactions may affect the company's results of operations in a given period. Moreover, because of concentration of risk, the company may suffer losses even when economic and market conditions are generally favourable for competitors. Disruptions in the credit markets can make it difficult to hedge these credit exposures effectively or economically.

Rules adopted under the Dodd-Frank Act require issuers of asset-backed securities and any person who organises and initiates an asset-backed securities transaction to retain economic exposure to the asset, which is likely to significantly increase the cost to the company of engaging in securitisation activities. The company's inability to reduce its credit risk by selling, syndicating or securitising these positions, including during periods of market stress, could negatively affect the company's results of operations due to a decrease in the fair value of the positions, including due to the insolvency or bankruptcy of the borrower, as well as the loss of revenues associated with selling such securities or loans.

In the ordinary course of business, the company may be subject to a concentration of credit risk to a particular counterparty, borrower, issuer, including sovereign issuers, or geographic area or group of related countries, such as the E.U. A failure or downgrade of, or default by, such entity could negatively impact the company's businesses, perhaps materially, and the systems by which the company sets limits and monitors the level of its credit exposure to individual entities, industries and countries may not function as anticipated. Provisions of the European Market Infrastructure Regulation and Dodd-Frank Act have led to increased centralisation of trading activity through particular clearing houses, central agents or exchanges, which has significantly increased the company's concentration of risk with respect to these entities. While the company's activities expose it to many different industries, counterparties and countries, the company routinely executes a high volume of transactions with counterparties engaged in financial services activities, including brokers and dealers, commercial banks, clearing houses and exchanges. This has resulted in significant credit concentration with respect to these counterparties.

Credit Quality

The company is exposed to the risk that third parties who owe money, securities or other assets will not perform their obligations. These parties may default on their obligations to the company due to bankruptcy, lack of liquidity, operational failure or other reasons. A failure of a significant market participant, or even concerns about a default by such an institution, could lead to significant liquidity problems, losses or defaults by other institutions, which in turn could adversely affect the company.

The company is also subject to the risk that its rights against third parties may not be enforceable in all circumstances. In addition, deterioration in the credit quality of third parties whose securities or obligations are held by the company, including a deterioration in the value of collateral posted by third parties to secure their obligations to the company under derivatives contracts and loan agreements, could result in losses and/or adversely affect the company's ability to rehypothecate or otherwise use those securities or obligations for liquidity purposes.

A significant downgrade in the credit ratings of the company's counterparties could also have a negative impact on the company's results. While in many cases the company is permitted to require additional collateral from counterparties that experience financial difficulty, disputes may arise as to the amount of collateral the company is entitled to receive and the value of pledged assets. The termination of contracts and the foreclosure on collateral may subject the company to claims for the improper exercise of its rights. Default rates, downgrades and disputes with counterparties as to the valuation of collateral increase significantly in times of market stress and illiquidity.

Derivative Transactions

The company is party to a large number of derivative transactions, including credit derivatives. Many of these derivative instruments are individually negotiated and non-standardised, which can make exiting, transferring or settling positions difficult. Many credit derivatives require that the company deliver to the counterparty the underlying security, loan or other obligation in order to receive payment. In a number of cases, the company does not hold the underlying security, loan or other obligation and may not be able to obtain the underlying security, loan or other obligation. This could cause the company to forfeit the payments due under these contracts or result in settlement delays with the attendant credit and operational risk as well as increased costs to the company.

Derivative transactions may also involve the risk that documentation has not been properly executed, that executed agreements may not be enforceable against the counterparty, or that obligations under such agreements may not be able to be netted against other obligations with such counterparty. In addition, counterparties may claim that such transactions were not appropriate or authorised.

As a signatory to the ISDA Protocol, the company may not be able to exercise remedies against counterparties and, as this new regime has not yet been tested, the company may suffer risks or losses that it would not have expected to suffer if it could immediately close out transactions upon a termination event. Various U.S. and non-U.S. regulators have proposed or adopted implementing regulations contemplated by the ISDA Protocol, and those implementing regulations may result in additional limitations on the company's ability to exercise remedies against counterparties. The ISDA Protocol's impact will depend on, among other things, how it is implemented and the development of market practice and structures under the implementing regulations.

Derivative contracts and other transactions entered into with third parties are not always confirmed by the counterparties or settled on a timely basis. While the transaction remains unconfirmed or during any delay in settlement, the company is subject to heightened credit and operational risk and in the event of a default may find it more difficult to enforce its rights. In addition, as new complex derivative products are created, covering a wider array of underlying credit and other instruments, disputes about the terms of the underlying contracts could arise, which could impair the company's ability to effectively manage its risk exposures from these products and subject it to increased costs. The provisions of legislation requiring central clearing of credit derivatives and other OTC derivatives, or a market shift toward standardised derivatives, could reduce the risk associated with such transactions, but under certain circumstances could also limit the company's ability to develop derivatives that best suit the needs of clients and to hedge its own risks, and could adversely affect the company's profitability and increase credit exposure to such a platform.

Regulations have been proposed or adopted in various jurisdictions that provide for significantly increased regulation of and restrictions on derivative markets and transactions, including the introduction of standardised execution and clearing, margining and reporting requirements for OTC derivatives. The E.U. has established regulatory requirements for OTC derivatives activities under the European Market Infrastructure Regulation, including requirements relating to portfolio reconciliation and reporting, which have already taken effect, as well as requirements relating to clearing and margining for uncleared derivatives. In addition, under the Dodd-Frank Act, the U.S. Commodity Futures Trading Commission has proposed or adopted rules relating to swaps, swap dealers and major swap participants, and the U.S. Securities and Exchange Commission has proposed or adopted rules relating to security-based swaps, security-based swap dealers and major security-based swap participants.

Operational Infrastructure

The company's businesses are highly dependent on its ability to process and monitor, on a daily basis, a large number of transactions, many of which are highly complex, and occur at high volumes and frequencies, across numerous and diverse markets in many currencies. These transactions, as well as information technology services provided to clients, often must adhere to client-specific guidelines, as well as legal and regulatory standards.

Many rules and regulations worldwide govern the company's obligations to report transactions and other information to regulators, exchanges and investors. Compliance with these legal and reporting requirements can be challenging, and the company and other financial institutions have been subject to regulatory fines and penalties for failing to report timely, accurate and complete information. As reporting requirements expand, compliance with these rules and regulations has become more challenging.

As the company's client base and geographical reach expand and the volume, speed, frequency and complexity of transactions, especially electronic transactions (as well as the requirements to report such transactions on a real-time basis to clients, regulators and exchanges) increase, developing and maintaining operational systems and infrastructure becomes more challenging, and the risk of systems or human error in connection with such transactions increases, as well as the potential consequences of such errors due to the speed and volume of transactions involved and the potential difficulty associated with discovering such errors quickly enough to limit the resulting consequences.

Financial, accounting, data processing or other operating systems and facilities may fail to operate properly or become disabled as a result of events that are wholly or partially beyond the company's control, such as a spike in transaction volume, adversely affecting the company's ability to process these transactions or provide these services. The company must continuously update these systems to support its operations and growth and to respond to changes in regulations and markets, and invest heavily in systemic controls and training to ensure that such transactions do not violate applicable rules and regulations or, due to errors in processing such transactions, adversely affect markets, clients and counterparties or the company itself.

Systems enhancements and updates, as well as the requisite training, including in connection with the integration of new businesses, entail significant costs and create risks associated with implementing new systems and integrating them with existing ones.

Notwithstanding the proliferation of technology and technology-based risk and control systems, the company's businesses ultimately rely on people as their greatest resource, and from time-to-time, mistakes are made that are not always caught immediately by technological processes or by other procedures which are intended to prevent and detect such errors. These can include calculation errors, mistakes in addressing emails, errors in software or model development or implementation, or simple errors in judgement. The company strives to eliminate such human errors through training, supervision, technology and by duplicate or overlapping processes and controls. Human errors, even if promptly discovered and remediated, can result in material losses and liabilities for the company.

In addition, the company faces the risk of operational failure, termination or capacity constraints of any of the clearing agents, exchanges, clearing houses or other financial intermediaries that it uses to facilitate securities and derivatives transactions, and as interconnectivity with clients grows, the company will increasingly face the risk of operational failure with respect to clients' systems.

In recent years, there has been significant consolidation among clearing agents, exchanges and clearing houses and an increasing number of derivative transactions are now or in the near future will be cleared on exchanges, which has increased the company's exposure to operational failure, termination or capacity constraints of the particular financial intermediaries that the company uses and could affect its ability to find adequate and cost-effective alternatives in the event of any such failure, termination or constraint. Industry consolidation, whether among market participants or financial intermediaries, increases the risk of operational failure as disparate complex systems need to be integrated, often on an accelerated basis.

Furthermore, the interconnectivity of multiple financial institutions with central agents, exchanges and clearing houses, and the increased centrality of these entities, increases the risk that an operational failure at one institution or entity may cause an industry-wide operational failure that could materially impact the company's ability to conduct business. Any such failure, termination or constraint could adversely affect the company's ability to effect transactions, service its clients, manage its exposure to risk or expand its businesses or result in financial loss or liability to its clients, impairment of its liquidity, disruption of its businesses, regulatory intervention or reputational damage.

Despite the resiliency plans and facilities that are in place, the company's ability to conduct business may be adversely impacted by a disruption in the infrastructure that supports its businesses and the communities in which the company is located. This may include a disruption involving electrical, satellite, undersea cable or other communications, internet, transportation or other services facilities used by the company or third parties with which the company conducts business, including cloud service providers. These disruptions may occur as a result of events that affect only the company's buildings or systems or those of such third parties, or as a result of events with a broader impact globally, regionally or in the cities where those buildings or systems are located, including, but not limited to, natural disasters, war, civil unrest, terrorism, economic or political developments, pandemics and weather events.

Technology

Technology is fundamental to the company's businesses and industry. The growth of electronic trading and the introduction of new technologies is changing these businesses and presenting the company with new challenges. Securities, futures and options transactions are increasingly occurring electronically, both on the company's own systems and through other alternative trading systems, and it appears that the trend toward alternative trading systems will continue. Some of these alternative trading systems compete with the company's businesses, particularly the company's exchange-based market-making activities, and the company may experience continued competitive pressures in these and other areas. In addition, the increased use by clients of low-cost electronic trading systems and direct electronic access to trading markets could cause a reduction in commissions and spreads. As clients increasingly use the company's systems to trade directly in the markets, the company may incur liabilities as a result of their use of the company's order routing and execution infrastructure. Significant resources have been invested into the development of electronic trading systems and the company expects to continue to do so, but there is no assurance that the revenues generated by these systems will yield an adequate return on this investment, particularly given the generally lower commissions arising from electronic trades.

Cyber Security

The company's operations rely on the secure processing, storage and transmission of confidential and other information in its computer systems and networks. There have been several recent highly publicised cases involving financial services companies, consumer-based companies and other organisations reporting the unauthorised disclosure of client, customer or other confidential information in recent years, as well as cyber attacks involving the dissemination, theft and destruction of corporate information or other assets, as a result of failure to follow procedures by employees or contractors or as a result of actions by third-parties, including actions by foreign governments. There have also been several highly publicised cases where hackers have requested "ransom" payments in exchange for not disclosing customer information.

The company is regularly the target of attempted cyber attacks, including denial-of-service attacks, and must continuously monitor and develop its systems to protect its technology infrastructure and data from misappropriation or corruption. In addition, due to the interconnectivity with third-party vendors, central agents, exchanges, clearing houses and other financial institutions, the company could be adversely impacted if any of them is subject to a successful cyber attack or other information security event.

Despite the company's efforts to ensure the integrity of its systems and information, it may not be able to anticipate, detect or implement effective preventive measures against all cyber threats, especially because the techniques used are increasingly sophisticated, change frequently and are often not recognised until launched. Cyber attacks can originate from a variety of sources, including third parties who are affiliated with foreign governments or are involved with organised crime or terrorist organisations. Third parties may also attempt to place individuals within the company or induce employees, clients or other users of the company's systems to disclose sensitive information or provide access to the company's data or that of its clients, and these types of risks may be difficult to detect or prevent.

Although the company takes protective measures and endeavours to modify them as circumstances warrant, its computer systems, software and networks may be vulnerable to unauthorised access, misuse, computer viruses or other malicious code and other events that could have a security impact. Due to the complexity and interconnectedness of the company's systems, the process of enhancing protective measures can itself create a risk of systems disruptions and security issues. If one or more of such events occur, this potentially could jeopardise the company or its clients' or counterparties' confidential and other information processed and stored in, and transmitted through, the company's computer systems and networks, or otherwise cause interruptions or malfunctions in the company's, its clients', its counterparties' or third parties' operations, which could impact their ability to transact with the company or otherwise result in significant losses or reputational damage.

The increased use of mobile and cloud technologies can heighten these and other operational risks. The company expects to expend significant additional resources on an ongoing basis to modify protective measures and to investigate and remediate vulnerabilities or other exposures, but these measures may be ineffective and the company may be subject to litigation and financial losses that are either not insured against or not fully covered through any insurance it maintains. Certain aspects of the security of such technologies are unpredictable or beyond the company's control, and the failure by mobile technology and cloud service providers to adequately safeguard their systems and prevent cyber attacks could disrupt the company's operations and result in misappropriation, corruption or loss of confidential and other information. In addition, there is a risk that encryption and other protective measures, despite their sophistication, may be defeated, particularly to the extent that new computing technologies vastly increase the speed and computing power available.

The company routinely transmits and receives personal, confidential and proprietary information by email and other electronic means. The company has discussed and worked with clients, vendors, service providers, counterparties and other third parties to develop secure transmission capabilities and protect against cyber attacks, but does not have, and may be unable to put in place, secure capabilities with all of its clients, vendors, service providers, counterparties and other third parties and it may not be able to ensure that these third parties have appropriate controls in place to protect the confidentiality of the information. An interception, misuse or mishandling of personal, confidential or proprietary information being sent to or received from a client, vendor, service provider, counterparty or other third party could result in legal liability, regulatory action and reputational harm.

Risk Management

The company seeks to monitor and control its risk exposure through a risk and control framework encompassing a variety of separate, but complementary financial, credit, operational, compliance and legal reporting systems, internal controls, management review processes and other mechanisms. The company's risk management process seeks to balance its ability to profit from market-making positions and underwriting activities with its exposure to potential losses. Whilst the company employs a broad and diversified set of risk monitoring and risk mitigation techniques, those techniques and the judgements that accompany their application cannot anticipate every economic and financial outcome or the specifics and timing of such outcomes. Thus, the company may, in the course of its activities, incur losses. Market conditions in recent years have involved unprecedented dislocations and highlight the limitations inherent in using historical data to manage risk.

The models that the company uses to assess and control its risk exposures reflect assumptions about the degrees of correlation or lack thereof among prices of various asset classes or other market indicators. In times of market stress or other unforeseen circumstances, such as occurred during 2008 and early 2009, and to some extent since 2011, previously uncorrelated indicators may become correlated, or conversely previously correlated indicators may move in different directions. These types of market movements have at times limited the effectiveness of the company's hedging strategies and have caused it to incur significant losses, and they may do so in the future. These changes in correlation can be exacerbated where other market participants are using risk or trading models with assumptions or algorithms that are similar to the company's. In these and other cases, it may be difficult to reduce the company's risk positions due to the activity of other market participants or widespread market dislocations, including circumstances where asset values are declining significantly or no market exists for certain assets.

In addition, the use of models in connection with risk management and numerous other critical activities presents risks that such models may be ineffective, either because of poor design or ineffective testing, improper or flawed inputs, as well as unpermitted access to such models resulting in unapproved or malicious changes to the model or its inputs.

To the extent that the company has positions through its market-making or origination activities or it makes investments directly through its investing activities, including private equity, that do not have an established liquid trading market or are otherwise subject to restrictions on sale or hedging, the company may not be able to reduce its positions and therefore reduce its risk associated with such positions. In addition, to the extent permitted by applicable law and regulation, the company invests its own capital in private equity, credit, real estate and hedge funds that it manages and limitations on its ability to withdraw some or all of its investments in these funds, whether for legal, reputational or other reasons, may make it more difficult for the company to control the risk exposures relating to these investments.

Prudent risk management, as well as regulatory restrictions, may cause the company to limit its exposure to counterparties, geographic areas or markets, which may limit its business opportunities and increase the cost of funding or hedging activities.

New Business Initiatives

The company faces enhanced risks as new business initiatives lead it to transact with a broader array of clients and counterparties and expose it to new asset classes and new markets. A number of the company's recent and planned business initiatives and expansions of existing businesses may bring it into contact, directly or indirectly, with individuals and entities that are not within the company's traditional client and counterparty base and expose it to new asset classes and new markets. For example, the company continues to transact business and invest in new regions, including a wide range of emerging and growth markets.

New business initiatives expose the company to new and enhanced risks, including risks associated with dealing with governmental entities, reputational concerns arising from dealing with less sophisticated clients, counterparties and investors, greater regulatory scrutiny of these activities, increased credit-related, market, sovereign and operational risks, risks arising from accidents or acts of terrorism, and reputational concerns with the manner in which these assets are being operated or held or in which the company interacts with these counterparties.

Operating in Multiple Jurisdictions

In conducting GSI's businesses and maintaining and supporting its global operations, the company is subject to risks of possible nationalisation, expropriation, price controls, capital controls, exchange controls and other restrictive governmental actions, as well as the outbreak of hostilities or acts of terrorism. For example, as a result of the significant conflict between Russia and Ukraine in recent years, sanctions have been imposed by the U.S. and E.U. on certain individuals and companies in Russia. In many countries, the laws and regulations applicable to the securities and financial services industries and many of the transactions in which the company is involved are uncertain and evolving, and it may be difficult to determine the exact requirements of local laws in every market. Any determination by local regulators that the company has not acted in compliance with the application of local laws in a particular market or a failure to develop effective working relationships with local regulators could have a significant and negative effect not only on GSI's businesses in that market but also on its reputation generally. Further, in some jurisdictions a failure to comply with laws and regulations may subject the company and its personnel not only to civil actions but also criminal actions. The company is also subject to the enhanced risk that transactions it structures might not be legally enforceable in all cases.

The exit of the U.K. from the E.U. will likely change the arrangements by which U.K. firms are able to provide services into the E.U. which may materially adversely affect the manner in which the company operates certain of its businesses in Europe and could require the company to restructure certain of its operations. The outcome of the negotiations between the U.K. and the E.U. in connection with Brexit is highly uncertain. Such uncertainty has resulted in, and may continue to result in market volatility and may negatively impact the confidence of investors and clients.

The company's businesses and operations are increasingly expanding throughout the world, including in emerging and growth markets, and this trend is expected to continue. Various emerging and growth market countries have experienced severe economic and financial disruptions, including significant devaluations of their currencies, defaults or threatened defaults on sovereign debt, capital and currency exchange controls, and low or negative growth rates in their economies, as well as military activity, civil unrest or acts of terrorism. The possible effects of any of these conditions include an adverse impact on the company's businesses and increased volatility in financial markets generally.

While business and other practices throughout the world differ, the company is subject in its operations worldwide to rules and regulations relating to corrupt and illegal payments, hiring practices and money laundering, as well as laws relating to doing business with certain individuals, groups and countries, such as the U.S. Foreign Corrupt Practices Act, the USA PATRIOT Act of 2001 and U.K. Bribery Act. While the company has invested and continues to invest significant resources in training and in compliance monitoring, the geographical diversity of its operations, employees, clients and customers, as well as the vendors and other third parties that the company deals with, greatly increases the risk that the company may be found in violation of such rules or regulations and any such violation could subject it to significant penalties or adversely affect its reputation.

In addition, there have been a number of highly publicised cases around the world, involving actual or alleged fraud or other misconduct by employees in the financial services industry in recent years, and the company runs the risk that employee misconduct could occur. This misconduct has included and may include in the future the theft of proprietary information, including proprietary software. It is not always possible to deter or prevent employee misconduct and the precautions taken to prevent and detect this activity have not been and may not be effective in all cases.

Conflicts of Interest

A failure to appropriately identify and address potential conflicts of interest could adversely affect the company's businesses. Due to the broad scope of GS Group's businesses and client base, the company regularly addresses potential conflicts of interest, including situations where services to a particular client or GS Group's own investments or other interests conflict, or are perceived to conflict, with the interests of another client, as well as situations where one or more of its businesses have access to material non-public information that may not be shared with other businesses within GS Group and situations where it may be a creditor of an entity with which GS Group also has an advisory or other relationship.

Extensive procedures and controls are in place that are designed to identify and address conflicts of interest, including those designed to prevent the improper sharing of information among businesses. However, appropriately identifying and dealing with conflicts of interest is complex and difficult, and the company's reputation, which is one of its most important assets, could be damaged and the willingness of clients to enter into transactions with the company may be affected if it fails, or appears to fail, to identify, disclose and deal appropriately with conflicts of interest. In addition, potential or perceived conflicts could give rise to litigation or regulatory enforcement actions.

Competition

The financial services industry and all of the company's businesses are intensely competitive, and are expected to remain so. The company competes on the basis of a number of factors, including transaction execution, products and services, innovation, reputation, creditworthiness and price. There has been substantial consolidation and convergence among companies in the financial services industry. This consolidation and convergence has also hastened the globalisation of the securities and other financial services markets.

To the extent the company expands into new business areas and new geographic regions, it will face competitors with more experience and more established relationships with clients, regulators and industry participants in the relevant market, which could adversely affect its ability to expand. Governments and regulators have recently adopted regulations, imposed taxes, adopted compensation restrictions or otherwise put forward various proposals that have or may impact the company's ability to conduct certain of its businesses in a cost-effective manner or at all in certain or all jurisdictions, including proposals relating to restrictions on the type of activities in which financial institutions are permitted to engage. These or other similar rules, many of which do not apply to all the company's competitors, could impact its ability to compete effectively.

Pricing and other competitive pressures in the company's businesses have continued to increase, particularly in situations where some competitors may seek to increase market share by reducing prices. For example, in connection with investment banking and other assignments, the company has experienced pressure to extend and price credit at levels that may not always fully compensate it for the risks taken.

The financial services industry is highly interrelated in that a significant volume of transactions occur among a limited number of members of that industry. Many transactions are syndicated to other financial institutions and financial institutions are often counterparties in transactions. This has led to claims by other market participants and regulators that such institutions have colluded in order to manipulate markets or market prices, including allegations that antitrust laws have been violated. While the company has extensive procedures and controls that are designed to identify and prevent such activities, allegations of such activities, particularly by regulators, can have a negative reputational impact and can subject the company to large fines and settlements, and potentially significant penalties, including treble damages.

Personnel

The company's businesses may be adversely affected if it is unable to hire and retain qualified employees. The company's performance is largely dependent on the talents and efforts of highly skilled people; therefore, the company's continued ability to compete effectively in its businesses, to manage its businesses effectively and to expand into new businesses and geographic areas depends on its ability to attract new talented and diverse employees and to retain and motivate existing employees. Factors that affect the company's ability to attract and retain such employees include compensation and benefits, and a reputation as a successful business with a culture of fairly hiring, training and promoting qualified employees. As a significant portion of the compensation that the company pays to its employees is paid in the form of year-end discretionary compensation, a significant portion of which is in the form of deferred equity-related awards, declines in the GS Group's profitability, or in the outlook for its future profitability, as well as regulatory limitations on compensation levels and terms, can negatively impact the company's ability to hire and retain highly qualified employees.

Competition from within the financial services industry and from businesses outside the financial services industry for qualified employees has often been intense. Recently, the company has experienced increased competition in hiring and retaining employees to address the demands of new regulatory requirements. This is also the case in emerging and growth markets, where the company is often competing for qualified employees with entities that have a significantly greater presence or more extensive experience in the region.

Changes in law or regulation in jurisdictions in which the company's operations are located that affect taxes on the company's employees' income, or the amount or composition of compensation, may also adversely affect the company's ability to hire and retain qualified employees in those jurisdictions.

The company's compensation practices are subject to review by, and the standards of, the PRA and the FCA. As a large financial institution, the company is subject to limitations on compensation practices (which may or may not affect competitors) by the PRA and the FCA and other regulators worldwide. These limitations, including any imposed by or as a result of future legislation or regulation, may require the company to alter compensation practices in ways that could adversely affect its ability to attract and retain talented employees.

Legal Liability

Substantial legal liability or significant regulatory action against the company could have material adverse financial effects or cause significant reputational harm, which in turn could seriously harm business prospects. The company faces significant legal risks in its businesses, and the volume of claims and amount of damages and penalties claimed in litigation and regulatory proceedings against financial institutions remain high. GSI is, from time to time, subject to a number of other investigations and reviews by, and in some cases has received requests for documents and information from, various governmental and regulatory bodies and self-regulatory organisations relating to various aspects of the company's businesses and operations. From experience, legal claims by customers and clients increase in a market downturn and employment-related claims increase following periods of staff reduction. Additionally, governmental entities have been and are plaintiffs in certain of the legal proceedings in which the company is involved, and it may face future actions or claims by the same or other governmental entities, as well as follow-on civil litigation that is often commenced after regulatory settlements.

