

**PROSPECTUS SUPPLEMENT NO. 2  
TO THE BASE PROSPECTUS DATED 20 FEBRUARY 2019**



**GOLDMAN SACHS INTERNATIONAL**  
(Incorporated with unlimited liability in England)

**as Issuer**

**GOLDMAN, SACHS & CO. WERTPAPIER GMBH**  
(Incorporated with limited liability in Germany)

**as Issuer**

**GOLDMAN SACHS FINANCE CORP INTERNATIONAL LTD**  
(Incorporated with limited liability in Jersey)

**as Issuer**

Securities issued by Goldman Sachs International, Goldman, Sachs & Co. Wertpapier GmbH and Goldman Sachs Finance Corp International Ltd are guaranteed by

**THE GOLDMAN SACHS GROUP, INC.**  
(A corporation organised under the laws of the State of Delaware)

**as Guarantor**

**SERIES M PROGRAMME FOR THE ISSUANCE OF WARRANTS, NOTES AND  
CERTIFICATES**

**This Prospectus Supplement**

This prospectus supplement (the "**Prospectus Supplement**") to the base prospectus dated 20 February 2019 prepared by Goldman Sachs International ("**GSI**") as issuer, Goldman, Sachs & Co. Wertpapier GmbH ("**GSW**") as issuer, Goldman Sachs Finance Corp International Ltd ("**GSFCI**") as issuer and The Goldman Sachs Group, Inc. ("**GSG**") as guarantor in respect of Securities issued by GSI, GSW and GSFCI (the "**Original Base Prospectus**") under their programme for the issuance of warrants, notes and certificates with respect to the securities (the "**Programme**"), constitutes a supplement to the base prospectus for the purposes of Article 13 of Chapter 1 of Part II of the Luxembourg Law on Prospectuses for Securities dated 10 July 2005, as amended on 3 July 2012, 21 December 2012 and 10 May 2016 (the "**Luxembourg Law**") and should be read in conjunction therewith and with Prospectus Supplement No. 1 to the Original Base Prospectus dated 5 March 2019 (the Original Base Prospectus as so supplemented, the "**Base Prospectus**"). On 20 February 2019, the Commission de Surveillance du Secteur Financier (the "**CSSF**") approved the Original Base Prospectus for the purposes of Article 7 of the Luxembourg Law.

Terms defined in the Base Prospectus have the same meaning when used in this Prospectus Supplement unless otherwise defined herein. This Prospectus Supplement shall form part of and be read in conjunction with the Base Prospectus.

**Rights of withdrawal**

In accordance with Article 13 paragraph 2 of the Luxembourg Law, investors who have already agreed to purchase or subscribe for the securities before this Prospectus Supplement is published have the right exercisable until 1 April 2019, which is two working days after the publication of this Prospectus Supplement, to withdraw their acceptances.

## Purpose of this Prospectus Supplement

The purpose of this Prospectus Supplement is (a) to incorporate by reference GSI's 2018 Annual Report (as defined below), (b) incorporate by reference GSI's Regulatory Ratios, 28 February 2019 (as defined below), (c) incorporate by reference GSW's 2018 Financial Statements (as defined below), and (d) to make certain changes to the information in the "Summary", "Risk Factors", "Commonly Asked Questions", "Payout Conditions", "Introduction to the Index Linked Conditions", "Index Linked Conditions", "Introduction to the Commodity Linked Conditions", "Commodity Linked Conditions", "Introduction to the FX Linked Conditions", "FX Linked Conditions", "Form of Final Terms (Instruments)", "Form of Final Terms (Notes)", "Goldman Sachs International" and "General Information" sections of the Base Prospectus".

## Information being supplemented

### *Incorporation by reference*

This Prospectus Supplement supplements the Base Prospectus by incorporating by reference: (a) the Annual Report for the fiscal year ended 30 November 2018 of GSI ("**GSI's 2018 Annual Report**"), containing, in Part II, the Directors' Report and Audited Financial Statements of GSI for the period ended 30 November 2018; (b) the report on the Regulatory Ratios of Goldman Sachs International for the fiscal quarter ended 28 February 2019 ("**GSI's Regulatory Ratios, 28 February 2019**"); and (c) the German language version of the (i) Financial Statements for the period ending 31 December 2018 and the Management Report for the Financial Year 2018 and (ii) Auditors' Report thereon (together with, in each case, an unofficial English translation thereof, for which GSW accepts responsibility) ("**GSW's 2018 Financial Statements**").

Copies of GSI's 2018 Annual Report, GSI's Regulatory Ratios, 28 February 2019 and GSW's 2018 Financial Statements have been filed with the CSSF in its capacity as competent authority under the Prospectus Directive.

GSI's 2018 Annual Report, GSI's Regulatory Ratios, 28 February 2019 and GSW's 2018 Financial Statements are incorporated by reference into, and form part of, this Prospectus Supplement, and the information contained in this Prospectus Supplement, GSI's 2018 Annual Report, GSI's Regulatory Ratios, 28 February 2019 and GSW's 2018 Financial Statements, shall be deemed to update and, where applicable, supersede any information contained in the Base Prospectus, or any documents incorporated by reference therein.

This Prospectus Supplement and the documents incorporated by reference into this Prospectus Supplement will be available on the website of the Luxembourg Stock Exchange at [www.bourse.lu](http://www.bourse.lu).

## Amendments to the Summary

The Summary shall be amended by virtue of this Prospectus Supplement, as follows:

- (a) Element B.4b (Known trends with respect to the Issuer), on page 3 of the Original Base Prospectus shall be deleted in its entirety and replaced with the following:

"B.4b **Known trends with respect to the Issuer** [GSI's prospects will be affected, potentially adversely, by developments in global, regional and national economies, including in the United Kingdom, movements and activity levels, in financial, commodities, currency and other markets, interest rate movements, political and military developments throughout the world, client activity levels and legal and regulatory developments in the United Kingdom and other countries where GSI does business.]

[GSW's objective is a strong increase in the issuance activity. This is due to increased client demand in warrants and structured products, particularly in the German market as well as additional distribution channels by GSI. Furthermore it is expected that in a volatile market there will be a multitude of follow-up issuances in the area of turbo warrants, mini-futures and bonus certificates. In addition, it is planned to expand the offer in the sections of warrants and structured products.

Previously implemented enhancements to the issuance process allow the issuance of new warrants and certificates to be almost fully automated. Issuance activity in the Netherlands is expected to remain at the current level, as here securities do not have a predetermined maturity date by default, and it is assumed there will not be a great need for follow-up issuances. GSW is part of the firmwide considerations on the UK's exit from the European Union. GSW has considered the impact of multiple scenarios, ultimately this is not expected to have a direct impact on the business model of GSW as it could continue to engage with affiliates as it does today.]

[Not applicable; there are no known trends affecting GSFCI and the industries in which it operates.]"

- (b) Element B.12 (*Selected historical key financial information of the Issuer*), on pages 4 to 5 of the Original Base Prospectus shall be deleted and replaced with the following:

"B.12 **Selected historical key financial information of the Issuer** [The following table shows selected key historical financial information in relation to GSI:

<b>As at and for the year ended (audited)</b>		
<i>(in USD millions)</i>	<b>30 November 2018</b>	<b>31 December 2017</b>
Operating Profit	3,259	2,389
Profit on ordinary activities before taxation	3,030	2,091
Profit for the financial period	2,198	1,557
<b>As of (audited)</b>		
<i>(in USD millions)</i>	<b>30 November 2018</b>	<b>31 December 2017</b>
Fixed Assets	315	210
Current Assets	886,652	939,863
Total Shareholder's funds	33,917	31,701]

[The following table shows selected key information in relation to GSW:

<b>As at and for the year ended (audited)</b>		
<i>(in EUR)</i>	<b>31 December 2018</b>	<b>31 December 2017</b>
Operating income	1,219,136.52	931,182.98
Taxation on income	-389,205.93	-278,376.25
Net income	829,930.59	652,821.73

<i>(in EUR)</i>	<b>As at (audited)</b>	
	<b>31 December 2018</b>	<b>31 December 2017</b>
Total Assets	7,397,795,665.36	6,466,271,258.32
Total capital and reserves	5,334,715.48	4,504,784.89]

[The following table shows selected key historical financial information in relation to GSFCl:

<i>(in USD thousands)</i>	<b>As at and for the six months ended (unaudited)</b>		<b>As at and for the year ended (audited)<sup>1</sup></b>
	<b>30 June 2018</b>	<b>30 June 2017</b>	<b>31 December 2017</b>
Operating profit	-2,746	10,318	35,570
Profit for the financial period	-2,746	10,318	35,570

<i>(in USD thousands)</i>	<b>As at six months ended (unaudited)</b>	<b>As at (audited)</b>
	<b>30 June 2018</b>	<b>31 December 2017</b>
Current assets	6,096,413	2,923,466
Net assets	159,577	13,090
Total shareholders' funds	159,577	13,090

<sup>1</sup> GSFCl was incorporated on 19 October 2016 and the accounting reference period has been extended to 63 weeks ending 31 December 2017. The figures included in the table represent the results of GSFCl for the 63 week period commencing on 19 October 2016 and ending on 31 December 2017.]

[There has been no material adverse change in the prospects of GSI since 30 November 2018.]

[There has been no material adverse change in the prospects of GSW since 31 December 2018.]

[There has been no material adverse change in the prospects of GSFCl since 31 December 2017.]

[Not applicable: there has been no significant change in the financial or trading position particular to GSI subsequent to 30 November 2018.]

[Not applicable: there has been no significant change in the financial or trading position particular to GSW subsequent to 31 December 2018.]

[Not applicable: there has been no significant change in the financial or trading position particular to GSFCl subsequent to 31 December 2017.]"

- (c) Element D.6 (Key risks that are specific to the Securities), on pages 48 to 54 of the Original Base Prospectus shall be deleted and replaced with the following:

D.6 **Key risks that** *[Insert if Annex XII is applicable]*  
**are specific to**  
**the Securities**

- **Your capital is at risk. Depending on the performance of the underlying asset(s), you may lose [some] [some or all] of your investment.**
- You could also lose some or all of your investment in the Securities where:
  - We (as Issuer and Guarantor) fail or go bankrupt, the Guarantor becomes subject to resolution proceedings or we are otherwise unable to meet our payment [or delivery] obligations. In the event that the Guarantor becomes subject to bankruptcy or resolution proceedings (but the Issuer does not), you will not be able to declare the Securities to be immediately due and repayable. The return you receive on the Securities in this particular circumstance could be significantly less than what you would have otherwise received had you been able to declare the Securities immediately due and repayable upon the bankruptcy or resolution of the Guarantor;
  - You do not hold your Securities to maturity and the secondary sale price you receive is less than the original purchase price; or
  - Your Securities are redeemed early due to an unexpected event and the amount you receive is less than the original purchase price.
- The estimated value of your Securities (as determined by reference to pricing models used by us) at the time the terms and conditions of your Securities are set on the trade date, will be less than the original issue price of your Securities.
- Depending on the performance of the Underlying Assets, you may not receive any interest or coupon on your investment.
- Your Securities may not have an active trading market, and you may be unable to dispose of them.
- [You will be required to make your investment decision based on the indicative amounts or indicative range rather than the actual amounts, levels, percentages, prices, rates or values (as applicable), which will only be fixed or determined at the end of the offer period after their investment decision is made but will apply to the Securities once issued.]

[Risks associated with listed Securities, insert: We give no assurance that application for listing and admission to trading of the Securities will be granted (or, if granted, will be granted by the issue date) or that an active trading market in the Securities will develop. We may discontinue any such listing at any time.]

[If Securities contain a leverage factor over 100 per cent., insert: As the return on the Securities is linked to the performance of the underlying asset(s) multiplied by a leverage factor of over 100 per cent., any negative performance of the underlying asset(s) carries the risk of a disproportionately higher loss in the value of and return on the Securities.]

[If Securities have an averaging feature, insert: The return on the Securities (whether at maturity or otherwise) will be based on the average of the applicable values of the underlying asset(s). If the value of an underlying

asset(s) dramatically increases on an averaging date (but not the other averaging dates), the amount payable may be significantly less than it would have been had the amount payable been linked only to the value of that underlying asset(s) on that single date.]

[If Securities have a cap, insert: The potential for the value of the Securities to increase is limited as the maximum payment at maturity is capped.]

[If Securities have a "worst-of" feature insert: The "worst-of" feature means that you will be exposed to the performance of each underlying asset and, in particular, to the underlying asset which has the worst performance.

[If Securities are linked to values on entry level observation dates, insert: The amount payable (or deliverable) on the Securities (whether at maturity or otherwise) will be based on the performance of the Underlying Asset(s) compared to the lowest or highest value of the underlying asset(s) observed across each of the specified entry level observation dates, and not just the value of the underlying asset(s) on a single initial date. If the applicable level or price of the particular underlying asset(s) increased significantly across the entry level observation dates, the return on your Securities may be significantly less than it would have been had the return been determined by reference to only the applicable value of the underlying asset(s) on a single initial date.]

[If Securities have an issuer call option, insert: Your Securities may be redeemed early if we exercise our Issuer call option, and you may not be able to reinvest the proceeds at an attractive rate.]

[If Securities are Fixed Rate Notes not linked to an Underlying Asset having a term of at least 10 years, insert: If interest rates rise during the term of the Securities, the value of the Securities is likely to fall.]

[If Securities are linked to an Original Primary Rate, insert: [A Reference Rate]/[An ISDA Rate] (a) may be materially modified, (b) may cease to be provided permanently or indefinitely, (c) may not be used in certain ways by the Issuer or the Calculation Agent if its administrator or such reference rate does not obtain authorisation or registration (subject to applicable transitional provisions). Any such event could have an adverse effect on the value of and return on the Securities.]

[If Securities are linked to LIBOR, EURIBOR or another benchmark, insert: Indices which are deemed 'benchmarks' are the subject of recent national, international and other regulatory guidance and proposals for reform. Some of these reforms are already effective whilst others are still to be implemented. These reforms may cause such benchmarks to perform differently than in the past, or have other consequences which cannot be predicted.]

[If FX Disruption Event or CNY FX Disruption Event applies, insert: If any specified currency disruption event has occurred which is material to our payment obligations under the Securities, then [If FX Disruption Event applies, insert: the forthcoming payment date shall be postponed. If such event continues on the specified cut-off date,] we may make payment of an equivalent amount in U.S. dollars.]

[If Securities are linked to one or more underlying asset(s), insert: Risks associated with Securities linked to underlying asset(s):

- The value of and return on the Securities depends on the performance of such underlying asset(s), which may be subject to unpredictable change over time.

- Past performance of an underlying asset is not indicative of future performance.
- You will not have any rights of ownership in the underlying asset(s), and our obligations under the Securities to you are not secured by any assets.
- Following a disruption event, the valuation of the underlying asset(s) may be postponed and/or valued by us (as Calculation Agent) in our discretion.
- Following the occurrence of certain extraordinary events in relation to the underlying asset(s) or in relation to index linked securities, following the occurrence of an index adjustment event, depending on the terms and conditions of the particular Securities, amongst other potential consequences, the terms and conditions of your Securities may be adjusted, the underlying asset may be substituted, or the Securities may be redeemed early at the non-scheduled early repayment amount. Such amount may be less than your initial investment and you could lose some or all of your investment.]

*[If Securities reference one or more emerging market underlying asset(s), insert: Countries with emerging economies or stock markets may lack the social, political and economic stability characteristics of more developed countries. Emerging market underlying asset(s) may be illiquid and may be more volatile than investments in more established markets.]*

*[For Share Linked Securities, insert:*

The performance of shares is dependent upon many unpredictable factors.

- You may receive a lower return on the Securities than you would have received from investing in the shares directly because you will not receive the value of dividends.
- The issuer of a share may take any actions in respect of a share without regard to your interests as holders of the Securities, and any of these actions could negatively affect the value of and return on the Securities.]

*[If Share Linked Securities reference Depositary Receipts, insert:*

- The performance of depositary receipts is dependent upon many unpredictable factors.
- You may receive a lower return on the Securities than you would have received from investing in the depositary receipts directly because the price of the depositary receipts may not include the value of dividends.
- The issuer of the depositary receipts or shares underlying the depositary receipts may take any actions in respect of the depositary receipts or shares (as applicable) without regard to your interests as holders of the Securities, and any of these actions could negatively affect the value of and return on the Securities.]

*[If Share Linked Securities reference ETFs, insert: An investment in the Securities linked to an exchange traded fund ("ETF") is not the same as an investment linked directly to any index underlying such ETF, or the shares of the underlying companies comprising such underlying index, or any assets, contracts and/or instruments which may be invested in or held by the ETF*

and may therefore result in a lower yield than an investment linked directly to such index or in such shares. The management company, trustee, sponsor or investment manager of an ETF may take any actions in respect of such ETF without regard to the interests of the purchasers of the Securities. Any of these actions could reduce the value of and return on the Securities.]

*[For Index Linked Securities, insert:*

- The performance of indices is dependent upon many unpredictable factors, including in relation to its underlying components.
- [For price return index only, insert: You may receive a lower return on the Securities than you would have received from investing in the components of the index directly because the index level may reflect the prices of such index components without including the value of dividends paid on those components.]
- The sponsor of an index may take any actions in respect of the index without regard to your interests as holders of the Securities, and any of these actions could negatively affect the value of and return on the Securities.
- [In certain circumstances, we (as Calculation Agent) may substitute the underlying asset for another index (or basket of indices).]]

*[For Commodity Linked Securities, insert: The performance of a commodity, and any corresponding commodity contract, depends on various factors, including supply and demand, liquidity, weather conditions and natural disasters, direct investment costs, location and changes in tax rates. Commodity prices are more volatile than other asset categories, making investments in commodities riskier and more complex than other investments.]*

*[For Commodity Index Linked Securities, insert: You may receive a lower return on the Securities than you would have received from investing directly in commodities underlying a commodity index or a Security whose redemption amount was based upon the spot price of physical commodities or commodity contracts that were scheduled to expire on the maturity date of the Securities.*

- The sponsor of a commodity index sponsor may take any actions in respect of the commodity index without regard to your interests as a holder of Securities, and any of these actions could have a negative impact on the value of and return on the Securities. The sponsor of a commodity index may make changes to the index composition and such changes may affect the level of the commodity index and any amount payable on the Securities. If the sponsor of a commodity index does not calculate the commodity index, then we (as Calculation Agent) will have the discretion to determine the relevant level of the commodity index in order to make any calculations under the Securities.
- Following the occurrence of any disruption event applicable to the Securities, we (as Calculation Agent) may determine the level of the commodity index and such level may not reflect any commodity index level which may be still be calculated and published by the sponsor of the commodity index (notwithstanding the occurrence of such event).
- [In certain circumstances, we (as Calculation Agent) may substitute the underlying asset for another commodity index (or basket of



commodity indices).]]

*[For Inflation linked Securities, insert:* The return on the Securities may be based on an Inflation Index level for a month which is several months prior to the relevant payment date and therefore could be substantially different from the level of inflation at the time such payment is made. The performance of an inflation index may not correlate perfectly with the rate of inflation experienced by purchasers of the Securities in the relevant jurisdiction.]

*[If Securities are linked to basket of underlying assets, insert:*

- [A small basket will generally be more vulnerable to changes in the value of the underlying assets and a change in composition of a basket may have an adverse effect on basket performance.]
- [The performance of a basket that gives greater weight to some underlying assets will be more affected by changes in the value of any such particular underlying asset included therein than a basket with equally weighted underlying assets.]
- A basket may offset the positive performance of one Underlying Asset with the negative performance of another Underlying Asset and therefore not produce a result as favourable as an investment linked only to one or more of the positive performing Underlying Assets.
- A high correlation of basket components may have a significant effect on amounts payable on the Securities and the negative performance of a single basket component may outweigh a positive performance of one or more other basket components and may have an impact on the return on the Securities.]

*[For EIS Notes, insert:*

- The return on your Securities is dependent on the change in the fair market value of the Preference Shares on the valuation date from their issue price on the initial valuation date. The fair market value of the Preference Shares will depend (amongst other things) on the redemption amount [and dividends/distributions] payable under the Preference Shares. Such amount [and the dividends/distributions] will be determined by reference to a particular payout formula, and will depend on the performance of an underlying asset (the "Preference Share Underlying"). As a purchaser of EIS Notes you are therefore exposed to the performance of the Preference Share Underlying, which may be subject to unpredictable change over time. The terms and conditions of the Preference Shares are available to investors upon request to the Issuer or Dealer.
- The Preference Shares will redeem prior to scheduled maturity on the occurrence of [a preference share automatic early redemption event or for] unforeseen events. In such case, the Securities will also be redeemed prior to maturity, and you may obtain a lower return than had the Securities not been so redeemed, and may be unable to reinvest the proceeds in an investment providing an equivalent return.
- Any consequential postponement of, or any alternative provisions for, valuation of the Preference Share Underlying following any disruption event applicable to the Preference Shares may have a negative impact on the value of and return on the Securities. If certain adjustment events applicable to the Preference Shares occur,

we (as Calculation Agent) may in certain cases adjust the terms and conditions of the Securities without your consent or cause the early redemption of the Securities. Such amount may be less than your initial investment and you could lose some or all of your investment.

- There are risks associated with Cayman Islands law as the governing law of the EIS Notes.
- The basis and rate of taxation in respect of the Securities and any reliefs depends on your own individual circumstances and could change at any time. You should seek your own independent tax advice prior to investing. [Any coupon paid other than on redemption (such term including early or final redemption) will likely be subject to income tax.]
- We are subject to certain conflicts of interest between our interests and yours as holder of the Securities which could reduce the value of and return on the Securities, including:
  - an affiliate of the Issuer will be the swap counterparty to the Preference Share Issuer in order to fund the payout on the Preference Shares;
  - we may hedge our obligations under the Securities by purchasing futures and/or other instruments linked to the Preference Share Underlying or the stocks or other components;
  - each of the calculation agent under the swap agreement with the Preference Share Issuer, the Calculation Agent under the Preference Shares and the Calculation Agent under the Securities is an affiliate of the Issuer and potential conflicts of interest may exist between any of them and the purchasers, including with respect to the exercise of their discretionary power.]
- Your Securities may be adjusted or redeemed prior to maturity due to a change in law. Any such adjustment may reduce the value of and return on your Securities; the amount you receive following an early redemption may be less than your initial investment and you could lose some or all of your investment.
- The Issuer of the Securities may be substituted with another company.
- We may amend the terms and conditions of your Securities in certain circumstances without your consent."

#### **Amendments to the Base Prospectus**

The Base Prospectus is amended and supplemented as follows:

1. **Amendments to the section entitled "Risk Factors"**

The information in the section entitled "Risk Factors" is amended and supplemented as follows:

- (a) the risk factors in sub-section 2 entitled "Risks relating to GSI", on pages 60 to 74 of the Original Base Prospectus shall be deleted and replaced with the following:

**"2. *Risks relating to GSI***

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 GSI's businesses.

(i) **Risks relating to 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.