Recently, significant settlements by several large financial institutions with governmental entities have been publicly announced. The trend of large settlements with governmental entities may adversely affect the outcomes for other financial institutions in similar actions, especially where governmental officials have announced that the large settlements will be used as the basis or a template for other settlements. The uncertain regulatory enforcement environment makes it difficult to estimate probable losses, which can lead to substantial disparities between legal reserves and subsequent actual settlements or penalties.

Unforeseen or Catastrophic Events

The occurrence of unforeseen or catastrophic events, including the emergence of a pandemic, such as the Ebola or Zika viruses, or other widespread health emergency (or concerns over the possibility of such an emergency), terrorist attacks, extreme terrestrial or solar weather events or other natural disasters, could create economic and financial disruptions, and could lead to operational difficulties (including travel limitations) that could impair the company's ability to manage its businesses and result in losses.

Risk Management

Risks are inherent in the company's business and include liquidity, market, credit, operational, model, legal, compliance, regulatory and reputational risks. For further information about the company's risk management processes, see "— Overview and Structure of Risk Management" below. The company's risks include the risks across its risk categories, regions or global businesses, as well as those which have uncertain outcomes and have the potential to materially impact the company's financial results, its liquidity and its reputation. For further information about the company's areas of risk, see "— Liquidity Risk Management", "— Market Risk Management", "— Credit Risk Management", "— Operational Risk Management", "— Model Risk Management" and "Principal Risks and Uncertainties".

Overview and Structure of Risk Management

Overview

The company believes that effective risk management is of primary importance to its success. GSI has comprehensive risk management processes through which the risks associated with the company's business are monitored, evaluated and managed. These risks include liquidity, market, credit, operational, model, legal, compliance, regulatory and reputational risk exposures. Together with the GSI board of directors, an extensive cross-divisional committee structure with representation from senior management of GSI is key to the risk management culture throughout the company. GSI's risk management framework, consistent with GS Group, is built around three core components: governance; processes; and people.

Governance. Senior management in the company's revenue-producing units and independent control and support functions lead and participate in risk-oriented committees. Independent control and support functions include Compliance, the Conflicts Resolution Group, Controllers, Credit Risk Management and Advisory (Credit Risk Management), Human Capital Management, Legal, Liquidity Risk Management and Analysis (Liquidity Risk Management), Market Risk Management and Analysis (Market Risk Management), Model Risk Management, Operations, Operational Risk Management and Analysis (Operational Risk Management), Tax, Technology and Treasury.

The company maintains strong communication about risk and has a culture of collaboration in decision-making among the revenue-producing units, independent control and support functions, committees and senior management. While the company believes that the first line of defence in managing risk rests with the managers in the revenue-producing units, it dedicates extensive resources to independent control and support functions in order to ensure a strong oversight structure and an appropriate segregation of duties. The company regularly reinforces a strong culture of escalation and accountability across all divisions and functions.

Processes. The company maintains various processes and procedures that are critical components of its risk management. First and foremost is the daily discipline of marking substantially all of the company's inventory to current market levels. The company carries its inventory at fair value, with changes in valuation reflected immediately in its risk management systems and in net revenues. The company does so because it believes this discipline is one of the most effective tools for assessing and managing risk and that it provides transparent and realistic insight into its financial exposures.

People. Even the best technology serves only as a tool for helping to make informed decisions in real time about the risks the company is taking. Ultimately, effective risk management requires the company's people to interpret risk data on an ongoing and timely basis and adjust risk positions accordingly. In both the revenue-producing units and the independent control and support functions, the experience of GSI's professionals, and their understanding of the nuances and limitations of each risk measure, guide the company in assessing exposures and maintaining them within prudent levels.

The company reinforces a culture of effective risk management in training and development programmes as well as the way performance is evaluated, and people are recognised and rewarded. Training and development programmes, including certain sessions led by the most senior leaders of GS Group and GSI, are focused on the importance of risk management, client relationships and reputational excellence. As part of the annual performance review process, reputational excellence is assessed, including how an employee exercises good risk management and reputational judgement, and adheres to the code of conduct and compliance policies. Review and reward processes are designed to communicate and reinforce to the company's professionals the link between behaviour and how people are recognised, the need to focus on clients and reputation, and the need to always act in accordance with the highest standards of GS Group.

Structure

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

European Management Committee. The European Management Committee (EMC) oversees all of GSI's activities in the region. It is chaired by the CEO of GSI and its membership includes senior managers from the revenue-producing divisions and independent control and support functions. The EMC reports to the GSI board of directors.

GSI Board Audit Committee. The GSI Board Audit Committee assists the company's board of directors in the review of processes for ensuring the suitability and effectiveness of the systems and controls of the company in the region. This committee also has responsibility for overseeing the external audit arrangements and review of internal audit activities. Its membership includes non-executive directors of the company. The GSI Board Audit Committee reports to the GSI board of directors.

GSI Board Risk Committee. The GSI Board Risk Committee is responsible for providing advice to the GSI board of directors on the company's overall current and future risk appetite and assisting the GSI board of directors in overseeing the implementation of that risk appetite and strategy by senior management. This includes reviewing and advising on the company's risk strategy and oversight of the capital, liquidity and funding position of the company. Its membership includes non-executive directors of the company. The GSI Board Risk Committee reports to the GSI board of directors.

GSI Risk Committee. The GSI Risk Committee is a management committee, which is responsible for the on-going monitoring and control of all financial risks associated with GSI's activities. This includes reviewing key financial and risk metrics, including but not limited to profit and loss, capital (including ICAAP), funding, liquidity, credit risk, market risk, operational risk, price verification and stress tests. The GSI Risk Committee approves market risk, credit risk, liquidity and regulatory capital limits. Its membership includes senior managers from the revenue-producing divisions and independent control and support functions. The GSI Risk Committee reports to the GSI board of directors.

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

GS Group Risk Governance

The comprehensive global risk governance framework in place at the GS Group level forms an integral part of the risk management process at GSI. GS Group has established a series of committees with specific risk management mandates. Committees with oversight of matters relevant to GSI include representation from GSI's senior management. The primary GS Group risk and oversight committees are described below.

Management Committee. The Management Committee oversees the global activities of GS Group, including GS Group's independent control and support functions. The committee is comprised of the most senior leaders of GS Group, and is chaired by GS Group's CEO. The CEO of GSI is a member of this committee.

Firmwide Client and Business Standards Committee. The Firmwide Client and Business Standards Committee assesses and makes determinations regarding business standards and practices, reputational risk management, client relationships and client service, is chaired by one of GS Group's presidents and co-chief operating officers (who is appointed as chair by GS Group's CEO), and reports to the Management Committee. Its membership includes representation from GSI's senior management.

Firmwide Risk Committee. The Firmwide Risk Committee is globally responsible for the ongoing monitoring and management of GS Group's financial risks. The Firmwide Risk Committee approves GS Group's risk limits framework, metrics and methodologies, reviews results of stress tests and scenario analyses, and provides oversight over model risk. This committee is co-chaired by GS Group's chief financial officer and its chief risk officer (who are appointed as co-chairs by GS Group's CEO), and reports to GS Group's Management Committee. Its membership includes representation from GSI's senior management.

Liquidity Risk Management

Overview (Audited)

Liquidity risk is the risk that the company will be unable to fund itself or meet its liquidity needs in the event of company-specific, broader industry, or market liquidity stress events. Liquidity is of critical importance to the company, as most of the failures of financial institutions have occurred in large part due to insufficient liquidity. Accordingly, the company has in place a comprehensive and conservative set of liquidity and funding policies. The principal objective is to be able to fund the company and to enable the core businesses to continue to serve clients and generate revenues, even under adverse circumstances.

Treasury has the primary responsibility for assessing, monitoring and managing liquidity and funding strategy. Treasury is independent of the revenue-producing units and reports to GS Group's chief financial officer.

GS Group's Liquidity Risk Management function is an independent risk management function responsible for control and oversight of GS Group's liquidity risk management framework, including stress testing and limit governance. Liquidity Risk Management is independent of the revenue-producing units and Treasury, and reports to GS Group's chief risk officer.

Liquidity Risk Management Principles (Audited)

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

Global Core Liquid Assets. GCLA is liquidity that the company maintains to meet a broad range of potential cash outflows and collateral needs in a stressed environment. The company's most important liquidity policy is to pre-fund its estimated potential cash and collateral needs during a liquidity crisis and hold this liquidity in the form of unencumbered, highly liquid securities and cash. The company believes that the securities held in its GCLA would be readily convertible to cash in a matter of days, through liquidation, by entering into repurchase agreements or from maturities of securities purchased under agreements to resell (resale agreements), and that this cash would allow it to meet immediate obligations without needing to sell other assets or depend on additional funding from credit-sensitive markets.

GSI's GCLA reflects the following principles:

- The first days or weeks of a liquidity crisis are the most critical to a company's survival;
- Focus must be maintained on all potential cash and collateral outflows, not just disruptions to financing flows. The company's businesses are diverse, and its liquidity needs are determined by many factors, including market movements, collateral requirements and client commitments, all of which can change dramatically in a difficult funding environment;
- During a liquidity crisis, credit-sensitive funding, including unsecured debt and some types of secured financing agreements, may be unavailable, and the terms (e.g., interest rates, collateral provisions and tenor) or availability of other types of secured financing may change; and
- As a result of the company's policy to pre-fund liquidity that it estimates may be needed in a crisis, GSI holds more unencumbered securities and has larger debt balances than it would otherwise require. GSI believes that its liquidity is stronger with greater balances of highly liquid unencumbered securities, even though it increases total assets and funding costs.

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

The company believes that its GCLA provides a resilient source of funds that would be available in advance of potential cash and collateral outflows and gives significant flexibility in managing through a difficult funding environment.

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

GSI's approach to asset-liability management includes:

- Conservatively managing the overall characteristics of its funding book, with a focus on maintaining long-term, diversified sources of funding in excess of current requirements. See "Balance Sheet and Funding Sources — Funding Sources" for additional details;
- Actively managing and monitoring its asset base, with particular focus on the liquidity, holding period and its ability to fund assets on a secured basis. The company assesses its funding requirements and its ability to liquidate assets in a stressed environment while appropriately managing risk. This enables the company to determine the most appropriate funding products and tenors. See "Balance Sheet and Funding Sources — Balance Sheet Management" for more detail on the company's balance sheet management process and "— Funding Sources — Secured Funding" for more detail on asset classes that may be harder to fund on a secured basis; and
- Raising secured and unsecured financing that has a long tenor relative to the liquidity profile of its assets. This reduces the risk that liabilities will come due in advance of the company's ability to generate liquidity from the sale of assets. Because GSI maintains a highly liquid balance sheet, the holding period of certain assets may be materially shorter than their contractual maturity dates.

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

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

The contingency funding plan identifies key groups of individuals to foster effective coordination, control and distribution of information, all of which are critical in the management of a crisis or period of market stress. The contingency funding plan also details the responsibilities of these groups and individuals, which include making and disseminating key decisions, coordinating all contingency activities throughout the duration of the crisis or period of market stress, implementing liquidity maintenance activities and managing internal and external communication.

Liquidity Stress Tests

In order to determine the appropriate size of the company's GCLA, an internal liquidity model is used, referred to as the Modeled Liquidity Outflow, which captures and quantifies the company's liquidity risks. Other factors are considered including, but not limited to, an assessment of potential intraday liquidity needs through an additional internal liquidity model, referred to as the Intraday Liquidity Model, the results of the company's long-term stress testing models, applicable regulatory requirements and a qualitative assessment of the condition of the financial markets and of the company. The results of the Modeled Liquidity Outflow, the Intraday Liquidity Model and the long-term stress testing models are reported to senior management on a regular basis.

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

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

The following are the critical modelling parameters of the Modeled Liquidity Outflow:

- Liquidity needs over a 30-day scenario;
- A two-notch downgrade of the long-term senior unsecured credit ratings of Group Inc. and its rated subsidiaries, including GSI;
- A combination of contractual outflows, such as upcoming maturities of unsecured debt, and contingent outflows (e.g., actions though not contractually required, may be deemed necessary in a crisis). GSI assumes most contingent outflows will occur within the initial days and weeks of a crisis;
- No issuance of equity or unsecured debt; and
- No asset liquidation, other than the GCLA.

The potential contractual and contingent cash and collateral outflows covered in the Modeled Liquidity Outflow include:

External Unsecured Funding

- Contractual: All upcoming maturities of unsecured long-term debt and other unsecured funding products. GSI assumes that it will be unable to issue new unsecured debt or rollover any maturing debt.
- Contingent: Repurchases of outstanding long-term debt and hybrid financial instruments in the ordinary course of business as a market maker.

Secured Funding

- Contractual: A portion of upcoming contractual maturities of secured funding due to either the inability to refinance or the ability to refinance only at wider haircuts (i.e., on terms which require the company to post additional collateral). Assumptions reflect, among other factors, the quality of the underlying collateral, counterparty roll probabilities (the company's assessment of the counterparty's likelihood of continuing to provide funding on a secured basis at the maturity of the trade) and counterparty concentration.
- Contingent: Adverse changes in the value of financial assets pledged as collateral for financing transactions, which would necessitate additional collateral postings under those transactions.

OTC Derivatives

- Contingent: Collateral postings to counterparties due to adverse changes in the value of the company's OTC derivatives, excluding those that are cleared and settled through central counterparties (OTC-cleared).
- Contingent: Other outflows of cash or collateral related to OTC derivatives, excluding OTC-cleared, including the impact of trade terminations, collateral substitutions, collateral disputes, loss of rehypothecation rights, collateral calls or termination payments required by a two-notch downgrade in Group Inc.'s and/or GSI's credit ratings, and collateral that has not been called by counterparties, but is available to them.

Exchange-Traded and OTC-cleared Derivatives

- Contingent: Variation margin postings required due to adverse changes in the value of outstanding exchange-traded and OTC-cleared derivatives.
- Contingent: An increase in initial margin and guarantee fund requirements by derivative clearing houses.

Customer Cash and Securities

- Contingent: Liquidity outflows associated with the company's prime brokerage business, including withdrawals of customer credit balances, and a reduction in customer short positions, which may serve as a funding source for long positions.

Firm Securities

- Contingent: Liquidity outflows associated with a reduction or composition change in firm short positions, which may serve as a funding source for long positions.

Unfunded Commitments

- Contingent: Draws on the company's unfunded commitments. Draw assumptions reflect, among other things, the type of commitment and counterparty.

Other

- Other upcoming large cash outflows, such as tax payments.

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

The following are key modelling elements of the Intraday Liquidity Model:

- Liquidity needs over a one-day settlement period;
- Delays in receipt of counterparty cash payments;
- A reduction in the availability of intraday credit lines at the company's third-party clearing agents; and
- Higher settlement volumes due to an increase in activity.

Long-Term Stress Testing. The company utilises a longer-term stress test to take a forward view on its liquidity position through a prolonged stress period in which the company experiences a severe liquidity stress and recovers in an environment that continues to be challenging. The company is focused on ensuring conservative asset-liability management to prepare for a prolonged period of potential stress, seeking to maintain a long-dated and diversified funding profile, taking into consideration the characteristics and liquidity profile of its assets.

The company also runs stress tests on a regular basis as part of its routine risk management processes and conducts tailored stress tests on an ad hoc or product-specific basis in response to market developments.

Model Review and Validation

Treasury regularly refines the company's Modeled Liquidity Outflow, Intraday Liquidity Model and stress testing models to reflect changes in market or economic conditions and the company's business mix. Any changes, including model assumptions, are assessed and approved by GS Group's Liquidity Risk Management function.

Model Risk Management is responsible for the independent review and validation of the company's liquidity models. See "Model Risk Management" for further information about the review and validation of these models.

Limits

The company uses liquidity limits at various levels and across liquidity risk types to manage the size of its liquidity exposures. Limits are measured relative to acceptable levels of risk given the liquidity risk tolerance of the company. The purpose of these limits is to assist senior management in monitoring and controlling the company's overall liquidity profile.

The GSI Risk Committee approves the company's liquidity risk limits. Limits are reviewed frequently and amended, with required approvals, on a permanent and temporary basis, as appropriate, to reflect changing market or business conditions.

The company's liquidity risk limits are monitored by Treasury and GS Group's Liquidity Risk Management. Treasury is responsible for identifying and escalating, on a timely basis, instances where limits have been exceeded.

GCLA and Unencumbered Metrics

GCLA. Based on the results of the company's internal liquidity risk models, described above, as well as consideration of other factors including, but not limited to, an assessment of the company's potential intraday liquidity needs and a qualitative assessment of the condition of the financial markets and the company, the company believes its liquidity position as of both December 2016 and December 2015 was appropriate. As of December 2016 and December 2015, the fair value of the securities and certain overnight cash deposits included in GSI's GCLA totalled $59.51 billion and $59.42 billion, respectively, and the fair value of these assets averaged $60.17 billion for 2016 and $57.22 billion for 2015.

The table below presents the average fair value of the company's GCLA by asset class.

	Average for the Year Ended December	
$ in millions	**2016**	2015
Overnight cash deposits	**$12,144**	$ 3,412
U.S. government obligations	**25,222**	19,308
French government obligations	**7,240**	10,769
U.K. government obligations	**8,750**	13,425
German government obligations	**4,610**	7,488
Japanese government obligations	**2,208**	2,813
Total	**$60,174**	$57,215

The company strictly limits its GCLA to the following narrowly defined list of securities and cash because they are highly liquid, even in a difficult funding environment: (i) unencumbered U.S. government obligations; (ii) unencumbered German, French, Japanese and U.K. government obligations; and (iii) certain overnight cash deposits in U.S. dollars and other highly liquid currencies. The company does not include other potential sources of excess liquidity, such as less liquid unencumbered securities or committed credit facilities, in the GCLA.

The company maintains its GCLA to enable it to meet current and potential liquidity requirements. The minimum GCLA required, as calculated by the Modeled Liquidity Outflow and the Intraday Liquidity Model, is held by the company directly and is intended for use only by GSI to meet its liquidity requirements, and is assumed not to be available to Group Inc. In addition to GCLA held in GSI, GS Group holds a portion of global GCLA directly at Group Inc., which in some circumstances may be additionally provided to GSI or other major subsidiaries.

Other Unencumbered Assets. In addition to its GCLA, the company has a significant amount of other unencumbered cash and financial instruments, including other government obligations, high-grade money market securities, corporate obligations, marginable equities, loans and cash deposits not included in its GCLA. The fair value of the company's other unencumbered assets averaged $25.68 billion and $25.95 billion for the years ended December 2016 and December 2015. GSI does not consider these assets liquid enough to be eligible for inclusion in its GCLA.

Liquidity Regulatory Framework

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

The LCR is designed to ensure that the entity maintains an adequate level of unencumbered high-quality liquid assets equal to or greater than the expected net cash outflows under an acute short-term liquidity stress scenario. The LCR rule issued by the European Commission became effective on October 1, 2015. The PRA set out a phase-in period whereby certain financial institutions, including GSI, must have an 80% minimum ratio initially, increasing to 90% on January 1, 2017 and 100% on January 1, 2018.

The NSFR is designed to promote medium- and long-term stable funding of the assets and off-balance-sheet activities of banking organisations over a one-year time horizon. The Basel Committee's NSFR framework requires banking organisations to maintain a minimum NSFR of 100%, and will be effective on January 1, 2018. In November 2016, the European Commission issued a proposed rule that would implement an NSFR for certain E.U. financial institutions, including GSI. The proposal would require financial institutions to ensure they have stable funding over a one-time horizon.

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

Credit Ratings

GSI relies on the debt capital markets to fund a portion of its day-to-day operations and the cost and availability of debt financing is influenced by its credit rating and that of Group Inc. Credit ratings are also important when GSI is competing in certain markets, such as OTC derivatives, and when GSI seeks to engage in longer-term transactions. See "Principal Risks and Uncertainties — Liquidity" for information about the risks associated with a reduction in GSI's and/or Group Inc.'s credit rating.

The table below presents the unsecured credit ratings and outlook of GSI and Group Inc. by Fitch, Inc. (Fitch), Moody's Investors Service (Moody's) and Standard & Poor's Ratings Services (S&P).

	As of December 2016		
	Fitch	**Moody's**	**S&P**
GSI			
Short-term Debt	**F1**	**P-1**	**A-1**
Long-term Debt	**A**	**A1**	**A+**
Ratings Outlook	**Stable**	**Stable**	**Stable**
Group Inc.			
Short-term Debt	**F1**	**P-2**	**A-2**
Long-term Debt	**A**	**A3**	**BBB+**
Subordinated Debt	**A-**	**Baa2**	**BBB-**
Trust Preferred	**BBB-**	**Baa3**	**BB**
Preferred Stock	**BB+**	**Ba1**	**BB**
Ratings Outlook	**Stable**	**Stable**	**Stable**

During the fourth quarter of 2016, S&P upgraded the long-term debt ratings of GSI from A to A+, and changed the outlook from watch positive to stable. Additionally, Fitch changed the outlook of GSI from positive to stable.

The company believes credit ratings are primarily based on the credit rating agencies' assessment of:

- The company's liquidity, market, credit and operational risk management practices;
- The level and variability of the company's earnings;
- The company's capital base;
- GSI and GS Group's franchise, reputation and management;
- The company's corporate governance;
- The external operating and economic environment, including, in some cases, the assumed level of government support or other systemic considerations, such as potential resolution; and
- The importance of GSI to GS Group.

Certain of the company's derivatives have been transacted under bilateral agreements with counterparties who may require GSI to post collateral or terminate the transactions based on changes in the credit ratings of either GSI and/or Group Inc. The company assesses the impact of these bilateral agreements by determining the collateral or termination payments that would occur assuming a downgrade by all rating agencies of both Group Inc. and GSI simultaneously and of each entity individually. A downgrade by any one rating agency, depending on the agency's relative ratings of Group Inc. and GSI at the time of the downgrade, may have an impact which is comparable to the impact of a downgrade by all rating agencies. The company manages its GCLA to ensure that it would, among other potential requirements, be able to make the additional collateral or termination payments that may be required in the event of a two-notch reduction in Group Inc. and/or GSI's long-term credit ratings, as well as collateral that has not been called by counterparties, but is available to them.

The table below presents the additional collateral or termination payments related to the company's net derivative liabilities under bilateral agreements that could have been called at the reporting date by counterparties in the event of a one-notch and two-notch downgrade in Group Inc.'s and/or GSI's credit ratings.

	As of December	
$ in millions	**2016**	2015
Additional collateral or termination payments:		
One-notch downgrade	**$ 491**	$ 401
Two-notch downgrade	**1,811**	1,457

Cash Flows

As a financial institution, the company's cash flows are complex and bear little relation to the company's profitability and net assets. Consequently, the company believes that traditional cash flow analysis is less meaningful in evaluating its liquidity position than the liquidity and asset-liability management policies described above. Cash flow analysis may, however, be helpful in highlighting certain macro trends and strategic initiatives in the company's businesses.

The statements of cash flows are set out on page 56 of this annual report.

Year Ended December 2016. The company's cash and cash equivalents increased by $7.90 billion to $16.88 billion at the end of 2016. The company generated $8.34 billion in net cash from operating activities.

Year Ended December 2015. The company's cash and cash equivalents increased by $6.82 billion to $9.97 billion at the end of 2015. The company generated $2.49 billion in net cash from operating activities, and generated $4.33 billion in net cash from financing activities due to the issuance of long-term subordinated loans and ordinary share capital.

Maturity of Financial Liabilities

See Note 24 to the financial statements for a maturity analysis of the company's financial liabilities.

Market Risk Management

Overview (Audited)

Market risk is the risk of loss in the value of the company's inventory, as well as certain other financial assets and financial liabilities, due to changes in market conditions. The company employs a variety of risk measures, each described in the respective sections below, to monitor market risk. The company holds inventory primarily for market making for clients. The company's inventory therefore changes based on client demands. The company's inventory is accounted for at fair value and therefore fluctuates on a daily basis, with the related gains and losses included in net revenues. 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 and metals.

Market Risk Management, which is independent of the revenue-producing units and reports to the GS Group chief risk officer, has primary responsibility for assessing, monitoring and managing market risk. Risks are monitored and controlled through strong oversight and independent control and support functions across the global businesses.

Managers in revenue-producing units and Market Risk Management discuss market information, positions and estimated risk and loss scenarios on an ongoing basis. Managers in revenue-producing units are accountable for managing risk within prescribed limits, both at the GS Group and GSI level. These managers have in-depth knowledge of their positions, markets and the instruments available to hedge their exposures.

Market Risk Management Process (Audited)

The company manages market risk by diversifying exposures, controlling position sizes and establishing economic hedges in related securities or derivatives. This process includes:

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

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

Risk Measures (Audited)

Market Risk Management produces risk measures and monitors them against established market risk limits. These measures reflect an extensive range of scenarios and the results are aggregated at the product, business and company-wide level.

A variety of risk measures are used to estimate the size of potential losses for both moderate and more extreme market moves over both short-term and long-term time horizons. Primary risk measures are VaR, used for shorter-term periods, and stress tests. The GSI risk report details key risks, drivers and changes for each business, and is distributed daily to senior management of both the revenue-producing units and independent control and support functions.

Value-at-Risk. VaR is the potential loss in value due to adverse market movements over a defined time horizon with a specified confidence level. A one-day time horizon with a 95% confidence level is typically employed. The VaR model is a single model that 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 across GSI.

There are inherent limitations to VaR and therefore a variety of risk measures are used in the market risk management process. Inherent limitations to VaR include:

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

When calculating VaR, historical simulations with full valuation of approximately 70,000 market factors are used. VaR is calculated at a position level based on simultaneously shocking the relevant market risk factors for that position. A sample from five years of historical data is taken to generate the scenarios for the VaR calculation. The historical data is weighted so that the relative importance of the data reduces over time. This gives greater importance to more recent observations and reflects current asset volatilities, which improves the accuracy of estimates of potential loss. As a result, even if positions included in VaR were unchanged, VaR would increase with increasing market volatility and vice versa.

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

The VaR measure does not include:

- Positions that are best measured and monitored using sensitivity measures; and
- The impact of changes in counterparty and GS Group's credit spreads on derivatives, as well as changes in GS Group's credit spreads on unsecured borrowings, which are designated at fair value through profit or loss.

The VaR model is applied consistently across GS Group, including GSI. Daily backtesting of the VaR model is performed (i.e., comparing daily trading net revenues to the VaR measure calculated as of the prior business day) at the GS Group and GSI level and for each of GS Group's businesses.

Stress Testing. Stress testing is a method of determining the effect on GS Group of various hypothetical stress scenarios. GS Group uses stress testing to examine risks of specific portfolios as well as the potential impact of significant risk exposures across GS Group, and the impact specifically on GSI. A variety of stress testing techniques to calculate the potential loss from a wide range of market moves on GSI's portfolios are used, including sensitivity analysis, scenario analysis and GSI stress tests. The results of the various stress tests are analysed together for risk management purposes.

Sensitivity analysis is used to quantify the impact of a market move in a single risk factor across all positions (e.g., equity prices or credit spreads) using a variety of defined market shocks, ranging from those that could be expected over a one-day time horizon up to those that could take many months to occur. Sensitivity analysis is also used to quantify the impact of the default of any single entity, which captures the risk of large or concentrated exposures.

Scenario analysis is used to quantify the impact of a specified event, including how the event impacts multiple risk factors simultaneously. For example, for sovereign stress testing GSI calculates potential direct exposure associated with its sovereign inventory as well as the corresponding debt, equity and currency exposures associated with its non-sovereign inventory that may be impacted by the sovereign distress. When conducting scenario analysis, a number of possible outcomes are typically considered for each scenario, ranging from moderate to severely adverse market impacts. In addition, these stress tests are constructed using both historical events and forward-looking hypothetical scenarios.

Stress testing across GS Group and GSI combines market, credit, operational and liquidity risks into a single combined scenario. These stress tests are primarily used to assess capital adequacy as part of the capital planning and stress testing process; however, it is also ensured that stress testing is integrated into the risk governance framework. This includes selecting appropriate scenarios to use for the capital planning and stress testing process.

Unlike VaR measures, which have an implied probability because they are calculated at a specified confidence level, there is generally no implied probability that GS Group's stress test scenarios will occur. Instead, stress tests are used to model both moderate and more extreme moves in underlying market factors. When estimating potential loss, it is generally assumed that positions cannot be reduced or hedged (although experience demonstrates that the company is generally able to do so).

Stress test scenarios are conducted on a regular basis as part of the routine risk management process and on an ad hoc basis in response to market events or concerns. Stress testing is an important part of the risk management process because it allows the company to quantify its exposure to tail risks, highlight potential loss concentrations, undertake risk/reward analysis and assess and mitigate its risk positions.

Limits. Risk limits are used at various levels (including entity, business and product) to govern risk appetite by controlling the size of its exposures to market risk. Limits for GSI are set based on VaR and on a range of stress tests relevant to the company's exposures. Limits are reviewed frequently and amended on a permanent or temporary basis to reflect changing market conditions, business conditions or tolerance for risk.

The GSI Board Risk Committee and the GSI Risk Committee sets market risk limits for the company at an overall, business and product level, consistent with the company's risk appetite.

The purpose of the company-wide limits is to assist senior management in controlling the overall risk profile. Sub-limits are set below the approved level of risk limits. Sub-limits set the desired maximum amount of exposure that may be managed by any particular business on a day-to-day basis without additional levels of senior management approval, effectively leaving day-to-day decisions to individual desk managers and traders. Accordingly, sub-limits are a management tool designed to ensure appropriate escalation rather than to establish maximum risk tolerance. Sub-limits also distribute risk among various businesses in a manner that is consistent with their level of activity and client demand, taking into account the relative performance of each area.

Market risk limits are monitored daily by Market Risk Management, which is responsible for identifying and escalating, on a timely basis, instances where limits have been exceeded.

When a risk limit has been exceeded (e.g., due to positional changes or changes in market conditions, such as increased volatilities or changes in correlations), it is escalated to senior managers in Market Risk Management and the appropriate risk committee. Such instances are remediated by an inventory reduction and/or a temporary or permanent increase to the risk limit.

Model Review and Validation

The VaR and stress testing models are regularly reviewed by Market Risk Management 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 assumptions and/or models, Model Risk Management performs model validations. Significant changes to the VaR and stress testing models are reviewed with GS Group's chief risk officer and chief financial officer, as well as approved by GS Group's Firmwide Risk Committee and, where appropriate, the GSI Risk Committee.

See "Model Risk Management" for further information about the review and validation of these models.

Systems

GS Group has made a significant investment in technology to monitor market risk including:

- An independent calculation of VaR and stress measures;
- Risk measures calculated at individual position levels;
- Attribution of risk measures to individual risk factors of each position;
- The ability to report many different views of the risk measures (e.g., by desk, business, product type or legal entity); and
- The ability to produce ad hoc analyses in a timely manner.

Metrics (Audited)

The tables below present, by risk category, average daily VaR and period-end VaR, as well as the high and low VaR for the period. Diversification effect in the tables below 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.

The table below presents average daily VaR.

	Year Ended December	
$ in millions	**2016**	2015
Risk Categories		
Interest rates	**$ 25**	$ 22
Equity prices	**17**	17
Currency rates	**10**	8
Commodity prices	**2**	1
Diversification effect	**(23)**	(17)
Total	**$ 31**	$ 31

The company's average daily VaR was $31 million for the year ended December 2016, unchanged from the year ended December 2015.

The table below presents period-end VaR.

	As of December	
$ in millions	**2016**	2015
Risk Categories		
Interest rates	**$ 23**	$ 23
Equity prices	**16**	14
Currency rates	**8**	13
Commodity prices	**3**	1
Diversification effect	**(24)**	(23)
Total	**$ 26**	$ 28

The company's daily VaR decreased to $26 million as of December 2016 from $28 million as of December 2015, primarily reflecting a decrease in the currency rates category due to decreased exposures. The decrease was partially offset by an increase in the equity prices category due to increased exposures.

The table below presents high and low VaR by risk category.

	Year Ended December 2016	
$ in millions	**High**	**Low**
Risk Categories		
Interest rates	**$37**	**$20**
Equity prices	**52**	**13**
Currency rates	**20**	**5**
Commodity prices	**5**	**–**

The high and low total VaR was $59 million and $24 million, respectively, for the year ended December 2016.

Sensitivity Measures (Audited)

Certain portfolios and individual positions are not included in VaR because VaR is not the most appropriate risk measure for these positions.

10% Sensitivity Measures. The table below presents market risk for positions that are not included in VaR. The market risk of these positions is determined by estimating the potential reduction in net revenues of a 10% decline in the value of these positions.

	As of December	
$ in millions	**2016**	2015
Asset Categories		
Equity	**$11.8**	$10.8
Debt	**0.1**	0.3
Total	**$11.9**	$11.1

Credit Risk Management

Overview (Audited)

Credit risk represents the potential for loss due to the default or deterioration in credit quality of a counterparty (e.g., an OTC derivatives counterparty or a borrower) or an issuer of securities or other instruments the company holds. The company's exposure to credit risk comes mostly from client transactions in OTC derivatives. 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 debtors.

Credit Risk Management, which is independent of the revenue-producing units and reports to GS Group's chief risk officer, has primary responsibility for assessing, monitoring and managing credit risk. GSI's framework for managing credit risk is consistent with the framework of GS Group. GS Group's Credit Policy Committee and Firmwide Risk Committee establish and review credit policies and parameters for GS Group as a whole. In addition, the company holds other positions that give rise to credit risk (e.g., bonds held in inventory). These credit risks are captured as a component of market risk measures, which are monitored and managed by Market Risk Management, consistent with other inventory positions. The company also enters 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 (Audited)

Effective management of credit risk requires accurate and timely information, a high level of communication and knowledge of customers, countries, industries and products. The 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 the company's current and potential credit exposure and losses resulting from counterparty default;
- Reporting of credit exposures to senior management, the GSI board of directors and regulators;
- Using credit risk mitigants, including collateral and hedging; and
- Communicating and collaborating 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 company's counterparties. For substantially all of the company's 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 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 aggregate credit risk by product, internal credit rating, industry, country and region.

Risk Measures and Limits

Credit risk is measured based on the potential loss in the event of non-payment by a counterparty using current and potential exposure. For derivatives and securities financing transactions, current exposure represents the amount presently owed to the company after taking into account applicable netting and collateral arrangements while potential exposure represents the company'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.

Credit limits are used at various levels (e.g. counterparty, economic group, industry and country) to control the size and nature of the company's credit exposures. Limits for counterparties and economic groups are reviewed regularly and revised to reflect changing risk appetites for a given counterparty or group of counterparties. Limits for industries and countries are based on the company's risk tolerance and are designed to allow for regular monitoring, review, escalation and management of credit risk concentrations.

The GSI Board Risk Committee and the GSI Risk Committee approve credit risk limits for the company at the company-wide, business and product level, consistent with the company's risk appetite. Furthermore, the GSI Risk Committee approves the framework that governs the setting of credit risk sub-limits at the GSI level, which is delegated to the GSI Credit Committee. Credit Risk Management (through delegated authority from GS Group's Risk Governance Committee and the GSI Credit Committee) sets credit limits for individual counterparties, economic groups, industries and countries. Policies authorised by GS Group's Firmwide Risk Committee, Risk Governance Committee and Credit Policy Committee prescribe the level of formal approval required for GS Group to assume credit exposure to a counterparty across all product areas, taking into account any applicable netting provisions, collateral or other credit risk mitigants.

Stress Tests

Regular stress tests are used to calculate the credit exposures, including potential concentrations that would result from applying shocks to counterparty credit ratings or credit risk factors (e.g., currency rates, interest rates, equity prices). These shocks include a wide range of moderate and more extreme market movements. Some of the stress tests include shocks to multiple risk factors, consistent with the occurrence of a severe market or economic event. In the case of sovereign default, Credit Risk Management estimates the direct impact of the default on the company's credit exposures, changes to the company's credit exposures arising from potential market moves in response to the default, and the impact of credit market deterioration on corporate borrowers and counterparties that may result from the sovereign default. Unlike potential exposure, which is calculated within a specified confidence level, with a stress test there is generally no assumed probability of these events occurring.

Stress tests are performed on a regular basis as part of the company's routine risk management processes and the company conducts tailored stress tests on an ad hoc basis in response to market developments. Stress tests are conducted jointly with the company's market and liquidity risk functions.

Model Review and Validation

The company's potential credit exposure and stress testing models, and any changes to such models or assumptions, are reviewed by Model Risk Management. See "Model Risk Management" for further information about the review and validation of these models.

Risk Mitigants

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

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

Credit Exposures (Audited)

GSI's credit exposures are described further below.

Financial Instruments Owned. Financial instruments owned includes cash instruments and derivatives. The company's credit exposure on derivatives arises primarily from market-making activities. As a market maker, the company enters into derivative transactions to provide liquidity to clients and to facilitate the transfer and hedging of their risks. The company also enters into derivatives to manage market risk exposures. In the table below cash instruments are included in the gross exposure; however, to the extent that they have been captured by market risk they are removed to arrive at net credit exposure. Derivatives are reported at fair value on a gross by counterparty basis in the company's financial statements unless it has current legal right of set-off and also intends to settle on a net basis. OTC derivatives are risk managed using the risk processes, measures and limits described above.

Collateralised Agreements. The company bears credit risk related to collateralised agreements only to the extent that cash advanced to the counterparty exceeds the value of the collateral received. The company's credit exposure on these transactions is therefore significantly lower than the amounts recorded on the balance sheet, which represent fair values or contractual value before consideration of collateral received. The company also has credit exposure on collateralised financings, which are liabilities on its balance sheet, to the extent that the value of collateral pledged to the counterparty for these transactions exceeds the amount of cash or collateral received.

Debtors. The company is exposed to credit risk from its debtors through its amounts due from broker/dealers and customers; and amounts due from parent and group undertakings. These primarily comprise receivables related to cash collateral paid to counterparties and clearing organisations in respect of derivative financial instrument liabilities. Debtors also includes collateralised receivables related to customer securities transactions, which generally have minimal credit risk due to both the value of the collateral received and the short-term nature of these receivables.

Cash at Bank and in Hand. Cash at bank and in hand include both interest-bearing and non-interest-bearing deposits. To mitigate the risk of credit loss, the company places substantially all of its deposits with highly-rated banks and central banks.

The tables below present the company's gross credit exposure to financial assets and net credit exposure after taking account of assets captured by market risk in the company's risk management process, counterparty netting (i.e., the netting of financial assets and financial liabilities for a given counterparty when a legal right of setoff exists under an enforceable netting agreement), and cash and security collateral received and cash collateral posted under credit support agreements, which management considers when determining credit risk. This is presented by financial asset class and by credit rating equivalent (internally determined public rating agency equivalents).

In the tables below, cash collateral and security collateral are slightly higher than the amounts disclosed in Note 25 to the financial statements as the below disclosure includes additional cash and security collateral that management considers when determining credit risk.

$ in millions	Gross exposure	Assets captured by market risk	Counterparty netting	Cash collateral	Security collateral received	Net credit exposure
Financial Asset Class						
As of December 2016						
Financial instruments owned	**$662,945**	**$(58,759)**	**$(525,887)**	**$(42,921)**	**$ (16,136)**	**$19,242**
Collateralised agreements	**184,600**	**–**	**(85,692)**	**–**	**(95,741)**	**3,167**
Debtors	**68,960**	**–**	**(3,531)**	**(37,476)**	**(4,864)**	**23,089**
Cash at bank and in hand	**16,888**	**–**	**–**	**–**	**–**	**16,888**
Total	**$933,393**	**$(58,759)**	**$(615,110)**	**$(80,397)**	**$(116,741)**	**$62,386**
As of December 2015						
Financial instruments owned	$616,054	$(62,850)	$(474,519)	$(43,121)	$ (13,946)	$21,618
Collateralised agreements	163,703	–	(48,219)	–	(112,523)	2,961
Debtors	59,874	–	(542)	(32,202)	(7,900)	19,230
Cash at bank and in hand	9,974	–	–	–	–	9,974
Total	$849,605	$(62,850)	$(523,280)	$(75,323)	$(134,369)	$53,783

$ in millions	Gross exposure	Assets captured by market risk	Counterparty netting	Cash collateral	Security collateral received	Net credit exposure
Credit Rating Equivalent						
As of December 2016						
AAA/Aaa	**$ 14,117**	**$ –**	**$ (2,633)**	**$ (2,172)**	**$ (235)**	**$ 9,077**
AA/Aa2	**124,593**	**–**	**(56,064)**	**(23,156)**	**(26,761)**	**18,612**
A/A2	**603,808**	**–**	**(488,712)**	**(30,600)**	**(66,657)**	**17,839**
BBB/Baa2	**91,020**	**–**	**(56,285)**	**(16,746)**	**(9,573)**	**8,416**
BB/Ba2 or lower	**37,809**	**–**	**(11,315)**	**(7,709)**	**(12,966)**	**5,819**
Unrated	**62,046**	**(58,759)**	**(101)**	**(14)**	**(549)**	**2,623**
Total	**$933,393**	**$(58,759)**	**$(615,110)**	**$(80,397)**	**$(116,741)**	**$62,386**
As of December 2015						
AAA/Aaa	$ 15,024	$ –	$ (2,944)	$ (2,385)	$ (2,195)	$ 7,500
AA/Aa2	120,851	–	(53,752)	(18,425)	(33,236)	15,438
A/A2	530,383	–	(415,540)	(30,443)	(69,077)	15,323
BBB/Baa2	77,943	–	(41,552)	(15,834)	(11,334)	9,223
BB/Ba2 or lower	38,302	–	(9,386)	(8,140)	(17,536)	3,240
Unrated	67,102	(62,850)	(106)	(96)	(991)	3,059
Total	$849,605	$(62,850)	$(523,280)	$(75,323)	$(134,369)	$53,783

The unrated net credit exposure of $2.62 billion and $3.06 billion as of December 2016 and December 2015, respectively, relates to financial assets for which the company has not assigned an internally determined public rating agency equivalent.

In addition to credit risk on financial assets, the company also has credit exposure in respect of contingent and forward starting resale and securities borrowing agreements. The company's gross credit exposure related to these activities is $43.60 billion and $29.28 billion as of December 2016 and December 2015, respectively. However, this will be mitigated by collateral of approximately $43.26 billion and $29.21 billion as of December 2016 and December 2015, respectively, if these commitments are fulfilled. As a result, the company's net credit exposure to these commitments was $340 million and $64 million as of December 2016 and December 2015, respectively.

As of December 2016 and December 2015, financial assets past due or impaired were not material.

Operational Risk Management

Overview (Audited)

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

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

GSI's framework for managing operational risk is fully integrated in GS Group's comprehensive control framework designed to provide a well-controlled environment to minimise operational risks. In GSI, the EMEA Operational Risk Committee provides regional oversight for ongoing development and implementation of the operational risk framework and promotion of a robust overall control environment. Operational Risk Management is a risk management function independent of revenue-producing units, reports to GS Group'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 exposure to operational risk.

Operational Risk Management Process (Audited)

Managing operational risk requires timely and accurate information as well as a strong control culture. Operational risk is managed through:

- Training, supervision and development of people;
- Active participation of senior management in identifying and mitigating key operational risks;
- Independent control and support functions that monitor operational risk on a daily basis, and implementation of extensive policies and procedures, and controls designed to prevent the occurrence of operational risk events;
- Proactive communication between revenue-producing units and independent control and support functions; and
- A network of systems to facilitate the collection of data used to analyse and assess operational risk exposure.

Top-down and bottom-up approaches are combined to manage and measure operational risk. From a top-down perspective, senior management assesses company-wide and business-level operational risk profiles. From a bottom-up perspective, revenue-producing units and independent control and support functions are responsible for risk identification and risk management on a day-to-day basis, including escalating operational risks to senior management.

The operational risk management framework is in part designed to comply with the operational risk measurement rules under Basel III and has evolved based on the changing needs of the company's businesses and regulatory guidance. The operational risk management framework comprises the following practices:

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

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

Risk Identification and Assessment

The core of the operational risk management framework is risk identification and assessment. A comprehensive data collection process is in place, including policies and procedures, for operational risk events.

Policies are in place that require the revenue-producing units and independent control and support functions to report and escalate operational risk events. When operational risk events are identified, policies require that the events be documented and analysed to determine whether changes are required in the systems and/or processes to further mitigate the risk of future events.

In addition, systems capture internal operational risk event data, key metrics such as transaction volumes, and statistical information such as performance trends. An internally-developed operational risk management application is used to aggregate and organise this information. One of the company's key risk identification and assessment tools is an operational risk and control self-assessment process which is performed by managers from both revenue-producing units and independent control and support functions. This process consists of the identification and rating of operational risks, on a forward-looking basis, and the related controls. The results from this process are analysed to evaluate operational risk exposures and identify businesses, activities or products with heightened levels of operational risk.

Risk Measurement

GSI's operational risk exposure is measured over a twelve-month time horizon using both statistical modelling and scenario analyses, which involve qualitative assessments of the potential frequency and extent of potential operational risk losses, for each of GSI's businesses. Operational risk measurement incorporates qualitative and quantitative assessments of factors including:

- Internal and external operational risk event data;
- Assessments of GSI's internal controls;
- Evaluations of the complexity of GSI's business activities;
- The degree of and potential for automation in GSI's processes;
- New activity information;
- The legal and regulatory environment;
- Changes in the markets for GSI's products and services, including the diversity and sophistication of GSI's 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 and Reporting

Changes in the operational risk profile of GSI, including changes in business mix or jurisdictions in which GSI operates, are evaluated by monitoring the factors noted above at the company level. GSI 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 company monitors the results of assessments and independent internal audits of these internal controls.

Periodic operational risk reports are provided to senior management, the GSI Risk Committee and the GSI board of directors. In addition, the company has 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. If incidents breach escalation thresholds, respective operational risk reports are provided to senior management and the GSI Board Risk Committee.

Model Review and Validation

The statistical models utilised by Operational Risk Management are subject to independent review and validation by Model Risk Management. See "Model Risk Management" for further information about the review and validation of these models.

Model Risk Management

Overview (Audited)

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

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

Model Review and Validation

Model Risk Management consists of quantitative professionals who perform an independent review, validation and approval of the 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.

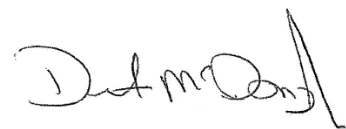
The model validation process incorporates a review of models and trade and risk parameters across a broad range of scenarios (including extreme conditions) in order to critically evaluate and verify:

- 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.

See "Critical Accounting Policy — Fair Value — Review of Valuation Models", "Liquidity Risk Management", "Market Risk Management", "Credit Risk Management" and "Operational Risk Management" for further information about the company's use of models within these areas.

Date of Authorisation of Issue

The strategic report was authorised for issue by the Board of Directors on March 15, 2017.



By order of the board
D. W. McDonogh
Director
March 16, 2017

Directors' Report

The directors present their report and the audited financial statements for the year ended December 2016.

Introduction

In accordance with section 414A of the Companies Act 2006, the directors have prepared a strategic report, which is included in Part I of this annual report and which contains a review of the company's businesses and a description of the principal risks and uncertainties facing the company. The directors have chosen to disclose the company's risk management objectives and policies, including exposures to market risk, credit risk and liquidity risk, and the future outlook of the company in the strategic report in accordance with section 414C(11) of the Companies Act 2006.

Dividends

The directors do not recommend the payment of an ordinary dividend for 2016. No dividends were paid in 2015.

Exchange Rate

The British pound/U.S. dollar exchange rate was £/$1.2337 and £/$1.4732 as of December 2016 and December 2015, respectively. The average rate for the year was £/$1.3439 and £/$1.5252 for 2016 and 2015, respectively.

Employment of Disabled Persons

Applications for employment by disabled persons are fully and fairly considered with regard to the aptitudes and abilities of each applicant. Efforts are made to enable any employees who become disabled during employment to continue their careers within GS Group. Training, career development and promotion of disabled persons are, to the extent possible, identical to that of other employees who are not disabled.

Charitable Contributions

The company made donations to charity of $25 million and $36 million for 2016 and 2015, respectively. This included donations of $22 million and $32 million for 2016 and 2015, respectively, to Goldman Sachs Gives (UK), a registered charity, for general charitable purposes in England and Wales.

Employee Involvement

It is company policy that there should be effective communication with all employees who, subject to practical and commercial considerations, should be consulted on and involved in decisions that affect their current jobs or future prospects. Employees share in performance-based incentive schemes.

Disclosure of Information to Auditors

In the case of each of the persons who are directors of the company at the date when this report was approved:

- So far as each of the directors is aware, there is no relevant audit information of which the company's auditors are unaware; and
- Each of the directors has taken all the steps that he/she ought to have taken as a director to make himself/herself aware of any relevant audit information and to establish that the company's auditors are aware of that information.

Independent Auditors

Prior to 1 October 2007, the company passed an elective resolution under section 386 of the Companies Act 1985 to dispense with the annual reappointment of auditors. PricewaterhouseCoopers LLP will, accordingly, continue in office as auditors of the company pursuant to section 487(2) of the Companies Act 2006 and paragraph 44 of Schedule 3 to the Companies Act 2006 (Commencement No. 3 Consequential Amendment, Transitional Provisions and Savings) Order 2007.