GSI'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 concerning fiscal or monetary policy; the extent of and uncertainty about tax and other regulatory changes; 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; the imposition of tariffs or other limitations on international trade and travel; outbreaks of domestic or international tensions or hostilities, terrorism, nuclear proliferation, cybersecurity threats or attacks and other forms of disruption to or curtailment of global communication, energy transmission or transportation networks or other geopolitical instability or uncertainty, such as 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, the impact of Brexit, and changes in interest rates and other market conditions or actual changes in interest rates and other market conditions, 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 impact of regulatory reform, as well as weak consumer, investor and chief executive officer confidence resulting in large part from such uncertainty, can negatively impact client activity, which adversely affects many of GSI'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 GSI's market-making businesses.

Financial institution returns in many countries may be negatively impacted by increased funding costs due in part to the lack of perceived government support of such institutions in the event of future financial crises relative to financial institutions in countries in which governmental support is maintained. In addition, liquidity in the financial markets has also been negatively impacted as market participants and market practices and structures continue to adjust to new regulations.

GSI'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.

The degree to which these and other changes since the financial crisis continue to have an impact on the profitability of financial institutions will depend on the effect of regulations adopted after 2008 and new regulations, the manner in which markets, market participants and financial institutions have continued to adapt to these regulations, and the prevailing economic and financial market conditions. However, there is a significant risk that such changes will negatively impact the absolute level of revenues, profitability and return on equity of GSI and other financial institutions.

(ii) **Risks relating to regulation**

As a participant in the financial services industry and a subsidiary of a systemically important financial institution, GSI 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 GSG and in certain other jurisdictions. GSI faces the risk of significant intervention by law enforcement, regulatory and tax authorities, as well as private litigation, in all jurisdictions in which it conducts its businesses. In many cases, GSI's activities may be subject to overlapping and divergent regulation in different jurisdictions. Among other things, as a result of law enforcement authorities, regulators or private parties challenging GSI's compliance with laws and regulations, GSI or its employees could be fined or criminally sanctioned, 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 GSI's profitability.

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

If there are new laws or regulations or changes in the enforcement of existing laws or regulations applicable to GSI's businesses or those of GSI's clients, including capital, liquidity, leverage, long-term debt, total loss-absorbing capacity (TLAC) and margin requirements, restrictions on other business practices, reporting requirements, requirements relating to the implementation of the E.U. Bank Recovery and Resolution Directive, tax burdens and compensation restrictions, that are imposed on a limited subset of financial institutions (either based on size, method of funding, activities, geography or other criteria) which may include GSI or GSG, compliance with these new laws and regulations, or changes in the enforcement of existing laws or regulations, could adversely affect GSI'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 GSI's businesses.

These developments could impact GSI'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 GSI 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 GSI's funding costs or otherwise adversely affects its shareholder and creditors.

The E.U. and national financial legislators and regulators have proposed or adopted numerous market reforms that have impacted and may continue to impact GSI's businesses. These include stricter capital and liquidity requirements (including proposed amendments to CRD IV and the CRR), authorisations for regulators to

impose position limits, restrictions on short selling and credit default swaps and market abuse regulations.

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

GSI is also subject to laws and regulations, such as the E.U.'s General Data Protection Regulation, relating to the privacy of the information of clients, employees or others, and any failure to comply with these laws and regulations could expose GSI to liability and/or reputational damage. As new privacy-related laws and regulations are implemented, the time and resources needed for GSI to comply with such laws and regulations, as well as GSI's potential liability for non-compliance and reporting obligations in the case of data breaches, may significantly increase.

In addition, GSI's businesses are increasingly subject to laws and regulations relating to surveillance, encryption and data on-shoring in the jurisdictions in which GSI operates. Compliance with these laws and regulations may require GSI to change its policies, procedures and technology for information security, which could, among other things, make GSI 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 GSI 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.

(iii) **Risks relating to Brexit**

In March 2017, the U.K. notified the European Council of its decision to leave the E.U. There is considerable uncertainty as to the regulatory framework that will govern transactions and business undertaken by GSI in the E.U., both in the near term and the long term. As a result, GSI faces numerous risks that could adversely affect the conduct of its businesses, its profitability and liquidity. In addition, as a result of GSI establishing third country branches in anticipation of Brexit, it will be subject to additional regulation and supervision in those jurisdictions.

GSI is incorporated and headquartered in the U.K., and currently benefits from non-discriminatory access to E.U. clients and infrastructure based on E.U. treaties and E.U. legislation, including arrangements for cross-border "passporting" and the establishment of E.U. branches. Because the Withdrawal Agreement has not been ratified by the U.K. and E.U. Parliaments, it is uncertain whether GSI will continue to benefit from the existing access arrangements for financial services following March 29, 2019, the date on which the U.K. is scheduled to leave the E.U. Further, even if the Withdrawal Agreement is ratified, there is uncertainty regarding the terms of the long-

term trading relationship between the E.U. and the U.K., including the terms of access to each other's financial markets.

In the event of a hard Brexit scenario, certain client relationships and activities currently undertaken by GSI may be transitioned to other E.U. subsidiaries of GSG, which may result in a decline in GSI's net revenues and profitability, and could adversely affect its businesses and liquidity.

In addition, Brexit has created an uncertain political and economic environment in the U.K., and may create such environments in other E.U. member states. Political and economic uncertainty has in the past led to, and the outcome of Brexit could lead to, declines in market liquidity and activity levels, volatile market conditions, a contraction of available credit, changes in interest rates or exchange rates, weaker economic growth and reduced business confidence all of which could adversely impact GSI's business.

(iv) **Risks relating to market volatility**

GSI's businesses have been and may be adversely affected by declining asset values. This is particularly true for those businesses in which GSI has net "long" positions, receives fees based on the value of assets managed, or receives or posts collateral. Many of GSI's businesses have net "long" positions in debt securities, loans, derivatives, mortgages, equities (including private equity) and most other asset classes. These include positions taken when GSI 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, equities and mortgage-related activities. In addition, GSI invests in similar asset classes. Substantially all of GSI's investing and market-making positions are marked-to-market on a daily basis and 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 GSI'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 GSI's capital, liquidity or leverage ratios, increase its funding costs and generally require maintaining additional capital.

In GSI's exchange-based market-making activities, GSI 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.

Collateral is posted to support obligations of GSI 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 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 GSI is the party providing collateral, this can increase costs and reduce profitability and if GSI 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 GSI forecloses on collateral, sudden declines in the value or liquidity of such collateral may, despite credit monitoring, over-collateralisation, the ability to call for additional collateral or the ability to force repayment of the underlying obligation, result in significant losses to GSI, especially where there is a single type of collateral supporting the obligation. In addition, GSI 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.

(v) **Risks relating to liquidity**

Liquidity is essential to GSI's businesses. It is of critical importance to GSI, as most of the failures of financial institutions have occurred in large part due to insufficient liquidity. GSI's liquidity could be impaired by an inability to access secured and/or unsecured debt markets, an inability to access funds from GSG 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 GSI may be unable to control, such as a general market disruption or an operational problem that affects third parties or GSI or its affiliates or even by the perception amongst market participants that GSI, or other market participants, are experiencing greater liquidity risk.

GSI employs structured products to benefit its clients and hedge its own risks. The financial instruments that GSI 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. GSI'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 GSI's positions.

Further, GSI'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 GSI interacts may exercise set-off rights or the right to require additional collateral, including in difficult market conditions, which could further impair GSI's liquidity.

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

GSI's and GSG's cost of obtaining long-term unsecured funding is directly related to both the credit spreads of GSI and GSG. Increases in the credit spreads of GSI and/or GSG 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 GSG are also influenced by market perceptions of its and/or GSG's creditworthiness. In addition, the credit spreads of GSI and/or GSG may be influenced by movements in the costs to purchasers of credit default swaps referenced to GSG'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 GSI's results of operations and competitive position. Recently, numerous regulations have been adopted or proposed to introduce more stringent liquidity requirements for large financial institutions. These regulations 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 certain cross-defaults. New and prospective liquidity-related regulations may overlap with, and be impacted by, other regulatory changes, including rules relating to minimum long-term debt requirements and TLAC, capital, leverage and resolution and recovery frameworks applicable to large financial institutions. Given the overlapping and complex interactions among these new and prospective regulations, they may have unintended cumulative effects, and their full impact will remain uncertain, while regulatory reforms are being adopted and market practices develop in response to such reforms.

(vi) **Risks relating to 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 investments.

(vii) **Risks relating to credit markets**

Widening credit spreads for GSI or GSG, as well as significant declines in the availability of credit, have in the past adversely affected GSI'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 GSG, 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. GSI 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 GSI's available funding is limited or GSI 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, acquisitions and other types of strategic transactions 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 GSI's financial advisory and underwriting businesses.

GSI'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.

(viii) **Risks relating to 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 GSI's results of operations in a given period. Moreover, because of concentration of risk, GSI 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.



In the ordinary course of business, GSI 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 entities could negatively impact GSI's businesses, perhaps materially, and the systems by which GSI sets limits and monitors the level of its credit exposure to individual entities, industries and countries may not function as anticipated. Regulatory reforms, including the European Market Infrastructure Regulation and the Dodd-Frank Wall Street Reform and Consumer Protection Act have led to increased centralisation of trading activity through particular clearing houses, central agents or exchanges, which has significantly increased GSI's concentration of risk with respect to these entities. While GSI's activities expose it to many different industries, counterparties and countries, GSI 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.

(ix) **Risks relating to credit quality**

GSI 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 GSI 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 GSI.

GSI 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 GSI, including a deterioration in the value of collateral posted by third parties to secure their obligations to GSI under derivatives contracts and loan agreements, could result in losses and/or adversely affect GSI's ability to rehypothecate or otherwise use those securities or obligations for liquidity purposes.

A significant downgrade in the credit ratings of GSI's counterparties could also have a negative impact on GSI's results. While in many cases GSI is permitted to require additional collateral from counterparties that experience financial difficulty, disputes may arise as to the amount of collateral GSI is entitled to receive and the value of pledged assets. The termination of contracts and the foreclosure on collateral may subject GSI 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, increased volatility and illiquidity.

(x) **Risks relating to composition of client base**

GSI's client base is not the same as that of its major competitors. GSI's businesses may have a higher or lower percentage of clients in certain industries or markets than some or all of its competitors. Therefore, unfavourable industry developments or market conditions affecting certain industries or markets may result in GSI's businesses underperforming relative to similar businesses of a competitor if its businesses have a higher concentration of clients in such industries or markets. For example, GSI's market-making businesses have a higher percentage of clients with actively managed assets than its competitors and such clients could be disproportionately affected during periods of low volatility.

Correspondingly, favourable or simply less adverse developments or market conditions involving industries or markets in a business where GSI has a lower concentration of clients in such industry or market may also result in GSI underperforming relative to a similar business of a competitor that has a higher concentration of clients in such industry or market. For example, GSI has a smaller corporate client base in its market-making businesses than many of its peers and therefore GSI's competitors may benefit more from increased activity by corporate clients.

(xi) **Risks relating to derivative transactions**

GSI 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 GSI deliver to the counterparty the underlying security, loan or other obligation in order to receive payment. In a number of cases, GSI 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 GSI 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 GSI.

As a signatory to the International Swaps and Derivatives Association Universal Resolution Stay Protocol (ISDA Universal Protocol) and the International Swaps and Derivatives Association 2018 U.S. Resolution Stay Protocol (collectively, ISDA Protocols), GSI may not be able to exercise termination rights and other remedies against counterparties and, as this new regime has not yet been tested, GSI 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 non-U.S. regulators have also proposed regulations contemplated by the ISDA Universal Protocol, which might result in additional limitations on GSI's ability to exercise remedies against counterparties. The impact of the ISDA Protocols and these rules and regulations will depend on the development of market practices and structures, and their extension to repurchase agreements and other instruments that are not derivative contracts.