Directors' Report

Statement of Directors' Responsibilities

The directors are responsible for preparing the strategic report, the directors' report and the financial statements in accordance with applicable law and regulations. Company law requires the directors to prepare accounts for each financial period which give a true and fair view of the state of affairs of the company as at the end of the financial period and of the profit or loss of the company for that period. In preparing those accounts, the directors are required to:

- Select suitable accounting policies and then apply them consistently;
- Make judgements and estimates that are reasonable and prudent;
- State whether applicable accounting standards have been followed subject to any material departures disclosed and explained in the financial statements; and
- Prepare the accounts on the going concern basis unless it is inappropriate to presume that the company will continue in business.

The directors are responsible for keeping adequate accounting records which disclose with reasonable accuracy at any time the financial position of the company and to enable them to ensure that the accounts comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the company and, hence, for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The directors are responsible for the maintenance and integrity of the company's financial statements on the Goldman Sachs website. Legislation in the U.K. governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Directors

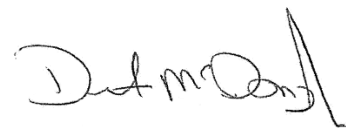
The directors of the company who served throughout the year and to the date of this report, except where noted, were:

Name	Appointed	Resigned
J. M. D. Barroso, Chairman	**July 8, 2016**	
C. A. G. Dahlbäck		**July 20, 2016**
I. Ealet	**June 28, 2016**	
R. J. Gnodde, Chief executive officer		
Lord Grabiner QC		
Lord Griffiths of Fforestfach		
N. Harman	**December 12, 2016**	
S. S. Kilsby	**May 5, 2016**	
D. W. McDonogh	**December 1, 2016**	
M. S. Sherwood		**December 31, 2016**
R. A. Vince		**May 5, 2016**
M. O. Winkelman	**June 10, 2016**	

No director had, at the year end, any interest requiring note herein.

Date of Authorisation of Issue

The financial statements were authorised for issue by the Board of Directors on March 15, 2017.



By order of the board
D. W. McDonogh
Director
March 16, 2017

Independent Auditors’ Report to the Members of Goldman Sachs International (unlimited company)

Report on the financial statements

Our opinion

In our opinion, Goldman Sachs International’s financial statements (the “financial statements”):

- give a true and fair view of the state of the company’s affairs as of December 31, 2016 and of its profit and cash flows for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Companies Act 2006.

What we have audited

The financial statements, included within the Annual Report, comprise:

- the Balance Sheet as of December 31, 2016;
- the Profit and Loss Account and the Statements of Comprehensive Income for the year then ended;
- the Statements of Cash Flows for the year then ended;
- the Statements of Changes in Equity for the year then ended; and
- the notes to the financial statements, which include a summary of significant accounting policies and other explanatory information.

Certain required disclosures have been presented elsewhere in the Annual Report, rather than in the notes to the financial statements. These are cross-referenced from the financial statements and are identified as audited.

The financial reporting framework that has been applied in the preparation of the financial statements is United Kingdom Accounting Standards, comprising FRS 101 “Reduced Disclosure Framework”, and applicable law (United Kingdom Generally Accepted Accounting Practice).

In applying the financial reporting framework, the directors have made a number of subjective judgements, for example in respect of significant accounting estimates. In making such estimates, they have made assumptions and considered future events.

Opinion on other matter prescribed by the Companies Act 2006

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the Strategic Report and the Directors’ Report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the Strategic Report and the Directors’ Report have been prepared in accordance with applicable legal requirements.

In addition, in light of the knowledge and understanding of the company and its environment obtained in the course of the audit, we are required to report if we have identified any material misstatements in the Strategic Report and the Directors’ Report. We have nothing to report in this respect.

Other matters on which we are required to report by exception

Adequacy of accounting records and information and explanations received

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- we have not received all the information and explanations we require for our audit; or
- adequate accounting records have not been kept, or returns adequate for our audit have not been received from branches not visited by us; or
- the financial statements are not in agreement with the accounting records and returns.

We have no exceptions to report arising from this responsibility.

Directors’ remuneration

Under the Companies Act 2006 we are required to report to you if, in our opinion, certain disclosures of directors’ remuneration specified by law are not made. We have no exceptions to report arising from this responsibility.

Responsibilities for the financial statements and the audit

Our responsibilities and those of the directors

As explained more fully in the Statement of Directors' Responsibilities set out on page 50, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view.

Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland) ("ISAs (UK & Ireland)"). Those standards require us to comply with the Auditing Practices Board's Ethical Standards for Auditors.

This report, including the opinions, has been prepared for and only for the company's members as a body in accordance with Chapter 3 of Part 16 of the Companies Act 2006 and for no other purpose. We do not, in giving these opinions, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

What an audit of financial statements involves

We conducted our audit in accordance with ISAs (UK & Ireland). An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of:

- whether the accounting policies are appropriate to the company's circumstances and have been consistently applied and adequately disclosed;
- the reasonableness of significant accounting estimates made by the directors; and
- the overall presentation of the financial statements.

We primarily focus our work in these areas by assessing the directors' judgements against available evidence, forming our own judgements, and evaluating the disclosures in the financial statements.

We test and examine information, using sampling and other auditing techniques, to the extent we consider necessary to provide a reasonable basis for us to draw conclusions. We obtain audit evidence through testing the effectiveness of controls, substantive procedures or a combination of both.

In addition, we read all the financial and non-financial information in the Annual Report to identify material inconsistencies with the audited financial statements and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by us in the course of performing the audit. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report. With respect to the Strategic Report and Directors' Report, we consider whether those reports include the disclosures required by applicable legal requirements.

Duncan McNab (Senior Statutory Auditor)
for and on behalf of PricewaterhouseCoopers LLP
Chartered Accountants and Statutory Auditors
7 More London Riverside
London
SE1 2RT
March 16, 2017

Profit and Loss Account

$ in millions	Note	Year Ended December 2016	2015
Net revenues	4	**$ 6,549**	$ 7,016
Administrative expenses	5	**(4,269)**	(4,077)
Operating profit		**2,280**	2,939
Interest payable and similar charges	8	**(346)**	(285)
Net finance income	9	**9**	7
Profit on ordinary activities before taxation		**1,943**	2,661
Tax on profit on ordinary activities	11	**(487)**	(353)
Profit for the financial year		**$ 1,456**	$ 2,308

Net revenues and operating profit of the company are derived from continuing operations in the current and prior years.

Statements of Comprehensive Income

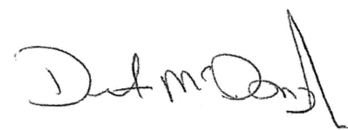
$ in millions	Note	Year Ended December 2016	2015
Profit for the financial year		**$ 1,456**	$ 2,308
Other comprehensive income			
Items that will not be reclassified subsequently to profit or loss			
Actuarial loss relating to the pension scheme	9	**(189)**	(3)
Debt valuation adjustment	18	**(182)**	–
U.K. deferred tax attributable to the components of other comprehensive income	16	**92**	1
U.K. current tax attributable to the components of other comprehensive income		**3**	–
Other comprehensive loss for the financial year, net of tax		**(276)**	(2)
Total comprehensive income for the financial year		**$ 1,180**	$ 2,306

The accompanying notes are an integral part of these financial statements.

Balance Sheet

		As of December	
$ in millions	**Note**	**2016**	2015
Fixed assets	12	**$ 140**	$ 12
Current assets			
Financial instruments owned (includes $20,110 as of December 2016 and $22,036 as of December 2015, pledged as collateral)	13	**662,945**	616,054
Collateralised agreements	14	**184,600**	163,703
Debtors	15	**69,696**	60,488
Cash at bank and in hand	20	**16,888**	9,974
		934,129	850,219
Creditors: amounts falling due within one year			
Financial instruments sold, but not yet purchased	13	**(613,911)**	(555,654)
Collateralised financings	17	**(137,641)**	(116,385)
Other creditors	18	**(110,931)**	(116,300)
		(862,483)	(788,339)
Net current assets		**71,646**	61,880
Total assets less current liabilities		**71,786**	61,892
Creditors: amounts falling due after more than one year			
Collateralised financings	17	**(6,233)**	(3,502)
Other creditors	18	**(38,073)**	(32,298)
		(44,306)	(35,800)
Net assets excluding pension surplus		**27,480**	26,092
Pension surplus	9	**53**	261
Net assets including pension surplus		**$ 27,533**	$ 26,353
Capital and reserves			
Called up share capital	19	**$ 582**	$ 582
Share premium account		**4,864**	4,864
Capital reserve (non-distributable)		**17**	17
Profit and loss account		**22,070**	20,890
Total shareholder's funds		**$ 27,533**	$ 26,353

The financial statements were approved by the Board of Directors on March 15, 2017 and signed on its behalf by:



D. W. McDonogh
Director

The accompanying notes are an integral part of these financial statements.
Company number: 02263951

Statements of Changes in Equity

	Year Ended December	
$ in millions	**2016**	2015
Called up share capital		
Beginning balance	**$ 582**	$ 533
Shares issued	**–**	49
Ending balance	**582**	582
Share premium account		
Beginning balance	**4,864**	2,863
Shares issued	**–**	2,001
Ending balance	**4,864**	4,864
Capital reserve (non-distributable)		
Beginning balance	**17**	17
Ending balance	**17**	17
Profit and loss account		
Beginning balance	**20,890**	18,584
Profit for the financial year	**1,456**	2,308
Other comprehensive loss	**(276)**	(2)
Share-based payments	**497**	630
Management recharge related to share-based payments	**(497)**	(630)
Ending balance	**22,070**	20,890
Total shareholder's funds	**$27,533**	$26,353

No dividends were paid in 2016 and 2015.

The accompanying notes are an integral part of these financial statements.

Statements of Cash Flows

		Year Ended December	
$ in millions	**Note**	**2016**	2015
Cash flows from operating activities			
Cash generated from operations	21	**$ 8,745**	$2,889
Taxation received		**23**	3
Taxation paid		**(428)**	(403)
Net cash from operating activities		**8,340**	2,489
Cash flows from investing activities			
Payments to acquire fixed assets		**(135)**	(3)
Net cash used in investing activities		**(135)**	(3)
Cash flows from financing activities			
Receipts from issuing ordinary share capital		**–**	2,050
Interest paid on long-term subordinated loans		**(305)**	(217)
Receipts from issuing long-term subordinated loans		**–**	2,500
Net cash from/(used in) financing activities		**(305)**	4,333
Net increase in cash and cash equivalents		**7,900**	6,819
Cash and cash equivalents, beginning balance		**9,970**	3,577
Foreign exchange losses on cash and cash equivalents		**(989)**	(426)
Cash and cash equivalents, ending balance	20	**$16,881**	$9,970

The accompanying notes are an integral part of these financial statements.

Note 1.

General Information

The company is a private unlimited company and is incorporated and domiciled in England and Wales. The address of its registered office is Peterborough Court, 133 Fleet Street, London, EC4A 2BB, United Kingdom.

The company's immediate parent undertaking is Goldman Sachs Group UK Limited (GSG UK), a company incorporated and domiciled in England and Wales.

The ultimate controlling undertaking and the parent company of the smallest and largest group for which consolidated financial statements are prepared is The Goldman Sachs Group, Inc., a company incorporated in the United States of America. Copies of its consolidated financial statements, as well as certain regulatory filings, for example Quarterly Reports on Form 10-Q and the Annual Report on Form 10-K, that provide additional information about GS Group and its business activities, can be obtained from Investor Relations, 200 West Street, New York, NY 10282, United States of America, GS Group's principal place of business, or at www.goldmansachs.com/shareholders/.

Basel III Pillar 3 Disclosures

The company is included in the consolidated Pillar 3 disclosures of GSG UK, which are required by the E.U. Capital Requirements Regulation. GSG UK's 2016 Pillar 3 disclosures will be made available in conjunction with the publication of its consolidated financial information at www.goldmansachs.com/disclosures/.

Country-by-Country Reporting

The company is included in the consolidated country-by-country reporting disclosures of GSG UK, which are required by the Capital Requirements (Country-by-Country Reporting) Regulations 2013. GSG UK's 2016 country-by-country disclosures will be made available by December 31, 2017 at www.goldmansachs.com/disclosures/.

Note 2.

Summary of Significant Accounting Policies

Basis of Preparation

The company prepares financial statements under U.K. GAAP. These financial statements have been prepared in accordance with FRS 101 'Reduced Disclosure Framework' (FRS 101).

These financial statements have been prepared on the going concern basis, under the historical cost convention (modified as explained in "Pension Arrangements" and "Financial Assets and Financial Liabilities" below), and in accordance with the Companies Act 2006.

The following exemptions from the disclosure requirements of International Financial Reporting Standards (IFRS) as adopted by the E.U. have been applied in the preparation of these financial statements in accordance with FRS 101:

- IFRS 2 'Share-based Payment' paragraph 45(b) and 46 to 52. These disclosures are provided in the consolidated financial statements of Group Inc.
- IAS 1 'Presentation of Financial Statements' paragraph 38 to present comparative information in respect of:
  - IAS 1 'Presentation of Financial Statements' paragraph 79(a)(iv); and
  - IAS 16 'Property, Plant and Equipment' paragraph 73(e).
- IAS 1 'Presentation of Financial Statements' paragraphs 10(f), 16, and 40A-D;
- IAS 8 'Accounting Policies, Changes in Accounting Estimates and Errors' paragraphs 30 and 31;
- IAS 24 'Related Party Disclosures' paragraph 17; and
- IAS 24 'Related Party Disclosures' requirements to disclose transactions with companies also wholly owned within GS Group.

Consolidation

The company has elected not to prepare consolidated financial statements as permitted by section 402 of the Companies Act 2006 as its subsidiaries are not material for the purpose of giving a true and fair view.

These financial statements are individual financial statements.

Accounting Policies

Revenue Recognition. Net revenues have been disclosed instead of turnover as this reflects more meaningfully the nature and results of the company's activities. Net revenues includes the net profit arising from transactions, with both third parties and affiliates, in securities, foreign exchange and other financial instruments, and fees and commissions. This is inclusive of associated interest and dividends.

Financial Assets and Financial Liabilities Measured at Fair Value Through Profit or Loss

Financial assets and financial liabilities held for trading or designated at fair value through profit or loss are recognised at fair value with realised and unrealised gains and losses as well as associated interest and dividend income and expenses included in net revenues. Financial assets are marked to bid prices and financial liabilities are marked to offer prices. Fair value measurements do not include transaction costs.

Non-derivative financial instruments owned and financial instruments sold, but not yet purchased (i.e., cash instruments) are recognised using settlement date accounting. See "Financial Assets and Financial Liabilities — Recognition and Derecognition" below for further details. Unrealised gains and losses related to the change in fair value of these instruments between trade date and settlement date are recognised within net revenues.

Investment Banking

Fees from financial advisory engagements and underwriting revenues are recognised in profit and loss when the relevant parties are contractually bound and as contract activity progresses unless the right to consideration does not arise until the occurrence of a critical event, in which case revenue is not recognised until that event has occurred.

Expenses associated with such engagements are deferred until the related revenue is recognised or the engagement is otherwise concluded. Expenses associated with financial advisory engagements are recognised in administrative expenses, net of client reimbursements. Underwriting revenues are presented net of related expenses.

Investment Management

Management fees are recognised on an accrual basis and are generally calculated as a percentage of a fund or a separately managed account's average net asset value. All management fees are recognised over the period that the related service is provided.

Incentive fees are calculated as a percentage of a fund's return or a percentage of a fund's excess return above a specified benchmark or other performance target. Incentive fees are recognised only when all material contingencies have been resolved.

Commissions and Fees

Revenue from commissions and fees from executing and clearing client transactions on stock, options and futures markets, as well as OTC transactions is recognised in net revenues on the day the trade is executed.

Operating Leases. The company has entered into operating lease arrangements as the lessee. Leased assets are not recognised on the balance sheet. Costs in respect of operating leases, adjusted for any incentives granted by the lessor, are charged on a straight-line basis over the lease term and included within administrative expenses in the profit and loss account.

Short-Term Employee Benefits. Short-term employee benefits, such as wages and salaries, are measured on an undiscounted basis and accrued as an expense over the period in which the employee renders the service to the company. Provision is made for discretionary year-end compensation whether to be paid in cash or share-based awards where, as a result of company policy and past practice, a constructive obligation exists at the balance sheet date.

Share-Based Payments. Group Inc. issues awards in the form of restricted stock units (RSUs) and stock options to the company's employees for services rendered to the company. Awards are classified as equity settled and hence the cost of share-based transactions with employees is measured based on the grant-date fair value of the award. Share-based awards that do not require future service (i.e., vested awards, including awards granted to retirement eligible employees) are expensed immediately. Share-based awards that require future service are amortised over the relevant service period. Expected forfeitures are included in determining share-based employee compensation expense.

Group Inc. settles equity awards through the delivery of its ordinary shares. Group Inc. pays cash dividend equivalents on outstanding RSUs. The company has also entered into a chargeback agreement with Group Inc. under which it is committed to pay to Group Inc. the grant-date fair value as well as subsequent movements in fair value of those awards to Group Inc. at the time of delivery to its employees.

Dividends. Final equity dividends are recognised as a liability and deducted from equity in the period in which the dividends are approved by the company's shareholder. Interim equity dividends are recognised and deducted from equity when paid.

Pension Arrangements. The company is a sponsor of a defined contribution pension plan, and was a sponsor of a hybrid pension plan until March 31, 2016, for the benefit of certain employees. The hybrid pension plan had both a defined benefit section (the Plan) and a defined contribution section. These are accounted for as follows:

- For the defined contribution pension plan and the defined contribution section of the hybrid pension plan, the contributions payable for the year are charged to operating profit. Differences between contributions payable for the year and contributions actually paid are shown as either accruals or prepayments on the balance sheet.
- For the Plan, the amounts charged to operating profit are the current service costs, any past service costs and any gains or losses on settlements and curtailments. These amounts are included in staff costs. The net interest is included in net finance income. Actuarial gains and losses are recognised immediately in other comprehensive income. Plan assets are measured at fair value and Plan liabilities are measured on an actuarial basis using the projected unit method and discounted at a rate equivalent to the current rate of return on a high-quality corporate bond of equivalent currency and term to the Plan liabilities. Full actuarial valuations are obtained at least triennially and updated at each balance sheet date. Any surplus or deficit of Plan assets over Plan liabilities is recognised on the balance sheet as an asset (surplus) or liability (deficit).

Fixed Assets.

Tangible Fixed Assets

Tangible fixed assets are stated at cost less accumulated depreciation and provision for impairment. Fixtures, fittings and equipment are depreciated on a straight-line basis over their estimated useful lives, which is between 3 to 7 years. Depreciation is included in administrative expenses.

Leasehold improvements are depreciated over the shorter of the useful economic life of the asset or the remaining life of the lease when the asset is brought into use. Depreciation policies are reviewed on an annual basis.

Intangible Fixed Assets

Intangible fixed assets are stated at cost less accumulated amortisation and provision for impairment. Subject to the recognition criteria in IAS 38 'Intangible Assets' being met, costs incurred during the year that are directly attributable to the development or improvement of new business application software are capitalised as assets in the course of construction. Assets in the course of construction are transferred to computer software once completed and ready for their intended use.

Computer software is amortised on a straight-line basis over its estimated useful life, which is three years. No amortisation is charged on assets in the course of construction. Amortisation is included in administrative expenses and the amortisation policies are reviewed on an annual basis.

Intangible fixed assets are tested for impairment whenever events or changes in circumstances suggest that an asset's or asset group's carrying value may not be fully recoverable.

Fixed Asset Investments

Fixed asset investments are stated at cost or amortised cost, as applicable, less provision for impairment. Amortisation is included in administrative expenses.

Cash at Bank and In Hand. Cash at bank and in hand is highly liquid overnight deposits held in the ordinary course of business.

Foreign Currencies. The company's financial statements are presented in U.S. dollars, which is also the company's functional currency.

Transactions denominated in foreign currencies are translated into U.S. dollars at rates of exchange ruling on the date the transaction occurred. Monetary assets and liabilities and non-monetary assets and liabilities measured at fair value, denominated in foreign currencies are translated into U.S. dollars at rates of exchange ruling at the balance sheet date. Foreign exchange gains and losses are recognised in operating profit.

Financial Assets and Financial Liabilities.

Recognition and Derecognition

Non-derivative financial instruments owned and financial instruments sold, but not yet purchased (i.e., cash instruments) purchased or sold in regular way transactions are recognised and derecognised using settlement date accounting.

Other financial assets and financial liabilities are recognised when the company becomes party to the contractual provisions of the instrument. They are de-recognised when the contractual rights to the cash flows from the financial asset expire or if the company transfers the financial asset and substantially all the risk and rewards of ownership of that financial asset. A financial liability is derecognised only when it is extinguished (i.e., when the obligation specified in the contract is discharged or cancelled or expires).

Classification and Measurement

The company classifies its financial assets and financial liabilities into the below categories. The classification, which is determined at initial recognition, depends on the purpose for which they were acquired or originated.

- **Financial assets and financial liabilities classified as held for trading.** Financial assets and financial liabilities classified as held for trading include financial instruments owned and financial instruments sold, but not yet purchased. Financial instruments owned and financial instruments sold, but not yet purchased include cash instruments and derivative instruments. Both are initially recognised at fair value with transaction costs expensed in profit or loss. Such financial instruments are carried in the balance sheet at fair value and all subsequent gains or losses are recognised in net revenues.

  The directors are of the opinion that it would not be appropriate to classify them as current asset investments or to provide an analysis of such securities between those listed and unlisted.

- **Financial assets and financial liabilities designated at fair value through profit or loss.** The company designates certain of its other financial assets and financial liabilities at fair value through profit or loss. Financial assets and financial liabilities designated at fair value through profit or loss are initially recognised at fair value with transaction costs expensed in profit or loss. Financial assets are measured in the balance sheet at fair value and all subsequent gains or losses are recognised in net revenues. Financial liabilities are measured in the balance sheet at fair value, with changes in fair value attributable to own credit spreads (debt valuation adjustment or DVA) being recognised in other comprehensive income, if it does not create or enlarge an accounting mismatch, and the remaining changes in the fair value being recognised in net revenues. See "New Accounting Standards — IFRS 9 'Financial Instruments'" below for further information. The primary reasons for designating such financial assets and financial liabilities at fair value through profit or loss are:

  - The group of financial assets, financial liabilities or both is managed and its performance evaluated on a fair value basis; and
  - To eliminate or significantly reduce a measurement or recognition inconsistency that would otherwise arise from measuring assets or liabilities or recognising the gains and losses on them on different bases.

  Financial assets and financial liabilities designated at fair value through profit or loss include:

  - Resale agreements and substantially all repurchase agreements;
  - Securities borrowed and loaned within Fixed Income, Currency and Commodities Client Execution;
  - Substantially all secured debt securities issued, which includes certain hybrid financial instruments and transfers of assets accounted for as financings rather than sales;
  - Certain unsecured debt securities issued, including certain hybrid financial instruments;
  - Certain intercompany unsecured borrowings included in other creditors; and
  - Certain debtors, including transfers of assets accounted for as secured loans rather than purchases.

  Hybrid financial instruments are instruments that contain bifurcatable embedded derivatives. If the company elects to bifurcate the embedded derivative from the associated debt, the derivative is accounted for at fair value and the host contract is accounted for at amortised cost, adjusted for the effective portion of any fair value hedges. If the company does not elect to bifurcate, the entire hybrid financial instrument is designated at fair value through profit or loss.

These financial assets and financial liabilities at fair value are generally valued based on discounted cash flow techniques, which incorporate inputs with reasonable levels of price transparency, and are generally classified as level 2 because the inputs are observable. Valuation adjustments may be made for liquidity and for counterparty and GS Group's credit quality.

- **Loans and receivables; and financial liabilities measured at amortised cost.** Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They include certain collateralised agreements, substantially all debtors and cash at bank and in hand. Such financial assets are initially recognised at fair value plus transaction costs and subsequently measured at amortised cost using the effective interest method (see below). Finance revenue is recorded in net revenues.

  Financial liabilities measured at amortised cost include certain collateralised financings and the majority of other creditors. Such financial liabilities are initially recognised at fair value plus transactions costs and subsequently measured at amortised cost using the effective interest method (see below). Finance costs, including discounts allowed on issue, are recorded in net revenues with the exception of interest on long-term subordinated loans, which is recorded in interest payable and similar charges.

  The effective interest method is a method of calculating the amortised cost of a financial asset or a financial liability (or a group of financial assets or financial liabilities) and of allocating the interest income or interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial asset or financial liability or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability. When calculating the effective interest rate, the company estimates cash flows considering all contractual terms of the financial asset or financial liability but does not consider future credit losses. The calculation includes all fees and points paid or received that are an integral part of the effective interest rate, transaction costs, and all other premiums or discounts.

  The company assesses its loans and receivables at each balance sheet date for any objective evidence of impairment. If there is objective evidence that an impairment loss has been incurred, the amount of the loss is measured as the difference between the financial asset's carrying amount and the present value of estimated future cash flows discounted at the financial asset's original effective interest rate. The amount of the loss is included within net revenues, if trading related, or in administrative expenses if non-trading related.