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, GSI 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 GSI'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 GSI's ability to develop derivatives that best suit the needs of clients and to hedge its own risks, and could adversely affect GSI's profitability and increase credit exposure to central clearing platforms.

(xii) **Risks relating to operational infrastructure**

GSI's businesses are highly dependent on its ability to process and monitor, on a daily basis, a very 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 GSI's obligations to execute transactions and report such transactions and other information to regulators, exchanges and investors. Compliance with these legal and reporting requirements can be challenging, and GSI has been, and may in the future be, subject to regulatory fines and penalties for failing to follow these rules or to report timely, accurate and complete information in accordance with such rules. As such requirements expand, compliance with these rules and regulations has become more challenging.

The use of computing devices and phones is critical to the work done by GSI's employees and the operation of GSI's systems and businesses and those of its clients

and third-party service providers and vendors. Fundamental security flaws in computer chips found in many types of these computing devices and phones have been reported in the past and may be discovered in the future. Addressing this and similar issues could be costly and affect the performance of these businesses and systems, and operational risks may be incurred in applying fixes and there may still be residual security risks.

Additionally, although the prevalence and scope of applications of distributed ledger technology and similar technologies is growing, the technology is also nascent and may be vulnerable to cyber attacks or have other inherent weaknesses. GSI may be, or may become, exposed to risks related to distributed ledger technology through GSI's facilitation of clients' activities involving financial products linked to distributed ledger technology, such as blockchain or cryptocurrencies, GSI's investments in firms that seek to develop platforms based on distributed ledger technology, and the use of distributed ledger technology by third-party vendors, clients, counterparties, clearing houses and other financial intermediaries.

In addition, GSI faces the risk of operational failure or significant operational delay, 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, GSI will increasingly face the risk of operational failure or significant operational delay with respect to clients' systems.

Despite the resiliency plans and facilities that are in place, GSI's ability to conduct business may be adversely impacted by a disruption in the infrastructure that supports its businesses and the communities in which GSI is located. This may include a disruption involving electrical, satellite, undersea cable or other communications, internet, transportation or other services facilities used by GSI, its employees or third parties with which GSI conducts business, including cloud service providers. These disruptions may occur as a result of events that affect only GSI'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.

In addition, although GSI seeks to diversify its third-party vendors to increase its resiliency, GSI is also exposed to the risk that a disruption or other information technology event at a common service provider to GSI's vendors could impede their ability to provide products or services to GSI. GSI may not be able to effectively monitor or mitigate operational risks relating to its vendors' use of common service providers.

(xiii) **Risks relating to cyber security**

GSI 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. The increasing migration of GSI's communication and other platforms from company provided devices to employee-owned devices presents additional risks of cyber attacks. In addition, due to the interconnectivity with third-party vendors (and their respective service providers), central agents, exchanges, clearing houses and other financial institutions, GSI could be adversely impacted if any of them is subject to a successful cyber attack or other information security event. These effects could include the loss of access to information or services from the third party subject to the cyber attack or other information security event, which could, in turn, interrupt certain of GSI's businesses.

Despite GSI'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 or sponsored by foreign governments or are involved with organised crime or terrorist organisations. Third parties may also attempt to place individuals within GSI or induce employees, clients or other users of GSI's systems to disclose sensitive information or provide access to GSI's data or that of its clients, and these types of risks may be difficult to detect or prevent.

Although GSI 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, cyber attacks on GSI's vendors and other events that could have a security impact. Due to the complexity and interconnectedness of GSI'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 GSI or its clients' or counterparties' confidential and other information processed and stored in, and transmitted through, GSI's computer systems and networks, or otherwise cause interruptions or malfunctions in GSI's, its clients', its counterparties' or third parties' operations, which could impact their ability to transact with GSI or otherwise result in legal or regulatory action, significant losses or reputational damage.

In addition, such an event could persist for an extended period of time before being detected, and, following detection, it could take considerable time for GSI to obtain full and reliable information about the extent, amount and type of information compromised. During the course of an investigation, GSI may not know the full impact of the event and how to remediate it, and actions, decisions and mistakes that are taken or made may further increase the negative effects of the event on GSI's business, results of operations and reputation.

The increased use of mobile and cloud technologies can heighten these and other operational risks. GSI 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 GSI may be subject to legal or regulatory action, 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 GSI's control, and the failure by mobile technology and cloud service providers to adequately safeguard their systems and prevent cyber attacks could disrupt GSI'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.

GSI routinely transmits and receives personal, confidential and proprietary information by email and other electronic means. GSI 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.

(xiv) **Risks relating to risk management**

GSI 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. GSI'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 GSI 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, GSI 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 GSI 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 those that 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 GSI'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 GSI's. In these and other cases, it may be difficult to reduce GSI'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 GSI 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, GSI 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, GSI 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 GSI to control the risk exposures relating to these investments.

Prudent risk management, as well as regulatory restrictions, may cause GSI 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.

(xv) **Risks relating to new business initiatives**

GSI 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 GSI'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 GSI's traditional client and counterparty base and expose it to new asset classes and new markets. For example, GSI continues to transact business and invest in new regions, including a wide range of emerging and growth markets.

New business initiatives expose GSI 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 certain assets are being operated or held or in which GSI interacts

with these counterparties. Legal, regulatory and reputational risks may also exist in connection with activities and transactions involving new products or markets where there is regulatory uncertainty or where there are different or conflicting regulations depending on the regulator or the jurisdiction involved, particularly where transactions in such products may involve multiple jurisdictions.

(xvi) **Risks relating to operating in multiple jurisdictions**

In conducting GSI's businesses and maintaining and supporting its global operations, GSI 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, 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 GSI 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 GSI 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 GSI and its personnel not only to civil actions but also criminal actions. GSI is also subject to the enhanced risk that transactions it structures might not be legally enforceable in all cases.

While business and other practices throughout the world differ, GSI 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 the U.K. Bribery Act. While GSI 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 GSI deals with, greatly increases the risk that GSI 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 GSI runs the risk that employee misconduct could occur. This misconduct may include intentional efforts to ignore or circumvent applicable policies, rules or procedures. 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.

(xvii) **Risks relating to conflicts of interest**

A failure to appropriately identify and address potential conflicts of interest could adversely affect GSI's businesses. Due to the broad scope of GS Group's businesses and client base, GSI 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 GSI's reputation, which is one of its most important assets, could be damaged and the willingness of clients to enter into transactions with GSI 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.

(xviii) **Risks relating to competition**

To the extent GSI 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 GSI'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 GSI's competitors, could impact its ability to compete effectively.

Pricing and other competitive pressures in GSI'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, in response to competitive pressure GSI has experienced, GSI has extended and priced 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 GSI 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 GSI to large fines and settlements, and potentially significant penalties, including treble damages.

(xix) **Risks relating to changes in underliers**

Certain of GSI's businesses and its funding may be adversely affected by changes in the reference rates, currencies, indices, baskets, exchange-traded funds (ETFs) or other financial metrics (the underlier) to which the products offered by GSI or funding raised by GSI are linked, in particular by changes in or the discontinuance of IBORs.

All of GSI's floating rate funding pays interest by reference to rates, such as LIBOR or the U.S. Federal Reserve's Federal Funds Rate. In addition, many of the products that GSI owns or that it offers, such as structured notes, warrants, swaps or security-based swaps, pay interest or determine the principal amount to be paid at maturity or in the event of default by reference to rates or by reference to another underlier. In the event that the composition of the underlier is significantly changed, by reference to rules governing such underlier or otherwise, the underlier ceases to exist (for example, in the event that LIBOR is discontinued, a country withdraws from the Euro or links its currency to or delinks its currency from another currency or benchmark, or an index or ETF sponsor materially alters the composition of an index or ETF) or the underlier ceases to be recognised as an acceptable market benchmark, GSI may experience pricing volatility, loss of market share in certain products, adverse tax or accounting impacts, compliance, legal and operational costs and risks associated with client disclosures, as well as systems disruption, model disruption and other business continuity issues. In addition, uncertainty relating to IBORs could result in increased capital requirements for GSI given potential low transaction volumes, a lack of liquidity or limited observability for exposures linked to IBORs or any emerging

successor rates and operational incidents associated with changes in and the discontinuance of IBORs.

There is considerable uncertainty as to how the financial services industry will address the discontinuance of designated rates in contracts and financial instruments or such designated rates ceasing to be acceptable reference rates. This uncertainty could ultimately result in client disputes and litigation surrounding the proper interpretation of GSI's IBOR-based contracts and financial instruments.

Further, the discontinuation of an IBOR, changes in an IBOR or changes in market acceptance of any IBOR as a reference rate may also adversely affect the yield on loans or securities held by GSI, amounts paid on securities GSI has issued, amounts received and paid on derivative instruments GSI has entered into, the value of such loans, securities or derivative instruments, the trading market for securities, the terms of new loans being made using different or modified reference rates, GSI's ability to effectively use derivative instruments to manage risk, or the availability or cost of GSI's floating-rate funding and its exposure to fluctuations in interest rates.

(xx) **Risks relating to personnel**

GSI's businesses may be adversely affected if it is unable to hire and retain qualified employees. GSI's performance is largely dependent on the talents and efforts of highly skilled people; therefore, GSI'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 GSI's ability to attract and retain such employees include the level and composition of 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 GSI 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 GSI's ability to hire and retain highly qualified employees.

Competition from within the financial services industry and from businesses outside the financial services industry, including the technology industry, for qualified employees has often been intense. Recently, GSI has experienced increased competition in hiring and retaining employees to address the demands of new regulatory requirements and GSI's technology initiatives. This is also the case in emerging and growth markets, where GSI 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 GSI's operations are located that affect taxes on GSI's employees' income, or the amount or composition of compensation, may also adversely affect GSI's ability to hire and retain qualified employees in those jurisdictions.

GSI's compensation practices are subject to review by, and the standards of, the PRA and the FCA. As a large financial institution, GSI 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 GSI to alter compensation practices in ways that could adversely affect its ability to attract and retain talented employees.

(xxi) **Risks relating to legal liability**

Substantial civil or criminal liability or significant regulatory action against GSI could have material adverse financial effects or cause significant reputational harm, which in



turn could seriously harm business prospects. GSI 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 GSI'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 headcount reduction. Additionally, governmental entities have been and are plaintiffs in certain of the legal proceedings in which GSI is involved, and it may face future civil or criminal actions or claims by the same or other governmental entities, as well as follow-on civil litigation that is often commenced after regulatory settlements.

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.

GSI is subject to laws and regulations worldwide, including the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act, relating to corrupt and illegal payments to, and hiring practices with regard to, government officials and others. Violations of these or similar laws and regulations could result in significant monetary penalties, severe restrictions on GSI's activities and damage to its reputation.

Resolution of a criminal matter involving GSI or its employees could lead to increased exposure to civil litigation, could adversely affect GSI's reputation, could result in penalties or limitations on GSI's ability to conduct its activities generally or in certain circumstances and could have other negative effects.

(xxii) **Risks relating to unforeseen or catastrophic events**

The occurrence of unforeseen or catastrophic events, including the emergence of a pandemic, 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 GSI's ability to manage its businesses and result in losses.

- (b) the risk factors in sub-section 3 entitled "Risks relating to GSW", on pages 74 to 75 of the Original Base Prospectus shall be deleted and replaced with the following:

**"3. Risks relating to GSW**

The following are further specific risk factors relating to GSW:

***Risks in connection with the legal form and organisation of GSW***

GSW may partially or wholly fail to meet its obligations under the Securities. Investors should therefore take the creditworthiness of GSW, as well as the creditworthiness of GSI as guarantor of the Securities, into account in their investment decision. Credit risk means the risk of insolvency or illiquidity of GSW, i.e. a potential, temporary or final inability to fulfil its interest and repayment obligations on time. An increased insolvency risk is typical of issuers that have a low creditworthiness.