Classification of Financial Liabilities and Equity

Financial liabilities and equity instruments are classified according to the substance of the contractual arrangements. A financial liability is any liability that is a contractual obligation to deliver cash or another financial asset to another entity; or to exchange financial assets or financial liabilities with another entity under conditions that are potentially unfavourable to the entity. An equity investment is any contract that evidences a residual interest in the assets of the entity after deducting all liabilities. Instruments are evaluated to determine if they contain both liability and equity components. The initial carrying amount of a compound financial instrument is allocated first to the liability component, measured at fair value, and the equity is assigned the residual amount.

Offsetting Financial Assets and Financial Liabilities

Financial assets and financial liabilities are offset and the net amount presented in the balance sheet where there is:

- Currently a legally enforceable right to set-off the recognised amounts; and
- Intent to settle on a net basis or to realise the asset and settle the liability simultaneously.

Where these conditions are not met, financial assets and financial liabilities are presented on a gross basis on the balance sheet.

Fair Value Measurement

See Note 24 for details about the fair value measurement of the company's financial assets and financial liabilities.

Hedge Accounting

The company applies hedge accounting for certain interest rate swaps used to manage the interest rate exposure of certain fixed-rate unsecured long-term and short-term borrowings. To qualify for hedge accounting, the derivative hedge must be highly effective at reducing the risk from the exposure being hedged. Additionally, the company must formally document the hedging relationship at inception and test the hedging relationship to ensure the derivative hedge continues to be highly effective over the life of the hedging relationship.

Collateralised Agreements and Collateralised Financings. Collateralised agreements include resale agreements and securities borrowed. Collateralised financings include repurchase agreements and securities loaned. See "Classification and Measurement" above for details on the classification and measurement of these instruments. Collateral received or posted can be in the form of cash or securities. Cash collateral is recognised/derecognised when received/paid. Collateral posted by the company in the form of securities is not derecognised from the balance sheet, whilst collateral received in the form of securities is not recognised on the balance sheet. If collateral received is subsequently sold, the obligation to return the collateral and the cash received are recognised on balance sheet.

Current and Deferred Taxation. The tax expense for the period comprises current and deferred taxation. Tax is recognised in the profit and loss account, except to the extent it relates to items recognised in other comprehensive income.

Current tax is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the countries where the company operates and generates taxable income. Deferred tax is recognised in respect of all temporary differences that have originated, but not reversed at the balance sheet date, where transactions or events have occurred at that date that will result in an obligation to pay more tax or a right to pay less tax in the future with the following exceptions:

- Deferred tax assets are recognised only to the extent that the directors consider that it is more likely than not that there will be suitable taxable profits from which the future reversal of the underlying temporary differences can be deducted.
- Deferred tax is measured on an undiscounted basis at the tax rates that are expected to apply in the periods in which temporary differences reverse, based on tax rates and laws enacted or substantively enacted at the balance sheet date.

Deferred tax is recognised in the profit and loss account or directly in other comprehensive income according to where the associated gain or loss, to which the deferred tax is attributable, is recognised.

Provisions, Contingent Liabilities and Contingent Assets. Provisions are recognised in the financial statements when it is probable that an outflow of economic benefits will be required to settle a present (legal or constructive) obligation, which has arisen as a result of past events, and for which a reliable estimate can be made of the amount of the obligation. Legal obligations that may arise as a result of proposed new laws are recognised as obligations only when the legislation is virtually certain to be enacted as drafted.

A contingent liability is a possible obligation that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the company or a present obligation that arises from past events but is not recognised because either an outflow of economic benefits is not probable or the amount of the obligation cannot be reliably measured.

A contingent asset is a possible asset that arises from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the company.

Contingent liabilities and contingent assets are not recognised in the financial statements. However, disclosure is made unless the probability of settlement is remote.

New Accounting Standards.

IFRS 9 'Financial Instruments'

In November 2016, the E.U. endorsed IFRS 9 'Financial Instruments' (IFRS 9). This standard provides requirements for recognising and measuring financial assets, financial liabilities and some contracts to buy or sell non-financial items, replacing IAS 39 'Financial Instruments: Recognition and Measurement'. This standard requires that changes in the fair value of financial liabilities attributable to own credit spreads (debt valuation adjustment or DVA) are presented in other comprehensive income, if it does not create or enlarge an accounting mismatch.

This standard is effective for the company in January 2018, with early application being permitted either in its entirety or only in relation to the presentation of DVA. The company has early adopted only the requirements related to the presentation of DVA effective from January 2016.

Note 3.

Critical Accounting Estimates and Judgements

The preparation of financial statements requires management to make judgements, estimates and assumptions that affect the amounts recognised in these financial statements. The nature of estimation means that actual outcomes could differ from those estimates. The following judgements have had the most significant effect on amounts recognised in the financial statements:

Fair Value Measurement

Certain of the company's financial assets and financial liabilities include significant unobservable inputs (i.e., level 3). See Note 24 for information about the carrying value, valuation techniques and significant inputs of these instruments.

Litigation and Regulatory Proceedings

The company estimates and provides for potential losses that may arise out of litigation and regulatory proceedings to the extent that such losses are probable and can be reasonably estimated. Significant judgement is required in making these estimates and the company's final liabilities may ultimately be materially different.

Defined Benefit Pension

The cost of the Plan and the value of the Plan liabilities are determined using actuarial valuations. This involves making assumptions about discount rates, future salary increases, mortality rates and future pension increases. Due to the complexity of the valuation, such estimates are subject to significant uncertainty.

Note 4.

Segment Reporting

The company reports its activities in the following four business segments: Investment Banking; Institutional Client Services; Investing & Lending; and Investment Management. See "Results of Operations — Segment Reporting" in Part I of this annual report for a description of the company's segments.

Basis of Presentation

In reporting segments, certain of the company's business lines have been aggregated where they have similar economic characteristics and are similar in each of the following areas: (i) the nature of the services they provide; (ii) their methods of distribution; (iii) the types of clients they serve; and (iv) the regulatory environments in which they operate.

The cost drivers of the company taken as a whole, compensation, headcount and levels of business activity, are broadly similar in each of the company's business segments. Direct costs of employment in the company's segments reflect, among other factors, the overall performance of the company as well as the performance of individual businesses. Consequently, operating profit margins in one segment of the company's business may be significantly affected by the performance of the company's other business segments.

The company allocates assets (including allocations of GCLA and cash, secured client financing and other assets), revenues and expenses among the four business segments. Due to the integrated nature of these segments, estimates and judgements are made in allocating certain assets, revenues and expenses. The allocation process is based on the manner in which management currently views the performance of the segments. Transactions between segments are based on specific criteria or approximate third-party rates. Total administrative expenses includes charitable contributions and mark-to-market of share-based compensation that have not been allocated to individual business segments.

In addition to transactions entered into with third parties, the company also enters into transactions with affiliates in the normal course of business as part of market-making activities and general operations. Revenues are allocated to, and received from, such affiliates for these transactions.

Management believes that the information in the tables below provides a reasonable representation of each segment's contribution to net revenues, operating profit and total assets. Operating profit has only been presented for the company's significant segments, which are Investment Banking and Institutional Client Services.

The segment information presented in "Segment Net Revenues" and "Segment Operating Profit" below is prepared according to the following methodologies:

- Revenue and expenses directly associated with each segment are included in determining operating profit.
- Net revenues in the company's segments include allocations of interest income and interest expense to specific securities and other positions in relation to the cash generated by, or funding requirements of, such underlying positions with the exception of interest on long-term subordinated loans, which is presented in interest payable and similar charges (see Note 8). Net interest is included in segment net revenues as it is consistent with the way in which management assesses segment performance.
- Overhead expenses not directly allocable to specific segments are allocated ratably based on direct segment expenses.

Segment Net Revenues

The table below presents the net revenues of the company's segments.

	Year Ended December	
$ in millions	**2016**	2015
Investment Banking		
Financial Advisory	**$ 563**	$ 590
Underwriting	**575**	689
Total Investment Banking	**$1,138**	$1,279
Institutional Client Services		
Fixed Income, Currency and Commodities Client Execution	**$2,523**	$2,549
Equities	**2,066**	2,353
Total Institutional Client Services	**$4,589**	$4,902
Investing & Lending	**$ 500**	$ 360
Investment Management	**$ 322**	$ 475
Total net revenues	**$6,549**	$7,016

Substantially all interest income and interest expense recognised within net revenues is attributable to Institutional Client Services.

Segment Operating Profit

The table below presents the operating profit of the company's significant segments.

	Year Ended December	
$ in millions	**2016**	2015
Investment Banking		
Net revenues	**$1,138**	$1,279
Administrative expenses	**712**	812
Operating profit	**$ 426**	$ 467
Institutional Client Services		
Net revenues	**$4,589**	$4,902
Administrative expenses	**2,502**	2,644
Operating profit	**$2,087**	$2,258
Total net revenues	**$6,549**	$7,016
Total administrative expenses	**4,269**	4,077
Total operating profit	**$2,280**	$2,939

In the table above:

- Total net revenues includes net revenues of $822 million and $835 million for 2016 and 2015, respectively, related to Investing & Lending and Investment Management.
- Total administrative expenses includes administrative expenses of $542 million and $579 million for 2016 and 2015, respectively, related to Investing & Lending and Investment Management segments, and certain overhead expenses that have not been allocated to the company's segments of $513 million and $42 million for 2016 and 2015, respectively, representing mark-to-market of share-based compensation and charitable contributions.

Segment Assets

Substantially all of the company's assets are attributable to Institutional Client Services.

Geographical Analysis

Due to the highly integrated nature of international financial markets, the company manages its businesses based on the profitability of the enterprise as a whole. The methodology for allocating profitability to geographic regions is dependent on estimates and management judgement.

Geographic results are generally allocated as follows:

- Investment Banking: location of the client, investment banking team and underlying risk.
- Institutional Client Services: location of the market-making desk and the primary market for the underlying security.
- Investing & Lending: location of the investing and lending team.
- Investment Management: location of the investment management team.

The table below presents the total net revenues of the company by geographic region allocated based on the methodology referred to above.

	Year Ended December	
$ in millions	**2016**	2015
Net revenues		
Europe, Middle East and Africa	**$5,013**	$5,252
Americas	**920**	1,010
Asia	**616**	754
Total net revenues	**$6,549**	$7,016

Note 5.

Administrative Expenses

The table below presents the company's administrative expenses.

	Year Ended December	
$ in millions	**2016**	2015
Direct costs of employment	**$2,974**	$2,834
Brokerage, clearing, exchange and distribution fees	**568**	550
Market development	**61**	95
Communications and technology	**85**	88
Depreciation and amortisation	**7**	4
Occupancy	**161**	173
Professional fees	**110**	147
Other expenses	**303**	186
Total non-compensation expenses	**1,295**	1,243
Total administrative expenses	**$4,269**	$4,077

In the table above:

- Occupancy expenses include net operating lease rentals for land and buildings of $80 million and $81 million for 2016 and 2015, respectively.
- Professional fees include fees payable to the company's auditors for the audit of the company's annual financial statements of $5 million for both 2016 and 2015, and fees payable to the company's auditor for other services of $1 million and $4 million for 2016 and 2015, respectively.
- Other expenses include miscellaneous taxes, charitable contributions, management fees charged by and to group undertakings relating to operational and administrative support, and management services received from and provided to affiliates.

Note 6.

Directors' Emoluments

The table below presents the company's directors' emoluments.

	Year Ended December	
$ in millions	**2016**	2015
Aggregate emoluments	**$7**	$8
Company pension contributions to money purchase schemes	**–**	–
Total directors' emoluments	**$7**	$8

The table below presents emoluments for the highest paid director.

	Year Ended December	
$ in millions	**2016**	2015
Aggregate emoluments	**$3**	$3
Company pension contributions to money purchase schemes	**–**	–
Accrued annual pension at end of year	**–**	–

In accordance with the Companies Act 2006, directors' emoluments above represent the proportion of total emoluments paid or payable in respect of qualifying services only. This total only includes the value of cash and benefits in kind, and does not include the value of equity awards in accordance with the provisions of Schedule 5 of SI 2008/410. Directors also receive emoluments for non-qualifying services which are not required to be disclosed.

For persons who were directors for some or all of the year, three directors were members of a defined contribution scheme and a defined benefit scheme; four directors, including the highest paid director, have received or are due to receive Group Inc. shares in respect of long term incentive schemes during the year; and two directors, including the highest paid director, have exercised options during the year.

The aggregate emoluments of the eight non-executive directors who were members of the board of directors for all or part of the year ended December 2016 was approximately $1.1 million. Certain non-executive directors received or will receive additional ongoing fees in respect of advisory services provided during the year, the aggregate amount of which is approximately $1.3 million.

Note 7.

Staff Costs

The table below presents the company's average monthly number of staff (employees including directors, consultants and temporary staff).

	Average for the Year Ended December	
Number	**2016**	2015
Employees including directors		
Investment Banking	**739**	721
Institutional Client Services	**1,383**	1,407
Investing & Lending	**169**	146
Investment Management	**624**	593
Support Functions	**2,801**	2,755
	5,716	5,622
Consultants and temporary staff	**409**	527
Total average number of staff	**6,125**	6,149

The company has the use of the services of a number of individuals who are employed by affiliated entities and seconded to the company. These seconded individuals are included in the disclosure of headcount and related staff costs. Consultants and temporary staff costs are included in total direct costs of employment, below. Total headcount was 5,903 and 6,458 as of December 2016 and December 2015, respectively.

The table below presents employment costs incurred by the company, including those relating to directors.

	Year Ended December	
$ in millions	**2016**	2015
Aggregate gross wages and salaries	**$2,567**	$2,454
Employer's National Insurance Contributions	**329**	295
Pension costs, employer contributions to:		
Defined contribution plan and defined contribution section of the hybrid pension plan	**69**	62
Defined benefit section of the hybrid pension plan	**9**	23
Total direct costs of employment	**$2,974**	$2,834

In the table above, total direct costs of employment include a charge of $488 million for 2016 and a charge of $6 million for 2015, relating to the mark-to-market of share-based compensation.

Note 8.

Interest Payable and Similar Charges

Interest payable and similar charges comprises interest on long-term subordinated loans from parent and group undertakings of $346 million and $285 million for 2016 and 2015, respectively. See Note 18 for further details.

Note 9.

Pension Arrangements

The company sponsors a pension plan with a hybrid structure, having both a defined benefit section (the Plan) and a defined contribution section. The Plan provides retirement benefits on the basis of members' final salary, with a normal retirement age of 65 for most members. The Plan is funded, with the assets of the scheme held separately from those of the company, in separate trustee-administered funds.

The Plan was closed to new entrants with effect from April 1, 2008, and was replaced by a defined contribution plan. As of March 31, 2016, the Plan was closed to future benefit accruals for existing participants.

The Plan operates under trust law and is managed and administrated by the Goldman Sachs UK Retirement Plan Trustee Limited (the Trustee) on behalf of the members in accordance with the terms of the Trust Deed and Rules and relevant legislation. The Plan's assets are held by the trust.

A full actuarial valuation of the Plan was carried out by a qualified independent actuary as of July 31, 2016 using the projected unit funding method and updated to December 31, 2016. As of December 2016, the Plan liabilities comprise 97% in respect of deferred members and 3% in respect of current beneficiaries.

Risks of the Plan

The main risks of the Plan are:

- **Funding Shortfall.** Additional contributions will be required if the investment returns are not sufficient to pay for benefits. The level of equity returns will be a key determinant of overall investment return; the investment portfolio is also subject to a range of other risks typical of the asset classes held, in particular interest rate risk and inflation risk on bonds.
- **Asset Volatility.** A consequence of the Plan's investment strategy, with a significant proportion of the assets invested in equities and other return-seeking assets is that the difference between Plan assets and Plan liabilities may be volatile.
- **Plan Liabilities Sensitivity.** Plan liabilities and the current service cost are sensitive to the assumptions made about future inflation and life expectancy. It is also sensitive to the discount rate, which depends on market yields on sterling-denominated AA corporate bonds.

Financial Assumptions

The table below presents the significant financial assumptions used to determine the present value of the defined benefit obligation.

	Year Ended December	
% per annum	**2016**	2015
Discount rate	**2.55**	3.80
Rate of increase in salaries	**4.00**	4.00
Rate of price inflation – RPI	**3.45**	3.40
Rate of price inflation – CPI	**2.45**	2.40
Rate of increase in pensions in payments (post-November 30, 1996 accrual)	**3.25**	3.20
Rate of increase in pensions in deferment (post-November 30, 1996 accrual)	**2.45**	2.40
Rate of increase in pensions in deferment (post-April 5, 2009 accrual)	**2.45**	2.40

Mortality Assumptions

The table below presents the mortality assumptions used to determine the present value of the defined benefit obligation. The mortality assumptions adopted were the "S1 series all pensioner light" base table with allowance for future improvements from 2002 onwards in line with the CMI 2012 core projections with a long-term rate of improvement of 1% per annum.

	Year Ended December	
Years	**2016**	2015
Life expectancy at 65 for a member currently 65		
Males	**24.0**	24.0
Females	**25.4**	25.3
Life expectancy at 65 for a member currently 45		
Males	**25.4**	25.3
Females	**26.9**	26.8

Defined Benefit Cost

The table below presents the defined benefit cost related to the Plan recognised in the company's profit and loss account and in other comprehensive income.

	Year Ended December	
$ in millions	**2016**	2015
Profit and loss account		
Current service cost	**$ 9**	$ 47
Curtailment gain	**–**	(24)
Net finance income	**(9)**	(7)
Total charged to the profit and loss account	**–**	16
Other comprehensive income		
Return on Plan assets greater than discount rate	**(611)**	(28)
Actuarial gain – liability experience	**(16)**	(13)
Actuarial loss – financial assumptions	**816**	44
Total loss recognised in other comprehensive income	**189**	3
Total defined benefit cost	**$ 189**	$ 19

Reconciliation of Pension Surplus

The table below presents a reconciliation of Plan assets, Plan liabilities and the net pension surplus.

$ in millions	Plan Assets	Plan Liabilities	Net Pension Surplus
Year Ended December 2016			
As of January 1	**$1,837**	**$(1,576)**	**$ 261**
Current service cost	**–**	**(9)**	**(9)**
Curtailment gain	**–**	**–**	**–**
Net finance income	**64**	**(55)**	**9**
Return on Plan assets greater than discount rate	**611**	**–**	**611**
Actuarial gain – liability experience	**–**	**16**	**16**
Actuarial loss – financial assumptions	**–**	**(816)**	**(816)**
Employer contributions	**8**	**–**	**8**
Benefits paid	**(7)**	**7**	**–**
Foreign exchange gain/(loss)	**(354)**	**327**	**(27)**
As of December 31	**$2,159**	**$(2,106)**	**$ 53**
Year Ended December 2015			
As of January 1	$1,817	$(1,560)	$ 257
Current service cost	–	(47)	(47)
Curtailment gain	–	24	24
Net finance income	68	(61)	7
Return on Plan assets greater than discount rate	28	–	28
Actuarial gain – liability experience	–	13	13
Actuarial loss – financial assumptions	–	(44)	(44)
Employer contributions	37	–	37
Benefits paid	(10)	10	–
Foreign exchange gain/(loss)	(103)	89	(14)
As of December 31	$1,837	$(1,576)	$ 261

Fair Value of Plan Assets

The Plan Trustees have a long-term asset allocation strategy to invest 65% of assets in return seeking investments (such as equities) and 35% in liability matching assets (such as Gilts). The Plan has a hedging programme investing in swaps and other derivatives in order to reduce the exposure to changes in interest rates and inflation. The table below presents the fair value of Plan assets.

$ in millions	Quoted	Unquoted	Total
As of December 2016			
Equities	**$ 740**	**$ –**	**$ 740**
Gilts	**600**	**–**	**600**
Swaps	**–**	**518**	**518**
Cash and cash equivalents	**104**	**–**	**104**
Other	**134**	**63**	**197**
Total	**$1,578**	**$581**	**$2,159**
As of December 2015			
Equities	$ 873	$ –	$ 873
Gilts	534	–	534
Swaps	250	–	250
Cash and cash equivalents	56	–	56
Other	73	51	124
Total	$1,786	$ 51	$1,837

Sensitivity Analysis

The table below presents a sensitivity analysis of Plan liabilities for each significant actuarial assumption. The sensitivities are based on a change in each assumption while holding all other assumptions constant.

There are inherent limitations in this analysis, as such idiosyncratic movements are unlikely to occur. The methodology used to calculate the sensitivities are consistent across the two periods presented in the table below.

	Impact to Plan Liabilities			
	Increase in assumption		Decrease in assumption	
	$ in millions	*%*	*$ in millions*	*%*
As of December 2016				
0.25% change in discount rate	**$(177)**	**(8.4)**	**$ 193**	**9.2**
0.25% change in price inflation	**137**	**6.5**	**(149)**	**(7.1)**
1 year change in life expectancy	**84**	**4.0**	**(81)**	**(3.8)**
As of December 2015				
0.25% change in discount rate	$(123)	(7.8)	$ 142	9.0
0.25% change in price inflation	112	7.1	(105)	(6.7)
1 year change in life expectancy	54	3.4	(52)	(3.3)

Nature of Future Cash Flows

Since the Plan's closure to future accrual from March 31, 2016, the company has ceased to make regular contributions into the Plan but will continue to assess the funding requirements of the Plan with the Trustees on a periodic basis.

On a triennial basis, a formal funding valuation of the Plan is performed for the Trustees to assess the funding needs of the Plan. This valuation differs from the actuarial valuation required for accounting purposes due to the use of different assumptions.

The most recent funding valuation was performed by a qualified independent actuary as of December 31, 2015, which indicated that the Plan was in a funding deficit of £66.3 million ($82 million). As of December 31, 2016, the company has agreed with the Trustees to contribute £73.3 million ($90 million) to the Plan, in two instalments by contributing £40.0 million ($49 million) in January 2017 and £33.3 million ($41 million) in January 2018. Had these contributions been made prior to December 31, 2016, the net pension surplus recognised on the company's balance sheet would have been $143 million.

The company expects $6 million of benefits to be paid out of the Plan to members in 2017.

The weighted average duration of Plan liabilities was 36 years as of December 2016.

Note 10.

Share-Based Payments

Stock Incentive Plan

Group Inc. sponsors a stock incentive plan, The Goldman Sachs Amended and Restated Stock Incentive Plan (2015) (2015 SIP), which provides for, amongst others, grants of RSUs and incentive stock options.

GSI recorded share-based compensation in respect of the amortisation of granted equity awards, net of forfeitures, of $497 million and $630 million for 2016 and 2015, respectively. The corresponding credit to equity has been transferred to liabilities as a result of the terms of the chargeback agreement with Group Inc. under which the company is committed to pay to Group Inc. the grant-date fair value as well as subsequent movements in fair value of those awards to Group Inc. at the time of delivery to its employees.

Restricted Stock Units

Group Inc. grants RSUs to GSI's employees under the 2015 SIP, which are valued based on the closing price of the underlying shares on the date of grant after taking into account a liquidity discount for any applicable post-vesting and delivery transfer restrictions. RSUs generally vest and underlying shares of common stock deliver as outlined in the applicable RSU agreements. Employee RSU agreements generally provide that vesting is accelerated in certain circumstances, such as on retirement, death, disability and conflicted employment. Delivery of the underlying shares of common stock is conditioned on the grantees satisfying certain vesting and other requirements outlined in the award agreements.

Stock Options

Stock options granted to employees generally vest as outlined in the applicable stock option agreement. In general, options expire on the tenth anniversary of the grant date, although they may be subject to earlier termination or cancellation under certain circumstances in accordance with the terms of the applicable stock option agreement and The Goldman Sachs Amended and Restated Stock Incentive Plan in effect at the time of grant.

The table below presents options outstanding. All outstanding options as of December 2016 were granted in 2007 and 2008.

Exercise Price	Options Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Life *(years)*
As of December 2016			
$ 75.00 - $ 89.99	**1,109,309**	**$ 78.78**	**2.00**
90.00 - 194.99	**–**	**–**	**–**
195.00 - 209.99	**436,951**	**204.16**	**0.92**
Total outstanding	**1,546,260**	**$114.21**	**1.69**
As of December 2015			
$ 75.00 - $ 89.99	2,154,052	$ 78.78	3.00
90.00 - 194.99	–	–	–
195.00 - 209.99	847,310	202.40	1.51
Total outstanding	3,001,362	$113.68	2.58

For those options exercised during the year, the weighted average share price at the date of exercise was $194.04 and $196.28 for 2016 and 2015, respectively.

Note 11.

Tax on Profit on Ordinary Activities

The table below presents the company's analysis of tax on profit on ordinary activities.