The creditworthiness of GSW may also change due to developments in the general economic or company-specific environment during the term of the Securities. This may be caused in particular by cyclical changes, which may have a lasting detrimental effect

on the profitability and the solvency of GSW. In addition, changes may also be considered that are caused by individual companies, industries, or countries such as, for example, economic crises as well as political developments with strong economic effects.

According to its articles of association, GSW was established only for the purpose of issuing fungible securities and does not carry out any further operating business activity besides that. The issued share capital of GSW amounts to only EUR 51,129.19 (DM 100,000.00). **You will therefore be exposed to a significantly greater credit risk by purchasing the Securities compared to securities issued by an issuer equipped with significantly more capital.**

In the case of an insolvency of GSW, an investment in a Security issued by GSW may mean a complete loss of the invested amount if the loss cannot be satisfied by the guarantee from GSI.

In this context, investors should also note that GSW is not connected to a deposit protection fund or similar safety system, which would cover all or part of the claims of holders of Securities in the case of an insolvency of GSW.

In order to hedge its claims arising from the issued Securities, GSW enters into hedging transactions with GSI. In this context, there is a risk of insolvency of the parties with whom GSW concludes derivative transactions to hedge its obligations in respect of the issuance of Securities. Since GSW enters into such hedging transactions mainly with GSI, this risk is more prominent for GSW compared to other issuers with a more widely spread selection of contracting partners. Therefore, an illiquidity or insolvency of companies affiliated with GSW may directly result in an insolvency of GSW.

Holders of Securities of GSW are not entitled to any claims in respect of any hedging transactions concluded in this manner.

There is no rating of GSW regarding its credit risk by renowned rating agencies such as Moody's or Standard and Poor's.

### ***3.1 Risks relating to an insolvency of GSI in relation to GSW-issued Securities***

GSI, as guarantor of Securities issued by GSW, failing or going bankrupt will not constitute an event of default in relation to such Securities. There is no automatic default or acceleration upon bankruptcy or resolution of GSI in relation to the Securities issued by GSW. In the event that GSI becomes subject to bankruptcy or resolution proceedings (but GSW does not), you will not be able to declare the Securities to be immediately due and repayable. Instead, you will need to wait until the earlier of the time that (i) GSW itself becomes insolvent or otherwise defaults on the terms of the Securities and (ii) the final maturity of the Securities. The return you receive on the Securities may be significantly less than what you would have otherwise received had you been able to declare the Securities immediately due and repayable upon the bankruptcy or resolution of GSI.

In the event that GSW, GSI, or any of their affiliates, becomes subject to a proceeding under the Federal Deposit Insurance Act or Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act (together, the "**U.S. Special Resolution Regimes**"), default rights against GSW or GSI in relation to Instruments or to the Guarantee given by GSI (as Guarantor) in relation to any Securities are permitted to be exercised to no greater extent than such default rights could be exercised under such U.S. Special Resolution Regime if the Instruments and the Guarantee were governed by the laws of the United States or a state of the United States.

### ***3.2 Risks relating to the commercial activity***

GSW is primarily involved in the issuance of securities. The activity of GSW and its annual issuance volume is affected both by positive and by negative developments in the markets where it carries out its business activity. A difficult general economic

situation may lead to a lower issuance volume and negatively affect GSW's earnings situation. The general market development of securities depends particularly on the development of the capital markets, which is in turn affected by the general situation of the world economy as well as the economic and political conditions in the respective countries (so-called market risk)."

- (c) risk factor 5.5 (*Following the occurrence of certain extraordinary events in relation to the Underlying Asset(s) or with respect to index linked securities, following the occurrence of an index adjustment event, the terms and conditions of your Securities may be adjusted or the Securities may be redeemed early at the non-scheduled early repayment amount*) on page 86 of the Original Base Prospectus shall be deleted in its entirety and replaced with the following (and each reference to such risk factor in the Original Base Prospectus shall be deemed to be amended accordingly):

***"5.5. Following the occurrence of certain extraordinary events in relation to the Underlying Asset(s) or the Original Primary Rate(s) or with respect to index linked securities, following the occurrence of an index adjustment event, the terms and conditions of your Securities may be adjusted or the Securities may be redeemed early at the non-scheduled early repayment amount***

If we (as Calculation Agent) determine that an extraordinary event (as described below in relation to each type of Underlying Asset) has occurred in relation to the Underlying Asset(s), or an Original Primary Event has occurred in relation to the Original Primary Rate(s) or an Index Adjustment Event has occurred in relation to an Index, or a Commodity Index Adjustment Event has occurred in relation to a Commodity Index, or a Disruption Event has occurred in relation to a Commodity Reference Price, then we may adjust the terms and conditions of the Securities (without your consent) to account for such event or we may redeem the Securities early. Any adjustment made to the terms and conditions of the Securities may have a negative effect on the value of and return on the Securities. ";

- (d) the following new risk factor shall be inserted immediately after risk factor 5.7 (The regulation and reform of certain published rates, indices and other values or "benchmarks" may adversely affect the value of and return on Securities linked to such values or benchmarks) on page 87 of the Original Base Prospectus:

***"5.8 Risks associated with Original Primary Rates by reference to which any Interest Amount payable under the Securities is determined***

"The Interest Amount(s) payable under the Securities may be determined by reference to one or more Original Primary Rates. An Original Primary Rate: (a) may be materially modified, (b) may cease to be provided permanently or indefinitely, (c) may not be used in certain ways by the Issuer or the Calculation Agent if its administrator or such Original Primary Rate does not obtain authorisation or registration (subject to applicable transitional provisions). If any such event occurs, we (as Calculation Agent) shall: (i) attempt to identify a replacement rate, (ii) attempt to determine an adjustment spread that we determine is required in order to reduce or eliminate any transfer of economic value from the Issuer to the Holders (or vice versa), and (iii) make such adjustments to the terms and conditions as we determine to be necessary or appropriate in order to account for the effect of such replacement.

If: (a) we cannot identify a replacement rate or determine an adjustment spread, or (b) we believe that it would be unlawful or would contravene any applicable licensing requirements for the Calculation Agent to perform the proposed actions above, or (c) we believe that the adjustment spread is or would be a benchmark, index or other price source that would subject us to material additional regulatory obligations, or (d) the adjustments above would not achieve a commercially reasonable result, we may redeem the Securities early. In such event, we will pay to you the non-scheduled early repayment amount. The non-scheduled early repayment amount may be less than your original investment and you may lose some or all of your money."

- (e) risk factor 6.4(d) (*The occurrence of an index adjustment event or the replacement of the index sponsor by a successor index sponsor may have a negative effect on your Securities*) on pages 93 to 94 of the Original Base Prospectus shall be amended by deleting the first two paragraphs thereof in its entirety and replacing it with the following:

"If the sponsor of an Index makes a material alteration to the Index or cancels the Index and no successor exists, or if the sponsor fails to calculate and announce the Index, or if the Index or its administrator does not obtain authorisation or registration with the effect that the Index may not be used in certain ways by the Issuer or the Calculation Agent, we (as Calculation Agent) shall, (i) (if "Calculation Agent Adjustment" is specified as applicable in the relevant Final Terms) if we determine the event to have a material effect on the Securities, calculate the level of the Index according to the previous formula and method, (ii) (if "Index Substitution" is specified as applicable in the relevant Final Terms) replace the Index with another index (or basket of indices) or (iii) (if "Related Exchange Adjustment" is specified as applicable in the relevant Final Terms) adjust the terms and conditions of the Securities (without your consent). Any such action may have a negative effect on the value and return on the Securities.

If we believe that (i) it would be unlawful or would contravene any applicable licensing requirements for the Calculation Agent to perform the proposed action above or (ii) the proposed action above would not achieve a commercially reasonable result, we may redeem the Securities early. In such event, we will pay to you the non-scheduled early repayment amount. The non-scheduled early repayment amount may be less than your original investment and you may lose some or all of your money. See also risk factor 5.5 (*Following the occurrence of certain extraordinary events in relation to the Underlying Asset(s) or the Original Primary Rate(s) or with respect to index linked securities, following the occurrence of an index adjustment event, the terms and conditions of your Securities may be adjusted or the Securities may be redeemed early at the non-scheduled early repayment amount.*");

- (f) the following new risk factor shall be inserted immediately after risk factor 6.5(f) (Factors affecting agricultural commodities) on page 98 of the Original Base Prospectus:

***"(g) The occurrence of an Administrator/Benchmark Event may have a negative effect on your Securities***

If a Commodity Reference Price or its administrator does not obtain authorisation or registration with the effect that the Commodity Reference Price may not be used in certain ways by the Issuer or the Calculation Agent, we (as Calculation Agent) shall, if we determine the event to have a material effect on the Securities, apply the applicable fallback(s) specified, which may include basing our determination on an alternate commodity reference price or we may determine the level of the Commodity Reference Price. If we believe that (i) it would be unlawful or would contravene any applicable licensing requirements for the Calculation Agent to perform the proposed action(s) above or (ii) the proposed action(s) above would not achieve a commercially reasonable result, we may redeem the Securities early. In such event, we will pay to you the non-scheduled early repayment amount. The non-scheduled early repayment amount may be less than your original investment and you may lose some or all of your money. See also risk factor 5.5 (*Following the occurrence of certain extraordinary events in relation to the Underlying Asset(s) or the Original Primary Rate(s) or with respect to index linked securities, following the occurrence of an index adjustment event, the terms and conditions of your Securities may be adjusted or the Securities may be redeemed early at the non-scheduled early repayment amount.*");

- (g) the following new risk factor shall be inserted immediately after risk factor 6.6(j) (Data sourcing and calculation risks associated with a Commodity Index and the commodity contracts underlying a Commodity Index may adversely affect the value of the Commodity Index) on page 102 of the Original Base Prospectus:

***"(k) The occurrence of a commodity index adjustment event or the replacement of the commodity index sponsor by a successor commodity index sponsor may have a negative effect on your Securities***

If the sponsor of a Commodity Index makes a material alteration to the Commodity Index or cancels the Commodity Index and no successor exists, or if the sponsor fails to calculate and announce the level of the Commodity Index, or if the Commodity Index or its administrator does not obtain authorisation or registration with the effect that the Commodity Index may not be used in certain ways by the Issuer or the Calculation Agent, we (as Calculation Agent) shall, if we determine the event to have a material effect on the Securities, (i) calculate the level of the Commodity Index according to the previous formula and method, (ii) replace the Commodity Index with another index (or basket of indices) or (iii) determine the appropriate adjustments to be made to the terms and conditions of the Securities (without your consent). Any such action may have a negative effect on the value and return on the Securities.

If we believe that (i) it would be unlawful or would contravene any applicable licensing requirements for the Calculation Agent to perform the proposed action above or (ii) the proposed action above would not achieve a commercially reasonable result, we may redeem the Securities early. In such event, we will pay to you the non-scheduled early repayment amount. The non-scheduled early repayment amount may be less than your original investment and you may lose some or all of your money. See also risk factor 5.5 (*Following the occurrence of certain extraordinary events in relation to the Underlying Asset(s) or the Original Primary Rate(s) or with respect to index linked securities, following the occurrence of an index adjustment event, the terms and conditions of your Securities may be adjusted or the Securities may be redeemed early at the non-scheduled early repayment amount*).

If a Commodity Index is calculated by a successor commodity index sponsor, or, is replaced by a successor commodity index, the successor commodity index or commodity index as calculated by the successor commodity index sponsor, will be deemed to be the Commodity Index if approved by us (as Calculation Agent). Any such successor commodity index may perform poorly and may result in holders of Securities receiving less than they otherwise expected.

Any of these events may have a negative effect on the value of and return on your Securities."; and

- (h) risk factor 6.7 (*Risks associated with foreign exchange rates as Underlying Assets*) on pages 102 to 103 of the Original Base Prospectus shall be amended by inserting the following text immediately after the second paragraph thereof:

*"Administrator/Benchmark Event*

If an FX Rate or its administrator does not obtain authorisation or registration with the effect that the FX Rate may not be used in certain ways by the Issuer or the Calculation Agent, we (as Calculation Agent) shall, if we determine the event to have a material effect on the Securities, base our determination on the fallback rate specified. If no fallback rate is specified and/or we believe that (i) it would be unlawful or would contravene any applicable licensing requirements for the Calculation Agent to perform the proposed action above or (ii) the proposed action above would not achieve a commercially reasonable result, we may redeem the Securities early. In such event, we will pay to you the non-scheduled early repayment amount. The non-scheduled early repayment amount may be less than your original investment and you may lose some or all of your money. See also risk factor 5.5 (*Following the occurrence of certain extraordinary events in relation to the Underlying Asset(s) or the Original Primary Rate(s) or with respect to index linked securities, following the occurrence of an index adjustment event, the terms and conditions of your Securities may be adjusted or the Securities may be redeemed early at the non-scheduled early repayment amount*).".

2. **Amendments to the section entitled "Documents Incorporated by Reference"**

The information in the section entitled "Documents Incorporated by Reference" is amended and supplemented by amending the information in: (a) the sub-section entitled "Goldman Sachs International", on page 115 of the Original Base Prospectus; and (b) the sub-section

entitled "Goldman Sachs & Co Wertpapier GmbH" on pages of the Original Base Prospectus, as follows:

- (a) deleting the first paragraph on page 114 of the Original Base Prospectus and replacing it with the following:

**"1 Goldman Sachs International**

GSI files documents and information with the Commission de Surveillance du Secteur Financier (the "CSSF"). The following documents, which GSI has filed with the CSSF, are hereby incorporated by reference into this Base Prospectus:

- (a) The report on the Regulatory Ratios of GSI for the fiscal quarter ended 28 February 2019 ("**GSI's Regulatory Ratios, 28 February 2019**").
  - (b) The Annual Report for the fiscal year ended 30 November 2018 of GSI ("**GSI's 2018 Annual Report**"), containing, in Part II, the Directors' Report and Audited Financial Statements of GSI for the period ended 30 November 2018 ("**GSI's 2018 Financial Statements**").
  - (c) The disclosure notice of Goldman Sachs International in relation to key recent events, dated 18 January 2019 ("**GSI's Notice of Recent Events, 18 January 2019**").
  - (d) The report on the Regulatory Ratios of GSI for the fiscal quarter ended 31 December 2018 ("**GSI's Regulatory Ratios, 31 December 2018**").
  - (e) The Unaudited Quarterly Financial Report of GSI for the period ended 30 September 2018 ("**GSI's 2018 Third Quarter Financial Report**"), containing, in Part II, the Unaudited Financial Statements of GSI for the period ended 30 September 2018 ("**GSI's 2018 Third Quarter Financial Statements**").
  - (f) The Annual Report for the fiscal year ended 31 December 2017 of GSI ("**GSI's 2017 Annual Report**"), containing, in Part II, the Directors' Report and Audited Financial Statements of GSI for the period ended 31 December 2017 ("**GSI's 2017 Financial Statements**").
  - (g) The Annual Report for the fiscal year ended 31 December 2016 of GSI ("**GSI's 2016 Annual Report**"), containing, in Part II, the Directors' Report and Audited Financial Statements of GSI for the period ended 31 December 2016 ("**GSI's 2016 Financial Statements**")."
- (b) deleting the first eight rows under the sub-heading "Cross Reference List" on page 114 of the Original Base Prospectus and replacing them with the following:

**"Cross-Reference List**

<b>GSI Information in the Financial Statements</b>	<b>GSI's 2018 Annual Report</b>	<b>GSI's 2017 Annual Report</b>
Management Report/ Strategic Report	pp. 2-41	pp. 2-38
Report of the Directors	pp. 42-43	pp. 39-40
Balance Sheet	p. 50	p. 47
Profit and Loss Account	p. 49	p. 46
Statement of Cash Flows	p. 52	p. 49
Notes to the Financial Statements	pp. 53-94	pp. 50-85

Independent Auditors' Report	pp. 44-48	pp. 41-45
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**GSI's Regulatory Ratios, 28 February 2019**

Introduction	p.1
Regulatory Ratios	p.1"

- (c) by deleting the sub-section entitled "Goldman Sachs & Co Wertpapier GmbH" on page 115 of the Original Base Prospectus and replacing them with the following:

**"2. Goldman Sachs & Co Wertpapier GmbH**

The following documents, which have previously been published and have been filed with the CSSF, shall be deemed to be incorporated in, and to form part of, this Base Prospectus:

- (a) The German language version of the (i) Financial Statements for the period ending 31 December 2018 and the Management Report for the Financial Year 2018 and (ii) Auditors' Report thereon (together with, in each case, an unofficial English translation thereof, for which GSW accepts responsibility) ("**GSW's 2018 Financial Statements**").
- (b) The German language version of the unaudited half yearly financial statements and interim management report for the period ended 30 June 2018 (together with, an unofficial English translation thereof, for which GSW accepts responsibility) ("**GSW's 2018 Interim Financial Statements**").
- (c) The German language version of the (i) Financial Statements for the period ending 31 December 2017 and the Management Report for the Financial Year 2017 and (ii) Auditors' Report thereon (together with, in each case, an unofficial English translation thereof, for which GSW accepts responsibility) ("**GSW's 2017 Financial Statements**").
- (d) The German language version of the (i) Financial Statements for the period ending 31 December 2016 and the Management Report for the Financial Year 2016 and (ii) Auditors' Report thereon (together with, in each case, an unofficial English translation thereof, for which GSW accepts responsibility) ("**GSW's 2016 Financial Statements**").

**Cross Reference List**

<b>GSW Information in the Financial Statements</b>	<b>GSW's 2018 Financial Statements*</b>	<b>GSW's 2017 Financial Statements*</b>
Balance Sheet	p.11	p.11
Profit and Loss Account/Income Statement	p.13	p.13
Cash Flow Statement	p.25	p.25
Notes to the Financial Statements	pp.15–21	pp.15–21
Independent Auditors' Report	pp.27–32	pp.27–29
Statement of Changes in Equity	p.23	p.23

\* The page numbers referenced above in relation to GSW's 2018 Financial Statements and GSW's 2017 Financial Statements relate to the order in which the pages appear in the PDF version of such document.

Only the German language versions of GSW's 2018 Financial Statements and GSW's 2017 Financial Statements relating to GSW are legally binding. The page references above refer to the English language versions of GSW's 2018 Financial Statements and GSW's 2017 Financial Statements.

Any information included in the documents incorporated by reference that is not included in the cross-reference list is considered to be additional information and is not required by the relevant schedules of the Prospectus Regulation."

### 3. **Amendments to the section entitled "Commonly Asked Questions"**

The information in the section entitled "Commonly Asked Questions" is amended and supplemented by deleting the information in sub-section 23 (What further determinations may the Calculation Agent have to make?) on pages 133 to 134 of the Original Base Prospectus in its entirety and replacing it with the following:

#### **"23. What further determinations may the Calculation Agent have to make?"**

The terms and conditions of the Securities (comprising (i) the General Instrument Conditions or the General Note Conditions, as applicable, (ii) any relevant Coupon Payout Conditions, (iii) any relevant Autocall Payout Conditions, (iv) the Payout Conditions or the EIS Note Payout Conditions, as applicable, (v) any relevant Underlying Asset Conditions, as completed by (vi) the Final Terms) also provide that the Calculation Agent is the entity responsible for determining whether certain events have occurred (some of which are mentioned above), and in circumstances where such events have occurred, whether the terms and conditions of the securities need to be amended to reflect such events. A non-exhaustive summary of some events is set out below:

- (a) Market Disruption Event – any event that means the value of the Underlying Asset(s) cannot be determined in the regular manner, for example, the exchange on which the relevant shares trade has closed early or been disrupted, the management company of the fund has failed to publish the net asset value of the shares, or the index sponsor or commodities exchange has failed to publish the reference level;
- (b) Potential Adjustment Event or Extraordinary Event (in respect of the Share Linked Conditions) – any event that results in significant changes to the nature of the shares, including a reclassification, an extraordinary dividend, a delisting of shares, a merger event, a tender offer, an insolvency or a nationalisation, and where the share is a fund, a non-publication of the net asset value of the share;
- (c) Index Adjustment Event (in respect of the Index Linked Conditions) – (i) a material non-prescribed modification of the composition of an index, (ii) the cancellation of an index, which is then not replaced, (iii) the non-publication of an index level (though this may be a Market Disruption Event), and (iv) if an index or its administrator does not obtain authorisation or registration (subject to applicable transitional provisions) with the effect that the index may not be used in certain ways by the Issuer or the Calculation Agent;
- (d) Commodity Index Adjustment Event (in respect of the Commodity Linked Conditions) – (i) a material non-prescribed change in the formula for determining the composition of a commodity index, (ii) the cancellation of a commodity index, which is then not replaced, (iii) the non-publication of a commodity index level, and (iv) if a commodity index or its administrator does not obtain authorisation or registration (subject to applicable transitional provisions) with the effect that such commodity index may not be used in certain ways by the Issuer or the Calculation Agent;
- (e) Delay in Publication or Cessation of Publication (in respect of Inflation Linked Conditions) – a delay in, or cessation of, publication of an inflation index level;
- (f) Change in Law – a change in law which materially increases the relevant Issuer's costs of performing its obligations under the Securities;



- (g) FX Disruption Event – an event that makes conversion of specified and settlement currencies impossible;
- (h) CNY FX Disruption Event – an event that makes conversion or delivery of CNY impossible or impractical, or the general CNY foreign exchange market becomes illiquid;
- (i) Physical Settlement Disruption Event - any event that has occurred as a result of which, in the opinion of the Calculation Agent, the relevant Issuer cannot, or it is commercially impracticable for such Issuer to effect physical settlement of all or any of the deliverable assets in satisfaction of such Issuer's obligation to pay a redemption amount;
- (j) Original Primary Rate Event – if an Original Primary Rate (a) is materially modified, (b) ceases to be provided permanently or indefinitely, (c) may not be used in certain ways by the Issuer or the Calculation Agent if its administrator or such reference rate does not obtain authorisation or registration (subject to applicable transitional provisions); and
- (k) Administrator/Benchmark Event - if a Commodity Reference Price or FX Rate or its administrator does not obtain authorisation or registration with the effect that the Commodity Reference Price or the FX Rate may not be used in certain ways by the Issuer or the Calculation Agent if or.

If the Calculation Agent determines that a Market Disruption Event, a Potential Adjustment Event, an Extraordinary Event, an Index Adjustment Event, a Commodity Index Adjustment Event, a Delay in Publication or Cessation of Publication, a Change in Law, an FX Disruption Event, a CNY FX Disruption Event, a Physical Settlement Disruption Event, an Original Primary Rate Event or Administrator/Benchmark Event and any other applicable event has occurred, any consequential postponement of, or any alternative provisions for, valuation provided in the terms and conditions of any securities may have an adverse effect on the value of such securities.