$ in millions	Year Ended December 2016	2015
Current tax		
U.K. corporation tax	**$431**	$ 372
Adjustments in respect of prior periods	**(4)**	18
Overseas taxation	**103**	77
Total current tax	**530**	467
Deferred tax		
Origination and reversal of temporary differences	**(46)**	54
Effect of decreased/(increased) U.K. corporate tax rates	**3**	(155)
Adjustments in respect of prior periods	**–**	(13)
Total deferred tax	**(43)**	(114)
Total tax on profit on ordinary activities	**$487**	$ 353

In September 2016, a budget was enacted that will reduce the U.K. corporate tax rate by 1 percentage point effective April 1, 2020. The company remeasured its deferred tax asset accordingly but this change did not have a material impact on the company's effective tax rate for the year ended December 2016.

The table below presents a reconciliation between tax on profit on ordinary activities and the amount calculated by applying the weighted average rate of U.K. corporation tax applicable to the company for the year of 28.0% (2015: 20.25%) to the profit on ordinary activities before tax.

$ in millions	Year Ended December 2016	2015
Profit on ordinary activities before taxation	**$1,943**	$2,661
Profit on ordinary activities multiplied by U.K. corporate tax rate of 28.0% (2015: 20.25%)	**544**	539
Changes in recognition and measurement of deferred tax assets	**9**	(8)
Permanent differences	**(30)**	(4)
Tax losses surrendered from group undertakings for nil consideration	**(22)**	(29)
Effect of higher taxes on overseas earnings	**–**	8
Exchange differences and other	**(13)**	(3)
Adjustments in respect of prior periods	**(4)**	5
Effect of decreased/(increased) U.K. corporate tax rates	**3**	(155)
Total tax on profit on ordinary activities	**$ 487**	$ 353

Note 12.

Fixed Assets

The table below presents the company's fixed assets.

$ in millions	As of December 2016	2015
Tangible fixed assets	**$ 34**	$11
Intangible fixed assets	**105**	–
Fixed asset investments	**1**	1
Total fixed assets	**$140**	$12

Tangible Fixed Assets

The table below presents the movements in tangible fixed assets during the year.

$ in millions	Leasehold improvements	Fixtures, fittings and equipment	Total
Cost			
As of January 1	$25	$11	$36
Additions	**27**	**–**	**27**
Disposals	**–**	**(1)**	**(1)**
As of December 31	**52**	**10**	**62**
Accumulated depreciation			
As of January 1	19	6	25
Charge for the year (see Note 5)	**3**	**1**	**4**
Disposals	**–**	**(1)**	**(1)**
As of December 31	**22**	**6**	**28**
Net book value			
As of December 2016	**$30**	**$ 4**	**$34**
As of December 2015	$ 6	$ 5	$11

Intangible Fixed Assets

The table below presents the movements in intangible fixed assets during the year.

$ in millions	Computer software	Assets in the course of construction	Total
Cost			
As of January 1	$ –	$ –	$ –
Additions/Transfers	**24**	**84**	**108**
As of December 31	**24**	**84**	**108**
Accumulated amortisation			
As of January 1	–	–	–
Charge for the year (see Note 5)	**3**	**–**	**3**
As of December 31	**3**	**–**	**3**
Net book value			
As of December 2016	**$21**	**$84**	**$105**
As of December 2015	$ –	$ –	$ –

From January 2016, the company has capitalised internally developed computer software. Prior to 2016, such costs were capitalised in another group undertaking, with the associated amortisation being recharged to the company.

Fixed Asset Investments

The table below presents the movements in fixed asset investments during the year.

$ in millions	Shares in subsidiary undertakings	Other investments, other than loans	Total
Cost			
As of January 1	$ –	$1	$1
As of December 31	**–**	**1**	**1**
Accumulated depreciation			
As of January 1	–	–	–
As of December 31	**–**	**–**	**–**
Net book value			
As of December 2016	**$ –**	**$1**	**$1**
As of December 2015	$ –	$1	$1

The table below presents the subsidiaries over which the company exercised control as of December 2016:

Name of company	Country of incorporation	Holding and proportion of voting rights	Class of shares held	Number held	Nature of business
Goldman Sachs (Cayman) Limited	Cayman Islands	100%	Ordinary shares	250	Financial services
Ipopema 80 Fundusz Inwestycyjny Zamkniety	Poland	100%	*	*	Investment fund

* This subsidiary undertaking is controlled other than through voting rights attached to shares.

The company has interests in a number of special purpose entities and capital guaranteed funds which do not meet the definition of a legal subsidiary, but give rise to the risks and rewards that are, in substance, no different than if they were legal subsidiaries. The activities of these special purpose entities and the capital guaranteed funds consist of the issuance of loan notes under the terms of a repackaging programme. These special purposes entities and capital guaranteed funds are consolidated in the financial statements of Group Inc.

Note 13.

Financial Instruments Owned and Financial Instruments Sold, But Not Yet Purchased

Financial instruments owned and financial instruments sold, but not yet purchased comprise financial instruments and investments within the operating activities of the company. Financial instruments owned includes financial instruments owned pledged as collateral. See Note 24 for further information.

The table below presents the company's financial instruments owned.

	As of December	
$ in millions	**2016**	2015
Cash instruments		
Money market instruments	**$ 211**	$ 454
Government and agency obligations	**18,459**	16,654
Mortgage and other asset-backed loans and securities	**704**	1,094
Corporate loans and debt securities and other debt obligations	**12,356**	12,368
Equities and convertible debentures	**31,513**	36,358
Commodities	**103**	9
Total cash instruments	**63,346**	66,937
Derivative instruments		
Interest rates	**371,881**	321,915
Credit	**34,059**	48,094
Currencies	**127,290**	113,522
Commodities	**9,813**	12,926
Equities	**56,556**	52,660
Total derivative instruments	**599,599**	549,117
Total financial instruments owned	**$662,945**	$616,054

The table below presents the company's financial instruments sold, but not yet purchased.

	As of December	
$ in millions	**2016**	2015
Cash instruments		
Government and agency obligations	**$ 10,099**	$ 7,433
Corporate loans and debt securities and other debt obligations	**2,129**	2,417
Equities and convertible debentures	**14,701**	14,834
Commodities	**7**	–
Total cash instruments	**26,936**	24,684
Derivative instruments		
Interest rates	**365,628**	312,222
Credit	**31,501**	43,944
Currencies	**126,877**	112,892
Commodities	**9,795**	12,897
Equities	**53,174**	49,015
Total derivative instruments	**586,975**	530,970
Total financial instruments sold, but not yet purchased	**$613,911**	$555,654

Note 14.

Collateralised Agreements

The table below presents the company's collateralised agreements.

	As of December	
$ in millions	**2016**	2015
Resale agreements	**$120,005**	$110,318
Securities borrowed	**64,595**	53,385
Total collateralised agreements	**$184,600**	$163,703

In the table above:

- Total collateralised agreements includes amounts due from group undertakings of $121.45 billion and $91.84 billion as of December 2016 and December 2015, respectively.
- Total collateralised agreements includes balances due in more than one year of $433 million and $1.87 billion as of December 2016 and December 2015, respectively.

Note 15.

Debtors

The table below presents the company's debtors balances. All debtors are due within one year of the balance sheet date, unless noted below.

	As of December	
$ in millions	**2016**	2015
Amounts due from broker/dealers and customers	**$57,290**	$53,047
Amounts due from parent and group undertakings	**11,574**	6,768
Deferred tax (see Note 16)	**704**	569
Other debtors	**44**	44
Prepayments and accrued income	**84**	60
Total debtors	**$69,696**	$60,488

In the table above:

- Amounts due from broker/dealers and customers includes balances due in more than one year relating to secured lending and/or prepaid commodity contracts of $276 million and $887 million as of December 2016 and December 2015, respectively.
- Total debtors include financial assets of $68.96 billion and $59.87 billion as of December 2016 and December 2015, respectively, and non-financial assets of $736 million and $614 million as of December 2016 and December 2015, respectively.

Note 16.

Deferred Tax

The table below presents the components of the company's deferred tax asset.

	As of December	
$ in millions	**2016**	2015
Depreciation in excess of capital allowances	**$ –**	$ 3
Post-retirement benefits	**(13)**	(68)
Deferred compensation	**672**	634
Debt valuation adjustment	**45**	–
Total deferred tax	**$704**	$569

In the table above, deferred compensation is mainly in respect of share-based compensation.

The table below presents changes in each component of the company's deferred tax asset.

	As of December	
$ in millions	**2016**	2015
Depreciation in excess of capital allowances		
As of January 1	**$ 3**	$ 3
Transfer to the profit and loss account	**(3)**	–
As of December 31	**$ –**	$ 3
Post-retirement benefits		
As of January 1	**$ (68)**	$ (51)
Transfer to the profit and loss account	**8**	(18)
Transfer to other comprehensive income	**47**	1
As of December 31	**$ (13)**	$ (68)
Deferred compensation		
As of January 1	**$634**	$502
Transfer to the profit and loss account	**38**	132
As of December 31	**$672**	$634
Debt valuation adjustment		
As of January 1	**$ –**	$ –
Transfer to other comprehensive income	**45**	–
As of December 31	**$ 45**	$ –
Total		
As of January 1	**$569**	$454
Transfer to the profit and loss account (see Note 11)	**43**	114
Transfer to other comprehensive income	**92**	1
As of December 31	**$704**	$569

Note 17.

Collateralised Financings

The table below presents the company's collateralised financings.

	As of December	
$ in millions	**2016**	2015
Amounts falling due within one year		
Repurchase agreements	**$ 84,581**	$ 38,578
Securities loaned	**53,060**	77,807
Total	**$137,641**	$116,385
Amounts falling due after more than one year		
Repurchase agreements	**$ 5,734**	$ 3,502
Securities loaned	**499**	–
Total	**$ 6,233**	$ 3,502
Total collateralised financings	**$143,874**	$119,887

In the table above, total collateralised financings includes amounts due to group undertakings of $97.91 billion and $82.67 billion as of December 2016 and December 2015, respectively, of which $97.58 billion and $82.55 billion as of December 2016 and December 2015, respectively, are due within one year.

Note 18.

Other Creditors

The table below presents the company's other creditors.

	As of December	
$ in millions	**2016**	2015
Amounts falling due within one year		
Bank loans	**$ 164**	$ 63
Overdrafts	**7**	4
Debt securities issued	**12,819**	13,850
Amounts due to broker/dealers and customers	**54,071**	54,544
Amounts due to parent and group undertakings – unsecured borrowings	**18,922**	27,195
Amounts due to parent and group undertakings – other unsecured creditors	**22,517**	18,316
Accrual for management charges payable to parent and group undertakings	**918**	834
Corporation tax payable	**203**	134
Other taxes and social security costs	**231**	230
Other creditors and accruals	**1,079**	1,130
Total	**$110,931**	$116,300
Amounts falling due after more than one year		
Bank loans	**$ –**	$ 100
Long-term subordinated loans	**8,958**	8,958
Debt securities issued	**11,157**	7,896
Amounts due to parent and group undertakings – unsecured borrowings	**16,882**	14,316
Amounts due to parent and group undertakings – other unsecured creditors	**276**	344
Accrual for management charges payable to parent and group undertakings	**745**	684
Other creditors	**55**	–
Total	**$ 38,073**	$ 32,298
Total other creditors	**$149,004**	$148,598

In the table above:

- The accrual for management charges payable to parent and group undertakings is in respect of share-based compensation.
- Total amounts falling due within one year includes financial liabilities of $110.50 billion and $115.94 billion as of December 2016 and December 2015, respectively, and non-financial liabilities of $434 million and $364 million as of December 2016 and December 2015, respectively.
- All amounts falling due after more than one year are financial liabilities as of December 2016 and December 2015.

Debt Securities Issued

The table below presents the company's debt securities issued.

	As of December	
$ in millions	**2016**	2015
Amounts falling due within one year		
Unsecured debt securities with affiliates	**$ 2,080**	$ 1,778
Unsecured debt securities with external counterparties	**7,992**	9,722
Secured debt securities with affiliates	**932**	493
Secured debt securities with external counterparties	**1,815**	1,857
Total	**$12,819**	$13,850
Amounts falling due after more than one year		
Unsecured debt securities with affiliates	**$ 886**	$ 671
Unsecured debt securities with external counterparties	**8,704**	5,317
Secured debt securities with affiliates	**537**	1,148
Secured debt securities with external counterparties	**1,030**	760
Total	**$11,157**	$ 7,896
Total debt securities issued	**$23,976**	$21,746

In the table above, secured debt securities are secured by securities which have been pledged as collateral. This pledged collateral is either recognised within "Financial instruments owned" or sourced through collateralised agreements.

The table below presents the maturity of the company's long-term debt securities issued.

	As of December	
$ in millions	**2016**	2015
Over one year and up to two years	**$ 1,630**	$2,554
Over two years and up to five years	**3,295**	2,074
Over five years	**6,232**	3,268
Total	**$11,157**	$7,896

Amounts due in more than five years predominantly relate to structured debt securities with maturities falling due between 2022 and 2056. Payments on these securities are typically referenced to underlying financial assets, which are predominately interest rate and equities-related.

Long-Term Subordinated Loans

Long-term subordinated loans comprise long-term subordinated loans from parent and group undertakings, which are unsecured and carry interest at a margin over the U.S. Federal Reserve's federal funds rate. The margin is reset on a periodic basis to reflect changes in GS Group's weighted average cost of debt. Long-term subordinated loans constitute regulatory capital as approved by the PRA and are repayable subject to PRA approval. Long-term subordinated loans of $8.70 billion are repayable between December 14, 2021 and April 29, 2025. Any repayment prior to these maturity dates requires PRA approval. Long-term subordinated loans of $255 million are repayable upon giving or receiving at least 5 years' notice to or from the group undertaking and is subject to PRA approval.

Debt Valuation Adjustment

The fair value of debt securities issued that are designated at fair value through profit or loss are calculated by discounting future cash flows at a rate which incorporates GS Group's credit spreads. The net DVA on such financial liabilities is a pre-tax loss of $182 million for 2016 and has been included in "Debt valuation adjustment" in other comprehensive income.

Intercompany Borrowings

Amounts due to parent and group undertakings falling due after more than one year include loans that are repayable in more than five years. As of December 2016, the company had a variable rate loan of $211 million with a maturity of June 13, 2026 and as of December 2015, the company had a variable rate loan of $284 million with a maturity of October 22, 2063.

Note 19.

Share Capital

The table below presents the company's share capital.

Allotted, called up and fully paid	**Ordinary shares of $1 each**	***$ in millions***
As of January 1, 2016	**581,964,161**	**$582**
As of December 31, 2016	**581,964,161**	**$582**

Note 20.

Cash and Cash Equivalents

The table below presents the company's cash and cash equivalents for the purpose of the statements of cash flows.

	As of December	
$ in millions	**2016**	2015
Cash at bank and in hand	**$16,888**	$9,974
Overdrafts (see Note 18)	**(7)**	(4)
Total cash and cash equivalents	**$16,881**	$9,970

Note 21.

Reconciliation of Cash Flows From Operating Activities

The table below presents the company's reconciliation of cash flows from operating activities.

	Year Ended December	
$ in millions	**2016**	2015
Profit on ordinary activities before taxation	**$ 1,943**	$ 2,661
Adjustments for		
Depreciation and amortisation (see Notes 5 and 12)	**7**	4
Charge for defined benefit plan (see Note 9)	**–**	16
Foreign exchange losses	**992**	433
Share-based compensation expense	**870**	502
Provisions for liabilities	**–**	1
Interest payable and similar charges (see Note 8)	**346**	285
Cash generated before changes in operating assets and liabilities	**4,158**	3,902
Changes in operating assets		
Decrease/(increase) in financial instruments owned	**(46,891)**	77,694
Decrease/(increase) in collateralised agreements	**(20,897)**	39,813
Decrease/(increase) in debtors	**(9,062)**	6,194
Changes in operating assets	**(76,850)**	123,701
Changes in operating liabilities		
Increase/(decrease) in financial instruments sold, but not yet purchased	**58,257**	(85,759)
Increase/(decrease) in collateralised financings	**23,987**	(21,764)
Decrease in other creditors	**(799)**	(17,137)
Decrease in provisions for liabilities	**–**	(17)
Changes in operating liabilities	**81,445**	(124,677)
Contributions paid to defined benefit plan (see Note 9)	**(8)**	(37)
Cash generated from operations	**$ 8,745**	$ 2,889

Cash generated from operations includes interest paid of $2.05 billion and $2.16 billion for 2016 and 2015, respectively, and interest received of $1.83 billion and $2.22 billion for 2016 and 2015, respectively.

Note 22.

Financial Commitments and Contingencies

Commitments and Contingencies

The table below presents the company's commitments and contingencies.

	As of December	
$ in millions	**2016**	2015
Contingent and forward starting resale and securities borrowing agreements	**$43,599**	$29,276
Forward starting repurchase and secured lending agreements	**11,806**	11,483
Other	**3,993**	4,137
Total	**$59,398**	$44,896

The company enters into resale and securities borrowing agreements and repurchase and secured lending agreements that settle at a future date, generally within three business days. The company also enters into commitments to provide contingent financing to its clients and counterparties through resale agreements. The company's funding of these commitments depends on the satisfaction of all contractual conditions to the resale agreement and these commitments can expire unused.

Other commitments primarily relate to collateral commitments and commitments to extend credit.

In addition, there are registered charges on the company's assets which have arisen in the ordinary course of business.

Leases

The company leases certain buildings under long-term lease agreements. Under these lease agreements, which are subject to renegotiation at various intervals specified in the leases, the company pays all insurance, maintenance and repairs of these properties. The table below presents total future minimum rental payments under non-cancellable operating leases for each of the following periods.

	As of December	
$ in millions	**2016**	2015
Less than one year	**$ 82**	$ 95
Between one and five years	**229**	347
Over five years	**–**	16
Total	**$311**	$458

Total future minimum sublease payments expected to be received under non-cancellable subleases as of December 2016 and December 2015 were $46 million and $70 million, respectively.

Legal Proceedings

The company is involved in a number of judicial, regulatory and arbitration proceedings (including those described below) concerning matters arising in connection with the conduct of the company's business, however it is not practicable to reliably estimate an impact, if any, of these proceedings.

Interest Rate Swap Antitrust Litigation. GSI is among the defendants named in putative antitrust class actions relating to the trading of interest rate swaps, filed beginning in November 2015 and consolidated in the U.S. District Court for the Southern District of New York. The second consolidated amended complaint filed on December 9, 2016 generally alleges a conspiracy among the defendants since at least January 1, 2007 to preclude exchange trading of interest rate swaps. The complaint seeks declaratory and injunctive relief as well as treble damages in an unspecified amount. Defendants moved to dismiss on January 20, 2017.

GSI is among the defendants named in antitrust actions relating to the trading of interest rate swaps filed in the U.S. District Court for the Southern District of New York beginning in April 2016 by two operators of swap execution facilities and certain of their affiliates. These actions have been consolidated with the class action described above for pretrial proceedings. The second consolidated amended complaint filed on December 9, 2016 generally asserts claims under federal and state antitrust laws and state common law in connection with an alleged conspiracy among the defendants to preclude trading of interest rate swaps on the plaintiffs' respective swap execution facilities and seeks declaratory and injunctive relief as well as treble damages in an unspecified amount. Defendants moved to dismiss on January 20, 2017.

Commodities-Related Litigation. GSI is among the defendants named in putative class actions relating to trading in platinum and palladium, filed beginning on November 25, 2014 and most recently amended on July 27, 2015, in the U.S. District Court for the Southern District of New York. The complaints generally allege that the defendants violated federal antitrust laws and the Commodity Exchange Act in connection with an alleged conspiracy to manipulate a benchmark for physical platinum and palladium prices and seek declaratory and injunctive relief as well as treble damages in an unspecified amount. On September 21, 2015, the defendants moved to dismiss.

Regulatory Investigations and Reviews and Related Litigation. Group Inc. and certain of its affiliates, including GSI, are subject to a number of other investigations and reviews by, and in some cases have received subpoenas and requests for documents and information from, various governmental and regulatory bodies and self-regulatory organisations and litigation relating to various matters relating to the GS Group's businesses and operations, including:

- The 2008 financial crisis;
- The public offering process;
- Investment management and financial advisory services;
- Conflicts of interest;
- Transactions involving government-related financings and other matters, including those related to 1Malaysia Development Berhad (1MDB), a sovereign wealth fund in Malaysia;
- The offering, auction, sales, trading and clearance of corporate and government securities, currencies, commodities and other financial products and related sales and other communications and activities, including compliance with short sale rules, algorithmic, high-frequency and quantitative trading, futures trading, options trading, when-issued trading, transaction reporting, technology systems and controls, securities lending practices, trading and clearance of credit derivative instruments and interest rate swaps, commodities activities and metals storage, private placement practices, allocations of and trading in securities, and trading activities and communications in connection with the establishment of benchmark rates, such as currency rates;
- Compliance with the U.K. Bribery Act and the U.S. Foreign Corrupt Practices Act;
- Hiring and compensation practices;
- System of risk management and controls; and
- Insider trading, the potential misuse and dissemination of material non-public information regarding corporate and governmental developments and the effectiveness of insider trading controls and information barriers.

In addition, investigations, reviews and litigation involving the company's affiliates and such affiliates' businesses and operations, including various matters referred to above but also other matters, may have an impact on the company's businesses and operations.

Note 23.

Financial Risk Management and Capital Management

Certain disclosures in relation to the company's financial risk management and capital management have been presented alongside other risk management and regulatory information in Part I of this annual report and are identified as audited, where relevant.

Note 24.

Financial Assets and Financial Liabilities

Financial Assets and Financial Liabilities by Category

The tables below present the carrying value of the company's financial assets and financial liabilities by category.

	Financial Assets			
$ in millions	Held for trading	Designated at fair value	Loans and receivables	Total
As of December 2016				
Financial instruments owned	**$662,945**	**$ –**	**$ –**	**$662,945**
Collateralised agreements	**–**	**139,732**	**44,868**	**184,600**
Debtors	**–**	**1,432**	**67,528**	**68,960**
Cash at bank and in hand	**–**	**–**	**16,888**	**16,888**
Total financial assets	**$662,945**	**$141,164**	**$129,284**	**$933,393**
As of December 2015				
Financial instruments owned	$616,054	$ –	$ –	$616,054
Collateralised agreements	–	132,933	30,770	163,703
Debtors	–	1,368	58,506	59,874
Cash at bank and in hand	–	–	9,974	9,974
Total financial assets	$616,054	$134,301	$ 99,250	$849,605

	Financial Liabilities			
$ in millions	Held for trading	Designated at fair value	Amortised cost	Total
As of December 2016				
Amounts falling due within one year				
Financial instruments sold, but not yet purchased	**$613,911**	**$ –**	**$ –**	**$613,911**
Collateralised financings	**–**	**96,427**	**41,214**	**137,641**
Other creditors	**–**	**13,542**	**96,955**	**110,497**
Total	**613,911**	**109,969**	**138,169**	**862,049**
Amounts falling due after more than one year				
Collateralised financings	**–**	**6,233**	**–**	**6,233**
Other creditors	**–**	**19,407**	**18,666**	**38,073**
Total	**–**	**25,640**	**18,666**	**44,306**
Total financial liabilities	**$613,911**	**$135,609**	**$156,835**	**$906,355**
As of December 2015				
Amounts falling due within one year				
Financial instruments sold, but not yet purchased	$555,654	$ –	$ –	$555,654
Collateralised financings	–	72,913	43,472	116,385
Other creditors	–	14,281	101,655	115,936
Total	555,654	87,194	145,127	787,975
Amounts falling due after more than one year				
Collateralised financings	–	3,502	–	3,502
Other creditors	–	19,928	12,370	32,298
Total	–	23,430	12,370	35,800
Total financial liabilities	$555,654	$110,624	$157,497	$823,775

In the table above, certain of the company's intercompany unsecured borrowings that have been designated at fair value were previously disclosed as measured at amortised cost. As of December 2015, $87 million of other creditors falling due within one year and $12.48 billion of other creditors falling due after more than one year have been moved from amortised cost to designated at fair value to more appropriately present these balances. These financial instruments have been presented in level 2 in the fair value hierarchy. See "Fair Value of Financial Assets and Financial Liabilities by Level" below.

Fair Value Hierarchy

The fair value of a financial instrument is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets are marked to bid prices and financial liabilities are marked to offer prices. Fair value measurements do not include transaction costs. The company measures certain financial assets and financial liabilities as a portfolio (i.e., based on its net exposure to market and/or credit risks).

U.K. GAAP has a three-level fair value hierarchy for disclosure of fair value measurements. The fair value hierarchy prioritises inputs to the valuation techniques used to measure fair value, giving the highest priority to level 1 inputs and the lowest priority to level 3 inputs. A financial asset or financial liability's level in the fair value hierarchy is based on the lowest level of input that is significant to its fair value measurement.