The sections entitled "Introduction to the Share Linked Conditions", "Introduction to the Index Linked Conditions", "Introduction to the Commodity Linked Conditions", "Introduction to the FX Linked Conditions", "Introduction to the Inflation Linked Conditions" and "Introduction to the Multi-Asset Basket Linked Conditions" set out in more detail the circumstances which can lead to a disruption event and the postponement of, or a change in the process relating to, the valuation of the most common types of underlying assets."

#### 4. **Amendments to the section entitled "Payout Conditions"**

The information in the section entitled "Payout Conditions" is amended and supplemented as follows:

- (a) Payout Condition 1.2(a)(i)(A) on page 273 of the Original Base Prospectus shall be deleted in its entirety and replaced with the following:

"(A) "Trigger Payout 1" to be applicable, the following formula:

$$CA \times \textit{Trigger Percentage}$$

- (b) Payout Condition 1.2(c)(i)(A)(1) on page 274 of the Original Base Prospectus shall be deleted in its entirety and replaced with the following:

"(1) "Single Asset" or "Worst of Basket" to be applicable, the following formula:

$$CA \times \frac{\textit{Final Reference Value}}{\textit{Initial reference Value}}; \textit{or}$$

#### 5. **Amendments to the section entitled "Introduction to the Index Linked Conditions"**

The information in the section entitled "Introduction to the Index Linked Conditions" is amended and supplemented by deleting the information in the sub-section entitled "Adjustments to the terms of Index Linked Securities" on pages 351 to 352 of the Original Base Prospectus in its entirety and replacing it with the following:

**"Adjustments to terms of Index Linked Securities**

Following the occurrence of an Index Adjustment Event or Change in Law specified as applicable in the relevant Final Terms, the Calculation Agent may (depending on the terms and conditions of the applicable Securities) determine itself the Index Level, rebase the Index Linked Securities against another comparable index or basket of indices or make adjustments to the terms of the Index Linked Securities and calculations as described in the Conditions. In the event that the proposed actions (a) would be unlawful or contravene any applicable licensing requirements, or (b) would not achieve a commercially reasonable result, the Index Linked Securities may be redeemed early.

Index Adjustment Event includes (i) **Index Modification**, which means that the relevant Index Sponsor makes a material non-prescribed change in the formula or composition of the Index; (ii) **Index Cancellation**, which means that the Index has been cancelled and no successor exists; (iii) **Index Disruption**, which means that the relevant Index Sponsor fails to calculate and announce the Index (though this may be deemed to be a Disrupted Day by the Calculation Agent); or (iv) an **Administrator/Benchmark Event**, which means that any relevant authorisation, registration, recognition, endorsement, equivalence decision, approval, inclusion in any official register or similar regulatory or legal requirement, in respect of the relevant Index or the administrator or sponsor of the Index, has not been or will not be obtained or has been or will be, rejected, refused, suspended or withdrawn by the relevant competent authority or other relevant official body, in each case with the effect that either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use the Index to perform its or their respective obligations under the Index Linked Securities.

**Change in Law** results in the relevant Issuer incurring material costs for performing its obligations under the Index Linked Securities."

6. **Amendments to the section entitled "Index Linked Conditions"**

The information in the section entitled "Index Linked Conditions" is amended and supplemented as follows:

- (c) Index Linked Condition 3.2 (Occurrence of an Index Adjustment Event) on pages 370 to 371 of the Original Base Prospectus shall be deleted in its entirety and replaced with the following:

**"3.2 Occurrence of an Index Adjustment Event**

If the Calculation Agent determines in respect of an Index that, (a) on or prior to any Reference Date, Averaging Reference Date, Observation Date or other relevant date, the relevant Index Sponsor or Successor Index Sponsor, if applicable, makes or announces that it will make a material change in the formula for, or the method of, calculating a relevant Index, or in any other way materially modifies such Index (other than a modification prescribed in that formula or method to maintain such Index in the event of changes in the Components, capitalisation and/or other routine events) (an "**Index Modification**"), or permanently cancels a relevant Index and no Successor Index exists as at the date of such cancellation (an "**Index Cancellation**"), or (b) on any Reference Date, Averaging Reference Date, Observation Date or other relevant date, the Index Sponsor or Successor Index Sponsor, if applicable, fails to calculate and announce a relevant Index (an "**Index Disruption**"), (provided that, in respect of a Multi-Exchange Index, the Calculation Agent may, in its discretion, determine that such event instead results in the occurrence of a Disrupted Day), or (c) on or prior to any Reference Date, Averaging Reference Date, Observation Date or other relevant date, an Administrator/Benchmark

Event Date has occurred in respect of a relevant Index, and, if in the relevant Final Terms the consequence specified in respect of any such Index Adjustment Event is:

- (i) "**Calculation Agent Adjustment**", then the Calculation Agent shall determine if such Index Adjustment Event has a material effect on the Index Linked Securities and, if so, shall calculate the relevant Index Level using, in lieu of a published level for that Index, the level for such Index as at the Valuation Time on that Reference Date, Averaging Reference Date, Observation Date or other relevant date, as the case may be, as determined by the Calculation Agent in accordance with the formula for, and method of, calculating such Index last in effect prior to the relevant Index Adjustment Event, but using only those Components that comprised such Index immediately prior to such Index Adjustment Event (other than those Components that have since ceased to be listed on the relevant Exchange);
- (ii) "**Index Substitution**", then the Calculation Agent shall determine if such Index Adjustment Event has a material effect on the Index Linked Securities, and, if so, the Calculation Agent may rebase the Index Linked Securities against another index or basket of indices, as applicable, selected by the Calculation Agent to be reasonably comparable to the relevant Index, and, following such rebasing, the Calculation Agent will make such adjustment(s) that it determines to be appropriate, if any, to any variable, calculation methodology, valuation, settlement, payment terms or any other terms of the Index Linked Securities to account for such rebasing; or
- (iii) "**Related Exchange Adjustment**", then following each adjustment to the exercise, settlement, payment, or other terms of options or futures contracts on the Index traded on any Options Exchange, the Calculation Agent will make the appropriate adjustments, if any, to any one or more of the terms of the Index Linked Securities, including without limitation, any variable or term relevant to the settlement or payment under the Index Linked Securities, as the Calculation Agent determines appropriate, which adjustment will be effective as of the date determined by the Calculation Agent to be the effective date of the corresponding adjustment made by the Options Exchange. If options or futures contracts on the Index are not traded on the Options Exchange, the Calculation Agent will make such adjustment, if any, to any one or more of the terms of such Index Linked Securities, including without limitation, any variable or term relevant to the settlement or payment under such Index Linked Securities, as the Calculation Agent determines appropriate, with reference to the rules of and precedents (if any) set by the Options Exchange, to account for any event that, in the determination of the Calculation Agent, would have given rise to an adjustment by the Options Exchange if such options or futures contracts were so traded;

provided that if:

- (A) it (I) is or would be unlawful at any time under any applicable law or regulation; or (II) would contravene any applicable licensing requirements for the Calculation Agent to perform the actions prescribed in paragraphs (i), (ii) or (iii) above (or it would be unlawful or would contravene those licensing requirements were a determination to be made at such time); or
- (B) the Calculation Agent determines that none of paragraphs (i), (ii) or (iii) above, as is applicable, would achieve a commercially reasonable result, for any of the Issuer, the Calculation Agent or the Holders,

on giving notice to Holders in accordance with General Instrument Condition 22 (Notices) or General Note Condition 20 (Notices), as the case may be, the Issuer shall redeem the Index Linked Securities in whole but not in part, each Index Linked Security being redeemed by payment of an amount equal to the Non-scheduled Early Repayment Amount of such Index Linked Security taking into account such Index Adjustment Event, as determined by the Calculation Agent. Payments will be made in such manner as shall be notified to the Holders in accordance with General Instrument Condition 22 (Notices) or General Note Condition 20 (Notices), as the case may be.";

- (d) the definition of "Index Adjustment Event" in Index Linked Condition 7 (Definitions), on page 378 of the Original Base Prospectus shall be deleted in its entirety and replaced with the following:

**"Index Adjustment Event"** means each of an Index Cancellation, an Index Disruption, an Index Modification and an Administrator/Benchmark Event."; and

- (e) Index Linked Condition 7 (Definitions) on pages 373 to 384 of the Original Base Prospectus shall be amended and supplemented by inserting the following definitions in alphabetical order:

**"Administrator/Benchmark Event"** means, in respect of an Index, the occurrence of a Non-Approval Event, a Rejection Event or a Suspension/Withdrawal Event, in each case being treated as having occurred on the Administrator/Benchmark Event Date."

**"Administrator/Benchmark Event Date"** means, in respect of an Index, the date determined by the Calculation Agent to be:

- (a) in respect of a Non-Approval Event, the date on which the relevant authorisation, registration, recognition, endorsement, equivalence decision, approval, inclusion in any official register or similar regulatory or legal requirement is required under any applicable law or regulation for the use of such Index in respect of the Index Linked Securities
- (b) in respect of a Rejection Event, the date on which following the rejection or refusal of the relevant application for authorisation, registration, recognition, endorsement, an equivalence decision, approval or inclusion in any official register, either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use such Index or to perform its or their respective obligations under the Index Linked Securities; and
- (c) in respect of a Suspension/Withdrawal Event, the date on which following (A) the suspension or withdrawal by the relevant competent authority or other relevant official body of the authorisation, registration, recognition, endorsement, equivalence decision or approval, or (B) the date on which such Index or the administrator or sponsor of such Index is removed from the official register, as applicable, either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use such Index or to perform its or their respective obligations under the Index Linked Securities,

or, in each case, if such date occurs before the Strike Date, the Strike Date."

**"Non-Approval Event"** means, in respect of an Index, the determination by the Calculation Agent that one or more of the following events has occurred:

- (a) any authorisation, registration, recognition, endorsement, equivalence decision or approval in respect of such Index or the administrator or sponsor of such Index is not obtained;
- (b) such Index or the administrator or sponsor of such Index is not included in an official register; or

- (c) such Index or the administrator or sponsor of such Index does not fulfil any legal or regulatory requirement applicable to the Issuer or the Calculation Agent or such Index,

in each case, with the effect that either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use such Index to perform its or their respective obligations under the Index Linked Securities, provided that a Non-Approval Event shall not occur if such Index or the administrator or sponsor of such Index is not included in an official register because its authorisation, registration, recognition, endorsement, equivalence decision or approval is suspended if, at the time of such suspension, the continued provision and use of such Index is permitted in respect of the Index Linked Securities under the applicable law or regulation."

**"Rejection Event"** means, in respect of an Index, the determination by the Calculation Agent that the relevant competent authority or other relevant official body has rejected or refused any application for authorisation, registration, recognition, endorsement, an equivalence decision, approval or inclusion in any official register in relation to such Index or the administrator or sponsor of such Index, with the effect that either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use such Index to perform its or their respective obligations under the Index Linked Conditions."

**"Suspension/Withdrawal Event"** means, in respect of an Index, the determination by the Calculation Agent that one or more of the following events has occurred:

- (i) the relevant competent authority or other relevant official body suspends or withdraws any authorisation, registration, recognition, endorsement, equivalence decision or approval in relation to such Index or the administrator or sponsor of such Index; or
- (ii) such Index or the administrator or sponsor of such Index is removed from any official register,

in each case, with the effect that either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use such Index to perform its or their respective obligations under the Index Linked Securities, provided that a Suspension/Withdrawal Event shall not occur if such authorisation, registration, recognition, endorsement, equivalence decision or approval is suspended or where inclusion in any official register is withdrawn if, at the time of such suspension or withdrawal, the continued provision and use of such Index is permitted in respect of the Index Linked Securities under the applicable law or regulation."