The fair value hierarchy is as follows:

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

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

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

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

Valuation Techniques and Significant Inputs

Cash Instruments. Cash instruments include government and agency obligations, corporate loans and debt securities and other debt obligations, equities and convertible debentures, and other non-derivative financial instruments owned and financial instruments sold, but not yet purchased. Valuation techniques and significant inputs for each level of the fair value hierarchy include:

Level 1 Cash Instruments

Level 1 cash instruments are valued using quoted prices for identical unrestricted instruments in active markets. The company defines active markets for equity instruments based on the average daily trading volume both in absolute terms and relative to the market capitalisation for the instrument. The company defines active markets for debt instruments based on both the average daily trading volume and the number of days with trading activity.

Level 2 Cash Instruments

Level 2 cash instruments can be verified to quoted prices, recent trading activity for identical or similar instruments, broker or dealer quotations or alternative pricing sources with reasonable levels of price transparency. Consideration is given to the nature of the quotations (e.g., indicative or firm) and the relationship of recent market activity to the prices provided from alternative pricing sources.

Valuation adjustments are typically made to level 2 cash instruments (i) if the cash instrument is subject to transfer restrictions and/or (ii) for other premiums and liquidity discounts that a market participant would require to arrive at fair value. Valuation adjustments are generally based on market evidence.

Level 3 Cash Instruments

Level 3 cash instruments have one or more significant valuation inputs that are not observable. Absent evidence to the contrary, level 3 cash instruments are initially valued at transaction price, which is considered to be the best initial estimate of fair value. Subsequently, the company uses other methodologies to determine fair value, which vary based on the type of instrument. Valuation inputs and assumptions are changed when corroborated by substantive observable evidence, including values realised on sales of financial assets.

Valuation techniques of level 3 cash instruments vary by instrument, but are generally based on discounted cash flow techniques. The valuation techniques and the nature of significant inputs used to determine the fair values of each type of level 3 cash instrument are described below.

- **Mortgages and Other Asset-Backed Loans and Securities.** Significant inputs are generally determined based on relative value analyses and include:
  - Market yields implied by transactions of similar or related assets;
  - Current performance of the borrower or loan collateral and recovery assumptions if a default occurs; and
  - Timing of expected future cash flows (duration) which, in certain cases, may incorporate the impact of other unobservable inputs (e.g., prepayment speeds).
- **Equities and Convertible Debentures.** Equities and convertible debentures include private equity investments. Recent third-party completed or pending transactions (e.g., merger proposals, tender offers, debt restructurings) are considered to be the best evidence for any change in fair value. When these are not available, the following valuation methodologies are used, as appropriate:
  - Industry multiples and public comparables;
  - Transactions in similar instruments; and
  - Discounted cash flow techniques.
- **Corporate Obligations and Other Cash Instruments.** Corporate obligations and other cash instruments consists of corporate loans and debt securities and other debt obligations and government and agency obligations. Significant inputs are generally determined based on relative value analyses, which incorporate comparisons both to prices of credit default swaps that reference the same or similar underlying instrument or entity and to other debt instruments for the same issuer for which observable prices or broker quotations are available. Significant inputs include:
  - Market yields implied by transactions of similar or related assets;
  - Current levels and changes in market indices such as the iTraxx, CDX and LCDX (indices that track the performance of corporate credit and loans, respectively);
  - Current performance of the borrower or loan collateral and recovery assumptions if a default occurs; and
  - Maturity and coupon profile of the instrument.

Derivative Instruments. Derivatives may be traded on an exchange (exchange-traded) or they may be privately negotiated contracts, which are usually referred to as OTC derivatives. Certain of the company's OTC derivatives are cleared and settled through central clearing counterparties (OTC-cleared), while others are bilateral contracts between two counterparties (bilateral OTC).

The company's level 2 and level 3 derivatives are valued using derivative pricing models (e.g., discounted cash flow models, correlation models, and models that incorporate option pricing methodologies, such as Monte Carlo simulations). Price transparency of derivatives can generally be characterised by product type, as described below.

- **Interest Rate.** In general, the key inputs used to value interest rate derivatives are transparent, even for most long-dated contracts. Interest rate swaps and options denominated in the currencies of leading industrialised nations are characterised by high trading volumes and tight bid/offer spreads. Interest rate derivatives that reference indices, such as an inflation index, or the shape of the yield curve (e.g., 10-year swap rate vs. 2-year swap rate) are more complex, but the key inputs are generally observable.
- **Credit.** Price transparency for credit default swaps, including both single names and baskets of credits, varies by market and underlying reference entity or obligation. Credit default swaps that reference indices, large corporates and major sovereigns generally exhibit the most price transparency. For credit default swaps with other underliers, price transparency varies based on credit rating, the cost of borrowing the underlying reference obligations, and the availability of the underlying reference obligations for delivery upon the default of the issuer. Credit default swaps that reference loans, asset-backed securities and emerging market debt instruments tend to have less price transparency than those that reference corporate bonds. In addition, more complex credit derivatives, such as those sensitive to the correlation between two or more underlying reference obligations, generally have less price transparency.
- **Currency.** Prices for currency derivatives based on the exchange rates of leading industrialised nations, including those with longer tenors, are generally transparent. The primary difference between the price transparency of developed and emerging market currency derivatives is that emerging markets tend to be observable for contracts with shorter tenors.
- **Equity.** Price transparency for equity derivatives varies by market and underlier. Options on indices and the common stock of corporates included in major equity indices exhibit the most price transparency. Equity derivatives generally have observable market prices, except for contracts with long tenors or reference prices that differ significantly from current market prices. More complex equity derivatives, such as those sensitive to the correlation between two or more individual stocks, generally have less price transparency.

Liquidity is essential to observability of all product types. If transaction volumes decline, previously transparent prices and other inputs may become unobservable. Conversely, even highly structured products may at times have trading volumes large enough to provide observability of prices and other inputs.

Level 1 Derivatives

Level 1 derivatives include short-term contracts for future delivery of securities when the underlying security is a level 1 instrument, and exchange-traded derivatives if they are actively traded and are valued at their quoted market price.

Level 2 Derivatives

Level 2 derivatives include OTC derivatives for which all significant valuation inputs are corroborated by market evidence and exchange-traded derivatives that are not actively traded and/or that are valued using models that calibrate to market-clearing levels of OTC derivatives. In evaluating the significance of a valuation input, the company considers, among other factors, a portfolio's net risk exposure to that input.

The selection of a particular model to value a derivative depends on the contractual terms of and specific risks inherent in the instrument, as well as the availability of pricing information in the market. For derivatives that trade in liquid markets, model selection does not involve significant management judgement because outputs of models can be calibrated to market-clearing levels.

Valuation models require a variety of inputs, such as contractual terms, market prices, yield curves, discount rates (including those derived from interest rates on collateral received and posted as specified in credit support agreements for collateralised derivatives), credit curves, measures of volatility and correlations of such inputs. Significant inputs to the valuations of level 2 derivatives can be verified to market transactions, broker or dealer quotations or other alternative pricing sources with reasonable levels of price transparency. Consideration is given to the nature of the quotations (e.g., indicative or firm) and the relationship of recent market activity to the prices provided from alternative pricing sources.

Level 3 Derivatives

Level 3 derivatives are valued using models which utilise observable level 1 and/or level 2 inputs, as well as unobservable level 3 inputs. Unobservable inputs include certain correlations as well as credit spreads and equity volatility inputs.

Subsequent to the initial valuation of a level 3 derivative, the company updates the level 1 and level 2 inputs to reflect observable market changes and any resulting gains and losses are recorded in level 3. Level 3 inputs are changed when corroborated by evidence such as similar market transactions, third-party pricing services and/or broker or dealer quotations or other empirical market data. In circumstances where the company cannot verify the model value by reference to market transactions, it is possible that a different valuation model could produce a materially different estimate of fair value. See below for further information about significant unobservable inputs used in the valuation of level 3 derivatives.

Where there is a difference between the initial transaction price and the fair value calculated by internal models, a gain or loss is recognised after initial recognition only to the extent that it arises from a change in a factor (including time) that market participants would consider in setting a price.

Valuation Adjustments

Valuation adjustments are integral to determining the fair value of derivative portfolios and are used to adjust the mid-market valuations produced by derivative pricing models to the appropriate exit price valuation. These adjustments incorporate bid/offer spreads, the cost of liquidity, credit valuation adjustments and funding valuation adjustments, which account for the credit and funding risk inherent in the uncollateralised portion of derivative portfolios. The company also makes funding valuation adjustments to collateralised derivatives where the terms of the agreement do not permit the company to deliver or repledge collateral received. Market-based inputs are generally used when calibrating valuation adjustments to market-clearing levels.

In addition, for derivatives that include significant unobservable inputs, the company makes model or exit price adjustments to account for the valuation uncertainty present in the transaction.

Other Financial Assets and Financial Liabilities. Valuation techniques and significant inputs of other financial assets and financial liabilities include:

- **Collateralised Agreements and Collateralised Financings.** The significant inputs to the valuation of resale and repurchase agreements and securities borrowed and loaned are funding spreads, the amount and timing of expected future cash flows and interest rates.
- **Debtors.** Debtors measured at fair value are primarily comprised of secured lending and prepaid commodity contracts. The significant inputs to the valuation of such receivables are commodity prices, interest rates, the amount and timing of expected future cash flows and funding spreads.
- **Other Creditors.** Other creditors primarily comprise hybrid financial instruments and prepaid commodity contracts.

  The significant inputs to the valuation of secured other creditors measured at fair value are the amount and timing of expected future cash flows, interest rates, funding spreads, the fair value of the collateral delivered by the company (which is determined using the amount and timing of expected future cash flows, market prices, market yields and recovery assumptions) and the frequency of additional collateral calls.

  The significant inputs to the valuation of unsecured other creditors measured at fair value are the amount and timing of expected future cash flows, interest rates, the credit spreads of GS Group, as well as commodity prices in the case of prepaid commodity contracts. The inputs used to value the embedded derivative component of hybrid financial instruments are consistent with the inputs used to value the company's other derivative instruments.

Fair Value of Financial Assets and Financial Liabilities by Level

The tables below present, by level within the fair value hierarchy, financial assets and financial liabilities measured at fair value on a recurring basis.

$ in millions	Financial Assets and Financial Liabilities at Fair Value as of December 2016			
	Level 1	**Level 2**	**Level 3**	**Total**
Financial Assets				
Cash instruments	**$43,678**	**$ 18,633**	**$1,035**	**$ 63,346**
Derivative instruments	**47**	**595,435**	**4,117**	**599,599**
Financial instruments owned	**43,725**	**614,068**	**5,152**	**662,945**
Collateralised agreements	**–**	**139,732**	**–**	**139,732**
Debtors	**–**	**1,432**	**–**	**1,432**
Total financial assets	**$43,725**	**$755,232**	**$5,152**	**$804,109**
Financial Liabilities				
Amounts falling due within one year				
Cash instruments	**$23,837**	**$ 3,095**	**$ 4**	**$ 26,936**
Derivative instruments	**34**	**584,717**	**2,224**	**586,975**
Financial instruments sold, but not yet purchased	**23,871**	**587,812**	**2,228**	**613,911**
Collateralised financings	**–**	**96,361**	**66**	**96,427**
Other creditors	**–**	**9,941**	**3,601**	**13,542**
Total	**23,871**	**694,114**	**5,895**	**723,880**
Amounts falling due after more than one year				
Collateralised financings	**–**	**6,233**	**–**	**6,233**
Other creditors	**–**	**15,674**	**3,733**	**19,407**
Total	**–**	**21,907**	**3,733**	**25,640**
Total financial liabilities	**$23,871**	**$716,021**	**$9,628**	**$749,520**
Net derivative instruments	**$ 13**	**$ 10,718**	**$1,893**	**$ 12,624**

$ in millions	Financial Assets and Financial Liabilities at Fair Value as of December 2015			
	Level 1	Level 2	Level 3	Total
Financial Assets				
Cash instruments	$48,198	$ 17,501	$1,238	$ 66,937
Derivative instruments	14	544,300	4,803	549,117
Financial instruments owned	48,212	561,801	6,041	616,054
Collateralised agreements	–	132,933	–	132,933
Debtors	–	1,368	–	1,368
Total financial assets	$48,212	$696,102	$6,041	$750,355
Financial Liabilities				
Amounts falling due within one year				
Cash instruments	$21,038	$ 3,584	$ 62	$ 24,684
Derivative instruments	28	528,277	2,665	530,970
Financial instruments sold, but not yet purchased	21,066	531,861	2,727	555,654
Collateralised financings	–	72,842	71	72,913
Other creditors	–	10,802	3,479	14,281
Total	21,066	615,505	6,277	642,848
Amounts falling due after more than one year				
Collateralised financings	–	3,502	–	3,502
Other creditors	–	17,804	2,124	19,928
Total	–	21,306	2,124	23,430
Total financial liabilities	$21,066	$636,811	$8,401	$666,278
Net derivative instruments	$ (14)	$ 16,023	$2,138	$ 18,147

In the table above, as of December 2015, level 2 other creditors falling due within one year and other creditors falling due after more than one year have been increased by $87 million and $12.48 billion, respectively. See “Financial Assets and Financial Liabilities by Category” above for further details.

Significant Unobservable Inputs Used in Level 3 Fair Value Measurements

Cash Instruments. As of December 2016 and December 2015, the company had level 3 cash instrument assets of $1.04 billion and $1.24 billion, respectively. Level 3 cash instrument liabilities were not material. The table below presents the amount of level 3 cash instruments assets, and ranges and weighted averages of significant unobservable inputs used to value the company’s level 3 cash instrument assets.

$ in millions	Level 3 Cash Instruments Assets and Range of Significant Unobservable Inputs (Weighted Average) as of	
	December 2016	December 2015
Mortgages and other asset-backed loans and securities		
Level 3 assets	**$336**	$405
Yield	**0.8% to 20.0% (7.1%)**	3.2% to 19.7% (5.9%)
Recovery rate	**35.0% to 97.5% (76.5%)**	N/A
Duration (years)	**0.8 to 16.1 (4.7)**	0.7 to 11.8 (5.5)
Equities and convertible debentures		
Level 3 assets	**$199**	$152
Multiples	**0.9x to 5.5x (1.6x)**	0.9x to 14.5x (2.4x)
Discount rate/yield	**N/A**	8.6% to 13.3% (11.4%)
Corporate obligations and other cash instruments		
Level 3 assets	**$500**	$681
Yield	**2.6% to 14.1% (6.3%)**	2.9% to 14.3% (6.2%)
Recovery rate	**0.0% to 70.0% (45.1%)**	0.0% to 70.0% (40.5%)
Duration (years)	**1.9 to 15.7 (3.4)**	1.8 to 5.5 (3.0)

In the table above:

- Ranges represent the significant unobservable inputs that were used in the valuation of each type of cash instrument.
- Weighted averages are calculated by weighting each input by the relative fair value of the cash instruments.
- The ranges and weighted averages of these inputs are not representative of the appropriate inputs to use when calculating the fair value of any one cash instrument. For example, the highest yield for mortgages and loans is appropriate for valuing a specific loan but may not be appropriate for valuing any other loan. Accordingly, the ranges of inputs do not represent uncertainty in, or possible ranges of, fair value measurements of the company’s level 3 cash instruments.
- Increases in yield, discount rate or duration used in the valuation of the company’s level 3 cash instruments would result in a lower fair value measurement, while increases in recovery rate, basis or multiples would result in a higher fair value measurement. Due to the distinctive nature of each of the company’s level 3 cash instruments, the interrelationship of inputs is not necessarily uniform within each product type.
- Equities and convertible debentures include private equity investments.

- Discount rate/yield was not significant to the valuation of level 3 equities and convertible debentures as of December 2016. Recovery rate was not significant to the valuation of mortgages and other asset-backed loans and securities as of December 2015.
- Mortgages and other asset-backed loans and securities and corporate obligations and other cash instruments are valued using discounted cash flows, and equities and convertible debentures are valued using market comparables and discounted cash flows.
- The fair value of any one instrument may be determined using multiple valuation techniques. For example, market comparables and discounted cash flows may be used together to determine fair value. Therefore, the level 3 balance encompasses both of these techniques.

Derivative Instruments. As of December 2016 and December 2015, the company had net level 3 derivative instruments of $1.89 billion and $2.14 billion, respectively. The table below presents the amount of net level 3 derivative instruments, and ranges, averages and medians of significant unobservable inputs used to value the company's credit and equities derivative instruments. As of December 2016 and December 2015, the company had net level 3 financial instruments of $(184) million and $136 million, respectively, relating to interest rate, currencies and commodities derivatives for which the range of significant unobservable inputs has not been disclosed as the amounts are not material.

	Net Level 3 Derivative Instruments and Range of Significant Unobservable Inputs (Average/Median) as of	
$ in millions	**December 2016**	December 2015
Credit	**$2,313**	$2,278
Correlation	**35% to 91% (65%/68%)**	46% to 99% (68%/66%)
Credit spreads (bps)	**2 to 993 (148/100)**	1 to 952 (174/131)
Upfront credit points	**0 to 96 (21/8)**	0 to 88 (24/20)
Recovery rates	**1% to 83% (54%/70%)**	2% to 55% (34%/40%)
Equities	**$(236)**	$(276)
Correlation	**(39)% to 87% (42%/45%)**	(65)% to 94% (38%/45%)
Volatility	**5% to 63% (23%/22%)**	14% to 59% (26%/26%)

In the table above:

- Net derivative assets are shown as positive amounts and net derivative liabilities are shown as negative amounts.
- Ranges represent the significant unobservable inputs that were used in the valuation of each type of derivative.
- Averages represent the arithmetic average of the inputs and are not weighted by the relative fair value or notional of the respective financial instruments. An average greater than the median indicates that the majority of inputs are below the average.
- The ranges, averages and medians of these inputs are not representative of the appropriate inputs to use when calculating the fair value of any one derivative. For example, the highest correlation for credit derivatives is appropriate for valuing a specific credit derivative but may not be appropriate for valuing any other credit derivative. Accordingly, the ranges of inputs do not represent uncertainty in, or possible ranges of, fair value measurements of the company's level 3 derivatives.
- Credit derivatives are valued using option pricing, correlation and discounted cash flow models, and equities derivatives are valued using option pricing models.
- The fair value of any one instrument may be determined using multiple valuation techniques. For example, option pricing models and discounted cash flows models are typically used together to determine fair value. Therefore, the level 3 balance encompasses both of these techniques.
- Correlation within equities includes cross-product correlation.

Range of Significant Unobservable Inputs

The following is information about the ranges of significant unobservable inputs used to value the company's level 3 derivative instruments:

- **Correlation.** Ranges for correlation cover a variety of underliers both within one market (e.g., equity index and equity single stock names) and across markets (e.g., correlation of an equity index and a foreign exchange rate), as well as across regions.
- **Volatility.** Ranges for volatility cover numerous underliers across a variety of markets, maturities and strike prices. For example, volatility of equity indices is generally lower than volatility of single stocks.
- **Credit spreads, upfront credit points and recovery rates.** The ranges for credit spreads, upfront credit points and recovery rates cover a variety of underliers (index and single names), regions, sectors, maturities and credit qualities (high-yield and investment-grade). The broad range of this population gives rise to the width of the ranges of significant unobservable inputs.

Sensitivity of Fair Value Measurement to Changes in Significant Unobservable Inputs

The following is a description of the directional sensitivity of the company's level 3 fair value measurements to changes in significant unobservable inputs, in isolation:

- **Correlation.** In general, for contracts where the holder benefits from the consistent directional performance of the underlying asset or index prices (e.g., interest rates, credit spreads, foreign exchange rates, inflation rates and equity prices), an increase in correlation results in a higher fair value measurement.
- **Volatility.** In general, for purchased options, an increase in volatility results in a higher fair value measurement.
- **Credit spreads, upfront credit points and recovery rates.** In general, the fair value of purchased credit protection increases as credit spreads or upfront credit points increase or recovery rates decrease. Credit spreads, upfront credit points and recovery rates are strongly related to distinctive risk factors of the underlying reference obligations. These include reference entity-specific factors such as leverage, volatility and industry; market-based risk factors, such as borrowing costs or liquidity of the underlying reference obligation; and macroeconomic conditions.

Due to the distinctive nature of each of the company's level 3 derivatives, the interrelationship of inputs is not necessarily uniform within each product type.

Other Financial Assets and Financial Liabilities. Significant unobservable inputs of other financial assets and financial liabilities include:

- **Collateralised Agreements and Collateralised Financings.** As of both December 2016 and December 2015, the company had no level 3 resale agreements, securities borrowed or securities loaned. As of both December 2016 and December 2015, the company's level 3 repurchase agreements were not material.
- **Debtors.** As of both December 2016 and December 2015, the company's level 3 debtors were nil.
- **Other Creditors.** As of both December 2016 and December 2015, the significant unobservable inputs used to value the company's secured level 3 other creditors have been incorporated in the company's cash instruments disclosures related to unobservable inputs, within corporate obligations and other cash instruments. See "Cash Instruments" above.

  As of both December 2016 and December 2015, substantially all of the company's unsecured level 3 other creditors are hybrid financial instruments. As the significant unobservable inputs used to value hybrid financial instruments primarily relate to the embedded derivative component of these borrowings, these inputs are incorporated in the company's derivative disclosures related to unobservable inputs. See "Derivative Instruments" above.

Transfers Between Level 1 and Level 2 of the Fair Value Hierarchy

During 2016 and 2015, there were no significant transfers between level 1 and level 2 financial assets and financial liabilities measured at fair value on a recurring basis.

Level 3 Rollforward

The table below presents a summary of the changes in fair value for all level 3 financial assets and financial liabilities measured at fair value on a recurring basis. Gains and losses arising on level 3 assets are recognised within net revenues in the profit and loss account. In the table below:

- If a financial asset or financial liability was transferred to level 3 during a reporting period, its entire gain or loss for the period is included in level 3. For level 3 financial assets, increases are shown as positive amounts, while decreases are shown as negative amounts. For level 3 financial liabilities, increases are shown as negative amounts, while decreases are shown as positive amounts.
- Transfers between levels are recognised at the beginning of the reporting period in which they occur. Accordingly, the tables do not include gains or losses for level 3 financial assets and financial liabilities that were transferred out of level 3 prior to the end of the period.
- Level 3 financial assets and financial liabilities are frequently economically hedged with level 1 and level 2 financial assets and financial liabilities. Accordingly, level 3 gains or losses that are reported in the table below for a particular class of financial asset or financial liability can be partially offset by gains or losses attributable to level 1 or level 2 in the same class of financial asset or financial liability or gains or losses attributable to level 1, level 2 or level 3 in a different class of financial asset or financial liability. As a result, gains or losses included in the level 3 rollforward below do not necessarily represent the overall impact on the company's results of operations, liquidity or capital resources.

	Year Ended December	
$ in millions	**2016**	2015
Total financial assets		
Beginning balance	**$ 6,041**	$ 7,793
Gains/(losses)	**1,052**	646
Purchases	**394**	680
Sales	**(351)**	(401)
Settlements	**(1,727)**	(1,399)
Transfers into level 3	**641**	934
Transfers out of level 3	**(898)**	(2,212)
Ending balance	**$ 5,152**	$ 6,041
Total financial liabilities		
Beginning balance	**$(8,401)**	$(6,422)
Gains/(losses)	**(377)**	528
Purchases	**14**	99
Sales	**(5,697)**	(5,194)
Settlements	**4,087**	2,801
Transfers into level 3	**(553)**	(973)
Transfers out of level 3	**1,299**	760
Ending balance	**$(9,628)**	$(8,401)

The table below disaggregates, by the balance sheet line items, the information for financial liabilities included in the summary table above. The information for financial assets included in the summary table above has not been disaggregated as it solely relates to "Financial instruments owned".

	Year Ended December	
$ in millions	**2016**	2015
Financial instruments sold, but not yet purchased		
Beginning balance	**$(2,727)**	$(2,718)
Gains/(losses)	**(446)**	(8)
Purchases	**14**	99
Sales	**(201)**	(383)
Settlements	**892**	324
Transfers into level 3	**(155)**	(424)
Transfers out of level 3	**395**	383
Ending balance	**$(2,228)**	$(2,727)
Collateralised financings		
Beginning balance	**$ (71)**	$ (124)
Gains/(losses)	**(6)**	(2)
Settlements	**11**	55
Ending balance	**$ (66)**	$ (71)
Other creditors		
Beginning balance	**$(5,603)**	$(3,580)
Gains/(losses)	**75**	538
Sales	**(5,496)**	(4,811)
Settlements	**3,184**	2,422
Transfers into level 3	**(398)**	(549)
Transfers out of level 3	**904**	377
Ending balance	**$(7,334)**	$(5,603)

Transfers Between Level 2 and Level 3 of the Fair Value Hierarchy

Year Ended December 2016. Transfers into level 3 primarily reflected transfers of certain credit derivatives from level 2, principally due to unobservable credit spread and yield inputs becoming significant to the valuation of these instruments and the transfers of certain equity derivatives from level 2, principally due to unobservable volatility and correlation inputs becoming significant to the valuation of these derivatives.

Transfers out of level 3 primarily reflected transfers of certain credit derivatives to level 2, principally due to unobservable credit spread inputs no longer being significant to the net risk of certain portfolios, transfer of certain equity derivatives to level 2, principally due to unobservable volatility and correlation inputs no longer being significant to the net risk of certain portfolios and transfer of certain interest rate derivatives to level 2, due to unobservable long dated interest rate bases becoming observable.

Year Ended December 2015. Transfers into level 3 primarily reflected transfers of certain credit derivatives from level 2, principally due to unobservable credit spread inputs becoming significant to the valuation of these instruments and the transfers of certain equity derivatives from level 2, principally due to unobservable volatility and correlation inputs becoming significant to the valuation of these derivatives.

Transfers out of level 3 primarily reflected transfers of certain credit derivatives to level 2, principally due to unobservable credit spread inputs no longer being significant to the net risk of certain portfolios.

Fair Value Financial Assets and Financial Liabilities Valued Using Techniques That Incorporate Unobservable Inputs

The fair value of financial assets and financial liabilities may be determined in whole or part using a valuation technique based on assumptions that are not supported by prices from observable current market transactions in the same instrument or based on available observable market data and changing these assumptions will change the resultant estimate of fair value. The potential impact of using reasonable possible alternative assumptions for the valuations, including significant unobservable inputs, has been quantified as of December 2016 and December 2015, as approximately $220 million and $261 million, respectively, for favourable changes, and $294 million and $238 million, respectively, for unfavourable changes. In determining reasonably possible alternative unfavourable assumptions, a detailed business and position level review has been performed to identify and quantify instances where potential uncertainty exists. This has taken into account the positions' fair value as compared to the range of available market information.

The table below presents the amounts not recognised in the profit and loss account relating to the difference between the fair value of financial instruments held for trading at initial recognition (the transaction price) and the amounts determined at initial recognition using the valuation techniques (day 1 P&L).

	Year Ended December	
$ in millions	**2016**	2015
As of January 1	**$139**	$136
New transactions	**90**	93
Amounts recognised in the profit and loss account during the period	**(80)**	(90)
As of December 31	**$149**	$139

Fair Value of Financial Assets and Financial Liabilities Not Measured at Fair Value

As of December 2016 and December 2015, the company had $129.28 billion and $99.25 billion, respectively, of current financial assets and $138.17 billion and $145.13 billion, respectively, of current financial liabilities that are not measured at fair value. Given the short-term nature of these instruments, their carrying amounts in the balance sheet are a reasonable approximation of fair value.

As of December 2016 and December 2015, the company had $18.67 billion and $12.37 billion, respectively, of financial liabilities that are due after more than one year that are not measured at fair value which predominantly relate to long-term intercompany borrowings. The interest rates of these borrowings are variable in nature and approximate prevailing market interest rates for instruments with similar terms and characteristics. As such, their carrying amounts in the balance sheet are a reasonable approximation of fair value.

Items of Income, Expense, Gains or Losses

The table below presents the items of income, expense, gains or losses related to the company's financial assets and financial liabilities that are presented within net revenues.

	Year Ended December	
$ in millions	**2016**	2015
Non-interest income	**$6,477**	$6,778
Interest income		
Interest income from external counterparties	**1,521**	1,804
Interest income from parent and group undertakings	**607**	235
Total interest income	**2,128**	2,039
Interest expense		
Interest expense from external counterparties	**1,016**	1,050
Interest expense from parent and group undertakings	**1,040**	751
Total interest expense	**2,056**	1,801
Net interest income	**72**	238
Total net revenues	**$6,549**	$7,016

In the table above:

- Non-interest income includes commissions and fees income of $619 million and $532 million for 2016 and 2015, respectively. This is recognised in Institutional Client Services and Investment Management.
- Non-interest income includes net losses of $495 million for 2016 and net gains of $625 million for 2015, in relation to the company's financial assets and financial liabilities designated at fair value through profit or loss. This is recognised in Institutional Client Services. The remaining net revenues within Institutional Client Services predominately relate to net gains from financial assets and financial liabilities held for trading.

Maturity of Financial Liabilities

The table below presents the cash flows of the company's financial liabilities by contractual maturity including interest that will accrue, except for financial instruments sold, but not yet purchased. Financial instruments sold, but not yet purchased are classified as trading/on demand. Financial liabilities, with the exception of those that are held for trading or designated at fair value through profit and loss, are disclosed at their undiscounted cash flows.

The fair values of financial liabilities held for trading and financial liabilities designated at fair value through profit and loss have been disclosed as this is consistent with the values used in the liquidity risk management of these instruments. Liquidity risk on derivatives is mitigated through master netting agreements and cash collateral arrangements.

	Financial Liabilities						
$ in millions	Trading/ on demand	Less than one month	More than one month but less than three months	More than three months but less than one year	More than one year but less than five years	Greater than five years	Total
As of December 2016							
Amounts falling due within one year							
Financial instruments sold, but not yet purchased	**$613,911**	**$ –**	**$ –**	**$ –**	**$ –**	**$ –**	**$613,911**
Collateralised financings	**86,069**	**27,178**	**13,193**	**11,201**	**–**	**–**	**137,641**
Other creditors	**87,223**	**2,424**	**1,054**	**19,966**	**–**	**–**	**110,667**
Total	**787,203**	**29,602**	**14,247**	**31,167**	**–**	**–**	**862,219**
Amounts falling due after more than one year							
Collateralised financings	**–**	**–**	**–**	**–**	**6,158**	**75**	**6,233**
Other creditors	**–**	**2**	**7**	**27**	**29,430**	**11,253**	**40,719**
Total	**–**	**2**	**7**	**27**	**35,588**	**11,328**	**46,952**
Total – on-balance-sheet	**787,203**	**29,604**	**14,254**	**31,194**	**35,588**	**11,328**	**909,171**
Contingent and forward starting resale and securities borrowing agreements	**844**	**42,261**	**–**	**494**	**–**	**–**	**43,599**
Operating leases	**–**	**7**	**14**	**61**	**229**	**–**	**311**
Other	**3,993**	**–**	**–**	**–**	**–**	**–**	**3,993**
Total – off-balance-sheet	**4,837**	**42,268**	**14**	**555**	**229**	**–**	**47,903**
Total financial liabilities	**$792,040**	**$71,872**	**$14,268**	**$31,749**	**$35,817**	**$11,328**	**$957,074**
As of December 2015							
Amounts falling due within one year							
Financial instruments sold, but not yet purchased	$555,654	$ –	$ –	$ –	$ –	$ –	$555,654
Collateralised financings	60,086	41,900	3,378	11,021	–	–	116,385
Other creditors	86,050	2,267	688	27,367	–	–	116,372
Total	701,790	44,167	4,066	38,388	–	–	788,411
Amounts falling due after more than one year							
Collateralised financings	–	–	–	–	3,413	89	3,502
Other creditors	–	1	6	19	21,111	12,591	33,728
Total	–	1	6	19	24,524	12,680	37,230
Total – on-balance-sheet	701,790	44,168	4,072	38,407	24,524	12,680	825,641
Contingent and forward starting resale and securities borrowing agreements	–	29,276	–	–	–	–	29,276
Operating leases	–	8	16	72	347	15	458
Other	4,137	–	–	–	–	–	4,137
Total – off-balance-sheet	4,137	29,284	16	72	347	15	33,871
Total financial liabilities	$705,927	$73,452	$ 4,088	$38,479	$24,871	$12,695	$859,512

Collateral Received and Pledged

The company receives financial instruments (e.g., government and agency obligations, corporate debt securities, equities and convertible debentures) as collateral, primarily in connection with resale agreements, securities borrowed, derivative transactions and customer margin loans. The company obtains cash and securities as collateral on an upfront or contingent basis for derivative instruments and collateralised agreements to reduce its credit exposure to individual counterparties.

In many cases, the company is permitted to deliver or repledge financial instruments received as collateral when entering into repurchase agreements and securities lending agreements, primarily in connection with secured client financing activity. The company is also permitted to deliver or repledge these financial instruments in connection with other secured financings, collateralising derivative transactions and meeting company or customer settlement requirements.

The company also pledges certain financial instruments owned in connection with repurchase agreements, securities lending agreements and other secured financings to counterparties who may or may not have the right to deliver or repledge.

The table below presents financial instruments received as collateral that were available to be delivered, or repledged and were delivered or repledged by the company.

	As of December	
$ in millions	**2016**	2015
Collateral available to be delivered or repledged	**$420,321**	$379,594
Collateral that was delivered or repledged	**367,705**	307,759

The table below presents information about assets pledged.

	As of December	
$ in millions	**2016**	2015
Financial instruments owned pledged to counterparties that:		
Had the right to deliver or repledge	**$20,110**	$22,036
Did not have the right to deliver or repledge	**21,563**	20,146

The company has received cash collateral in respect of financial instruments owned of $60.94 billion and $57.64 billion as of December 2016 and December 2015, respectively, and posted cash collateral in respect of financial instruments sold, but not yet purchased of $47.37 billion and $38.71 billion as of December 2016 and December 2015, respectively.

In addition to repurchase agreements and securities lending transactions, the company funds certain assets through the use of other secured financings and pledges financial instruments as collateral in these transactions. These other secured financings consist of liabilities related to special purpose entities, transfers of financial assets that are accounted for as financings rather than sales and other structured financing arrangements. Other secured financings include arrangements that are non-recourse.

Hedge Accounting

The company designates certain interest rate swaps as fair value hedges. These interest rate swaps hedge changes in fair value attributable to the relevant benchmark interest rate (e.g., London Interbank Offered Rate (LIBOR)), effectively converting fixed rate obligations into floating rate obligations.

The company applies a statistical method that utilises regression analysis when assessing the effectiveness of its fair value hedging relationships in achieving offsetting changes in the fair values of the hedging instrument and the risk being hedged (i.e., interest rate risk). An interest rate swap is considered highly effective in offsetting changes in fair value attributable to changes in the hedged risk when the regression analysis results in a coefficient of determination of 80% or greater and a slope between 80% and 125%.

For qualifying fair value hedges, gains or losses on derivatives and the change in fair value of the hedged item attributable to the hedged risk are included in net revenues. When a derivative is no longer designated as a hedge, any remaining difference between the carrying value and par value of the hedged item is amortised over the remaining life of the hedged item using the effective interest method.

The table below presents the gains/(losses) from interest rate derivatives accounted for as hedges, the related hedged borrowings and the hedge ineffectiveness on these derivatives.

	Year Ended December	
$ in millions	**2016**	2015
Interest rate hedges	**$ 7**	$(22)
Hedge borrowings	**(7)**	18
Hedge ineffectiveness	**$ –**	$ (4)

The table below presents the fair value of asset and liability derivative instruments designated as hedges.

	As of December 2016		As of December 2015	
$ in millions	**Derivative Assets**	**Derivative Liabilities**	Derivative Assets	Derivative Liabilities
Total	**$128**	**$29**	$158	$24

Unconsolidated Structured Entities

The company has interests in structured entities that it does not control (unconsolidated structured entities), which primarily includes: senior and subordinated debt in residential and commercial mortgage-backed and other asset-backed securitisation entities; collateralised debt obligations and collateralised loan obligations; derivatives and guarantees.

Structured entities generally finance the purchase of assets by issuing debt securities that are either collateralised by or indexed to the assets held by the structured entity. The debt securities issued by a structured entity may include tranches of varying levels of subordination. The company's involvement with structured entities primarily includes securitisation of financial assets.

In certain instances, the company provides guarantees, including derivative guarantees, to unconsolidated structured entities or holders of interests in unconsolidated structured entities.

The table below presents a summary of the unconsolidated structured entities in which the company holds interests. The company's maximum exposure to loss is mainly a result of derivatives, commitments and guarantees, for which the maximum exposure to loss is the notional amount, which does not represent anticipated losses and also has not been reduced by unrealised losses already recorded. As a result, the maximum exposure to loss exceeds liabilities recorded for derivatives, commitments and guarantees, provided to unconsolidated structured entities.

	As of December	
$ in millions	**2016**	2015
Assets in structured entities	**$7,513**	$13,301
Carrying value of interests - assets	**511**	975
Carrying value of interests - liabilities	**(31)**	(32)
Maximum exposure to loss	**4,523**	4,895

The carrying values of the company's interests are included in the balance sheet in "Financial instruments owned" or "Financial instruments sold, but not yet purchased".

Transferred Assets

Assets Continued to be Recognised in Full. During the year, the company transferred certain financial assets where the transfers failed to meet the derecognition criteria, as contained in IAS 39 'Financial Instruments: Recognition and Measurement', and as a result of which the company continues to recognise these assets in full on the balance sheet.

The company transfers assets owned to counterparties in the ordinary course of business to collateralise repurchase agreements and other securities lending transactions. In these transactions the transferred assets continue to be recognised by the company for accounting purposes because the transactions require the financial instruments to be repurchased at maturity of the agreement and the company remains exposed to the price, credit and interest rate risk of these instruments. When the company receives cash proceeds from the transfer of the asset, a financial liability is recognised in respect of the consideration received and recorded within "Collateralised financings". When the company receives non cash collateral (in the form of securities) no liability is initially recognised. If collateral received is subsequently sold, the obligation to return the collateral is recognised as a liability within "Financial instruments sold, but not yet purchased".

In addition to repurchase agreements and securities lending agreements, the company obtains funding through the use of other arrangements that fail to meet the derecognition criteria. For example, sales of securities with related derivatives, such as total return swaps, through which the company retains substantially all of the risk and reward of the transferred assets. A financial liability is recognised in such cases for the proceeds received.

Other financial assets transferred that continue to be recognised on balance sheet for accounting purposes relate to pledges of securities as collateral, primarily for derivative transactions. The obligations under such derivatives are recorded in "Financial instruments sold, but not yet purchased".

The table below presents financial assets which have been transferred but which remain on balance sheet for accounting purposes. The carrying amount of the associated financial liabilities generally approximate the carrying amount of the assets transferred.

	As of December	
$ in millions	**2016**	2015
Money market instruments	**$ –**	$ 221
Government and agency obligations	**14,803**	10,036
Corporate loans and debt securities and other debt obligations	**4,254**	5,300
Equities and convertible debentures	**22,616**	26,625
Total	**$41,673**	$42,182

Derecognised Assets With Ongoing Exposure. The company has continuing involvement in the form of derivative transactions and guarantees with certain unconsolidated structured entities to which the company had transferred financial assets. These derivatives may be credit-linked to the asset transferred and result in the company retaining specific risks in the transferred asset or require the company to make payments to the structured entity to compensate losses on the asset if certain contingent events occur.

In addition, the company transfers financial assets to securitisation vehicles. The company generally receives cash in exchange for the transferred assets but may have continuing involvement with the transferred assets, including ownership of beneficial interests in the securitisation. The company may also purchase senior or subordinated securities issued by securitisation vehicles in connection with secondary market-making activities.

Where the company's continuing involvement in transferred assets is through derivatives or guarantees, the maximum exposure to loss is the notional amounts of the derivative or guarantee. For retained or purchased interests in securitised assets, the company's risk of loss is limited to the fair value of these interests. In all cases these retained interests are carried at fair value.

The company accounts for assets pending transfer at fair value and therefore does not typically recognise significant gains or losses upon the transfer of assets. The company does not have continuing involvement that could require the company to repurchase derecognised financial assets.

The tables below present information about the company's exposure through continuing involvement and the gains or losses related to those transactions.

$ in millions	Carrying Amount	Maximum Exposure to Loss
As of December 2016		
Assets		
Cash instruments	**$ 13**	**$ 23**
Derivative instruments	**63**	**890**
Financial instruments owned	**76**	**913**
Total	**$ 76**	**$ 913**
Liabilities		
Derivatives instruments	**$ (2)**	**$ (99)**
Financial instruments sold, but not yet purchased	**(2)**	**(99)**
Other creditors	**–**	**–**
Total	**$ (2)**	**$ (99)**
As of December 2015		
Assets		
Cash instruments	$ 76	$ 93
Derivative instruments	99	1,160
Financial instruments owned	175	1,253
Total	$175	$1,253
Liabilities		
Derivatives instruments	$ (2)	$ (101)
Financial instruments sold, but not yet purchased	(2)	(101)
Other creditors	–	–
Total	$ (2)	$ (101)

$ in millions	Income/ (Expense) in the year	Cumulative Income/ (Expense)
As of December 2016		
Assets		
Cash instruments	**$ 11**	**$ 131**
Derivative instruments	**(27)**	**123**
Financial instruments owned	**(16)**	**254**
Total	**$(16)**	**$ 254**
Liabilities		
Derivatives instruments	**$ (3)**	**$ (35)**
Financial instruments sold, but not yet purchased	**(3)**	**(35)**
Other creditors	**–**	**(1)**
Total	**$ (3)**	**$ (36)**
As of December 2015		
Assets		
Cash instruments	$ 2	$ 120
Derivative instruments	6	150
Financial instruments owned	8	270
Total	$ 8	$ 270
Liabilities		
Derivatives instruments	$ (1)	$ (32)
Financial instruments sold, but not yet purchased	(1)	(32)
Other creditors	–	(1)
Total	$ (1)	$ (33)

Note 25.

Offsetting of Financial Assets and Financial Liabilities

The tables below present the company's financial assets and financial liabilities that are subject to enforceable netting agreements and offsetting. Amounts are only offset in the balance sheet when the company currently has a legally enforceable right to set-off the recognised amounts and an intention either to settle on a net basis, or to realise the asset and settle the liability simultaneously. In the tables below:

- Gross amounts exclude the effects of both counterparty netting and collateral, and therefore are not representative of the company's economic exposure.
- Amounts not offset in the balance sheet include counterparty netting (i.e., the netting of financial assets and financial liabilities for a given counterparty when a legal right of setoff exists under an enforceable netting agreement), and cash and security collateral received and posted under enforceable credit support agreements, that do not meet the criteria for offsetting under U.K. GAAP.
- Where the company has received or posted collateral under credit support agreements, but has not yet determined whether such agreements are enforceable, the related collateral has not been included in the amounts not offset in the balance sheet.
- Gross amounts include derivative assets and derivative liabilities of $6.94 billion and $6.82 billion, respectively, as of December 2016, and derivative assets and derivative liabilities of $8.34 billion and $7.49 billion, respectively, as of December 2015, which are not subject to an enforceable netting agreement or are subject to a netting agreement that the company has not yet determined to be enforceable.
- Substantially all collateralised agreements and collateralised financings are subject to enforceable netting agreements as of December 2016 and December 2015.
- As of December 2015, $7.11 billion of other creditors have been moved from financial liabilities not subject to enforceable netting agreements to financial liabilities subject to enforceable netting agreements, $2.36 billion of collateralised financings have been moved from financial liabilities subject to enforceable netting agreements to financial liabilities not subject to enforceable netting agreements and the amount disclosed as security collateral posted on collateralised financings has been increased by $12.65 billion to more appropriately present these balances.

	As of December 2016						
				Amounts not offset in the balance sheet			
$ in millions	Gross amounts	Amounts offset in the balance sheet	Net amount presented in the balance sheet	Counterparty netting	Cash collateral	Security collateral	Net amount
Financial Assets							
Cash instruments	**$ 16,948**	**$ (12,361)**	**$ 4,587**	**$ (1,120)**	**$ (42)**	**$ (2,919)**	**$ 506**
Derivative instruments	**661,959**	**(62,360)**	**599,599**	**(524,767)**	**(42,870)**	**(12,425)**	**19,537**
Financial instruments owned	**678,907**	**(74,721)**	**604,186**	**(525,887)**	**(42,912)**	**(15,344)**	**20,043**
Collateralised agreements	**232,912**	**(48,312)**	**184,600**	**(85,692)**	**–**	**(95,557)**	**3,351**
Debtors	**58,632**	**(6,162)**	**52,470**	**(3,531)**	**(37,476)**	**(4,864)**	**6,599**
Financial assets subject to enforceable netting agreements	**970,451**	**(129,195)**	**841,256**	**(615,110)**	**(80,388)**	**(115,765)**	**29,993**
Financial assets not subject to enforceable netting agreements	**92,137**	**–**	**92,137**	**–**	**–**	**–**	**92,137**
Total financial assets	**$1,062,588**	**$(129,195)**	**$933,393**	**$(615,110)**	**$(80,388)**	**$(115,765)**	**$122,130**
Financial Liabilities							
Amounts falling due within one year							
Cash instruments	**$ 1,740**	**$ (1,686)**	**$ 54**	**$ –**	**$ –**	**$ –**	**$ 54**
Derivative instruments	**648,143**	**(61,168)**	**586,975**	**(525,614)**	**(35,845)**	**(8,941)**	**16,575**
Financial instruments sold, but not yet purchased	**649,883**	**(62,854)**	**587,029**	**(525,614)**	**(35,845)**	**(8,941)**	**16,629**
Collateralised financings	**187,418**	**(53,155)**	**134,263**	**(84,632)**	**–**	**(48,821)**	**810**
Other creditors	**77,514**	**(6,444)**	**71,070**	**(3,792)**	**(43,765)**	**(683)**	**22,830**
Total	**914,815**	**(122,453)**	**792,362**	**(614,038)**	**(79,610)**	**(58,445)**	**40,269**
Amounts falling due after more than one year							
Collateralised financings	**6,233**	**–**	**6,233**	**(1,060)**	**–**	**(5,162)**	**11**
Other creditors	**9,268**	**(6,742)**	**2,526**	**(12)**	**(778)**	**(250)**	**1,486**
Total	**15,501**	**(6,742)**	**8,759**	**(1,072)**	**(778)**	**(5,412)**	**1,497**
Financial liabilities subject to enforceable netting agreements	**930,316**	**(129,195)**	**801,121**	**(615,110)**	**(80,388)**	**(63,857)**	**41,766**
Financial liabilities not subject to enforceable netting agreements	**105,234**	**–**	**105,234**	**–**	**–**	**–**	**105,234**
Total financial liabilities	**$1,035,550**	**$(129,195)**	**$906,355**	**$(615,110)**	**$(80,388)**	**$ (63,857)**	**$147,000**

	As of December 2015						
				Amounts not offset in the balance sheet			
$ in millions	Gross amounts	Amounts offset in the balance sheet	Net amount presented in the balance sheet	Counterparty netting	Cash collateral	Security collateral	Net amount
Financial Assets							
Cash instruments	$ 15,662	$ (11,579)	$ 4,083	$ (21)	$ (726)	$ (1,993)	$ 1,343
Derivative instruments	608,906	(59,789)	549,117	(474,498)	(42,162)	(11,095)	21,362
Financial instruments owned	624,568	(71,368)	553,200	(474,519)	(42,888)	(13,088)	22,705
Collateralised agreements	191,094	(27,391)	163,703	(48,219)	–	(112,475)	3,009
Debtors	55,187	(6,758)	48,429	(542)	(32,202)	(7,900)	7,785
Financial assets subject to enforceable netting agreements	870,849	(105,517)	765,332	(523,280)	(75,090)	(133,463)	33,499
Financial assets not subject to enforceable netting agreements	84,273	–	84,273	–	–	–	84,273
Total financial assets	$ 955,122	$(105,517)	$849,605	$(523,280)	$(75,090)	$(133,463)	$117,772
Financial Liabilities							
Amounts falling due within one year							
Cash instruments	$ 1,164	$ (1,164)	$ –	$ –	$ –	$ –	$ –
Derivative instruments	589,450	(58,480)	530,970	(474,498)	(32,203)	(8,617)	15,652
Financial instruments sold, but not yet purchased	590,614	(59,644)	530,970	(474,498)	(32,203)	(8,617)	15,652
Collateralised financings	148,170	(34,149)	114,021	(48,130)	–	(64,720)	1,171
Other creditors	74,559	(5,027)	69,532	(21)	(42,162)	–	27,349
Total	813,343	(98,820)	714,523	(522,649)	(74,365)	(73,337)	44,172
Amounts falling due after more than one year							
Collateralised financings	3,502	–	3,502	(89)	–	(3,343)	70
Other creditors	8,694	(6,697)	1,997	(542)	–	–	1,455
Total	12,196	(6,697)	5,499	(631)	–	(3,343)	1,525
Financial liabilities subject to enforceable netting agreements	825,539	(105,517)	720,022	(523,280)	(74,365)	(76,680)	45,697
Financial liabilities not subject to enforceable netting agreements	103,753	–	103,753	–	–	–	103,753
Total financial liabilities	$ 929,292	$(105,517)	$823,775	$(523,280)	$(74,365)	$ (76,680)	$149,450

A clearing organisation adopted a rule change in the first quarter of 2017 that requires transactions to be considered settled each day. Certain other clearing organisations allow for similar treatment. To the extent transactions with these clearing organisations are considered settled, the impact would be a reduction in gross derivative assets and liabilities, with no impact to the net amount in the table above.