7. **Amendments to the section entitled "Introduction to the Commodity Linked Conditions"**

The information in the section entitled "Introduction to the Commodity Linked Conditions" is amended and supplemented as follows:

- (a) the sub-section entitled "Summary of Disruption Events" on pages 385 to 386 of the Original Base Prospectus shall be deleted in its entirety and replaced with the following:

**"Summary of Disruption Events"**

**Disruption Events for Commodities** can be classified broadly as the occurrence or existence of the following events:

- (1) **Disappearance of Commodity Reference Price** – (i) trading in the relevant Commodity Contract permanently ceases, (ii) the disappearance of, or of trading in, the Commodity, or (iii) the disappearance of the Commodity Reference Price, i.e. the specified price on a specified day of a specified quantity of the Commodity for delivery on a particular date;

- (m) **Material Change in Content** – a material change in the content of the Commodity or relevant Commodity Contract;
  - (n) **Material Change in Formula** – a material change in the formula for or method of calculating the Commodity Reference Price;
  - (o) **Price Source Disruption** – (i) the failure of the **Price Source** (typically the relevant Trading Facility or publication) to announce the **Specified Price** (i.e. the type of price specified in the Commodity Reference Price), (ii) the temporary or permanent unavailability of the Price Source, (iii) where applicable, the failure to obtain at least three quotations, or (iv) where applicable, a **Price Materiality Percentage** is reached, i.e. the Specified Price differs from the price reached by reference dealers by the maximum amount permitted;
  - (p) **Tax Disruption** – the imposition of, or a change to, a tax, which has the direct effect of raising or lowering the price per unit of a Commodity;
  - (q) **Trading Disruption** – the material suspension of, or material limitation on, trading in the Commodity Contract or the Commodity: this includes where the relevant Trading Facility establishes limits on the range within which the price of the Commodity Contract or the Commodity may fluctuate and the closing or settlement price of the Commodity Contract or the Commodity has increased or decreased from the previous day's settlement price by the maximum amount permitted under the rules of the relevant Trading Facility; and
  - (r) **Administrator/Benchmark Event** – any relevant authorisation, registration, recognition, endorsement, equivalence decision, approval, inclusion in any official register or similar regulatory or legal requirement in respect of the Commodity Reference Price or the administrator or sponsor of the Commodity Reference Price has not been or will not be obtained or has been or will be, rejected, refused, suspended or withdrawn by the relevant competent authority or other relevant official body, in each case with the effect that either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use the Commodity Reference Price to perform its or their respective obligations under the relevant Commodity Linked Securities."
- (b) the sub-section entitled "Single Commodity and Pricing Date" on pages 386 to 387 of the Original Base Prospectus shall be amended by deleting the final paragraph thereof in its entirety and replacing it with the following:

"The Final Terms in respect of Commodity Linked Securities that are linked to a Commodity Basket will specify which of the above elections will be applicable. In the event that the Disruption Fallbacks specified: (a) would be unlawful or contravene any applicable licensing requirements, or (b) would not achieve a commercially reasonable result, the Commodity Linked Securities may be redeemed early."

- (c) the sub-section entitled "Adjustments in terms of Commodity Linked Securities linked to a Commodity Index" on pages 389 to 390 of the Original Base Prospectus shall be deleted in its entirety and replaced with the following:

**"Adjustments in terms of Commodity Linked Securities linked to a Commodity Index**

Following the occurrence of a Commodity Index Adjustment Event, the Calculation Agent may determine the closing level for such Commodity Index, rebase the Commodity Linked Securities against another comparable commodity index or basket of commodity indices or make adjustments to the terms of the Commodity Linked Securities and calculations as described in the Conditions. In the event that the proposed actions (a) would be unlawful or contravene any applicable licensing requirements, or (b) would not achieve a commercially reasonable result, the Commodity Linked Securities may be redeemed early.

**Commodity Index Adjustment Event** includes (i) a **Commodity Index Modification**, which means that the relevant Commodity Index Sponsor makes a material non-prescribed change in

the formula for determining the composition of the Commodity Index; (ii) a **Commodity Index Cancellation**, which means that the Commodity Index has been cancelled and no successor exists; (iii) a **Commodity Index Failure**, which means that the relevant Commodity Index Sponsor fails to calculate and announce the **Commodity Index** or a successor, and (iv) an Administrator/Benchmark Event, which means that any relevant authorisation, registration, recognition, endorsement, equivalence decision, approval, or inclusion in any official register or similar regulatory or legal requirement, in respect of the relevant Commodity Index or the administrator or sponsor of the Commodity Index, has not been or will not be obtained or has been or will be, rejected, refused, suspended or withdrawn by the relevant competent authority or other relevant official body, in each case with the effect that either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use the Commodity Index to perform its or their respective obligations under the Commodity Linked Securities."

#### 8. **Amendments to the section entitled "Commodity Linked Conditions"**

The information in the section entitled "Commodity Linked Conditions" is amended and supplemented as follows:

- (a) Commodity Linked Condition 1.1 (Single Commodity and Pricing Dates) on pages 392 to 393 of the Original Base Prospectus shall be amended by deleting Commodity Linked Condition 1.1(g) and (h) in their entirety and replacing them with the following:

"(g) if the Calculation Agent determines that any Pricing Date is a Disrupted Day in respect of such Commodity and, the relevant Final Terms do not specify a Disruption Fallback, then the Disruption Fallback of "**Postponement**" (with five (5) Scheduled Commodity Business Days as the Maximum Days of Disruption) will be deemed to have been specified;

(h) if "**Initial Pricing Date Adjustment**" is specified in the relevant Final Terms to be applicable, the Initial Pricing Date shall be deemed to be a Pricing Date for the purposes of this Commodity Linked Condition 1.1; and

(i) if:

(i) it (A) is or would be unlawful at any time under any applicable law or regulation; or (B) would contravene any applicable licensing requirements, for the Calculation Agent to perform the actions prescribed in this Commodity Linked Condition 1.1 (or it would be unlawful or would contravene those licensing requirements were a determination to be made at such time); or

(ii) the Calculation Agent determines that the Disruption Fallback would not achieve a commercially reasonable result for any of the Issuer, the Calculation Agent or the Holders,

then on giving notice to Holders in accordance with General Instrument Condition 22 (Notices) or General Note Condition 20 (*Notices*), as the case may be, the Issuer shall redeem the Commodity Linked Securities in whole but not in part, each Commodity Linked Security being redeemed by payment of an amount equal to the Non-scheduled Early Repayment Amount of such Commodity Linked Security taking into account such Disruption Event, as determined by the Calculation Agent. Payments will be made in such manner as shall be notified to the Holders in accordance with General Instrument Condition 22 (Notices) or General Note Condition 20 (*Notices*), as the case may be."

- (b) Commodity Linked Condition 1.2 (*Commodity Basket and Pricing Dates – Individual Scheduled Commodity Business Day and Individual Disrupted Day*) on pages 393 to 395 of the Original Base Prospectus shall be amended by deleting the Commodity Linked Condition 1.2(g) and (h) in their entirety and replacing them with the following:

"(g) if the Calculation Agent determines that any Pricing Date is a Disrupted Day in respect of any Commodity and, the relevant Final Terms do not specify a Disruption Fallback,

then the Disruption Fallback of "**Postponement**" (with five (5) Scheduled Commodity Business Days as the Maximum Days of Disruption) will be deemed to have been specified;

(h) if "**Initial Pricing Date Adjustment**" is specified in the relevant Final Terms to be applicable, the Initial Pricing Date shall be deemed to be a Pricing Date for the purposes of this Commodity Linked Condition 1.2; and

(i) if:

(i) it (A) is or would be unlawful at any time under any applicable law or regulation; or (B) would contravene any applicable licensing requirements, for the Calculation Agent to perform the actions prescribed in this Commodity Linked Condition 1.2 (or it would be unlawful or would contravene those licensing requirements were a determination to be made at such time); or

(ii) the Calculation Agent determines that the Disruption Fallback would not achieve a commercially reasonable result for any of the Issuer, the Calculation Agent or the Holders,

then on giving notice to Holders in accordance with General Instrument Condition 22 (*Notices*) or General Note Condition 20 (*Notices*), as the case may be, the Issuer shall redeem the Commodity Linked Securities in whole but not in part, each Commodity Linked Security being redeemed by payment of an amount equal to the Non-scheduled Early Repayment Amount of such Commodity Linked Security taking into account such Disruption Event, as determined by the Calculation Agent. Payments will be made in such manner as shall be notified to the Holders in accordance with General Instrument Condition 22 (*Notices*) or General Note Condition 20 (*Notices*), as the case may be."

(c) Commodity Linked Condition 1.3 (*Commodity Basket and Pricing Dates – Common Scheduled Commodity Business Day but Individual Disrupted Day*) on pages 395 to 397 of the Original Base Prospectus shall be amended by deleting the Commodity Linked Condition 1.3(f) and (g) in their entirety and replacing them with the following:

"(f) if the Calculation Agent determines that any Pricing Date is a Disrupted Day in respect of any Commodity and, the relevant Final Terms do not specify a Disruption Fallback, then the Disruption Fallback of "**Postponement**" (with five (5) Scheduled Commodity Business Days as the Maximum Days of Disruption) will be deemed to have been specified;

(g) if "**Initial Pricing Date Adjustment**" is specified in the relevant Final Terms to be applicable, the Initial Pricing Date shall be deemed to be a Pricing Date for the purposes of this Commodity Linked Condition 1.3; and

(h) if:

(i) it (A) is or would be unlawful at any time under any applicable law or regulation; or (B) would contravene any applicable licensing requirements, for the Calculation Agent to perform the actions prescribed in this Commodity Linked Condition 1.3 (or it would be unlawful or would contravene those licensing requirements were a determination to be made at such time); or

(ii) the Calculation Agent determines that the Disruption Fallback would not achieve a commercially reasonable result for any of the Issuer, the Calculation Agent or the Holders,

then on giving notice to Holders in accordance with General Instrument Condition 22 (*Notices*) or General Note Condition 20 (*Notices*), as the case may be, the Issuer shall redeem the Commodity Linked Securities in whole but not in part, each Commodity Linked Security being redeemed by payment of an amount equal to the Non-scheduled Early Repayment Amount of such Commodity Linked Security taking into account



such Disruption Event, as determined by the Calculation Agent. Payments will be made in such manner as shall be notified to the Holders in accordance with General Instrument Condition 22 (*Notices*) or General Note Condition 20 (*Notices*), as the case may be."

- (d) Commodity Linked Condition 6.2 (Occurrence of a Commodity Index Adjustment Event) on pages 401 to 402 of the Original Base Prospectus shall be deleted in its entirety and replaced with the following:

**"6.2 Occurrence of a Commodity Index Adjustment Event**

If, in respect of a Commodity Index, the Calculation Agent determines that,

- (a) on or prior to any Reference Date, Averaging Reference Date or other relevant date, (i) the relevant Commodity Index Sponsor makes, in the determination of the Calculation Agent, a material change in the weighting or composition of the Commodity Index or the formula for, or the method of, calculating or determining the composition of such Commodity Index, as the case may be, or in any other way materially modifies such Commodity Index (other than a change or modification prescribed in that formula or method relating to the weighting or composition of such Commodity Index, the weighting of the components of such Commodity Index and/or other routine events or modifications as determined by the Calculation Agent) (a "Commodity Index Modification"), (ii) the relevant Commodity Index Sponsor permanently cancels or ceases to calculate the relevant Commodity Index and no Successor Commodity Index exists as at the date of such cancellation or cessation (a "Commodity Index Cancellation"); or (iii) an Administrator/Benchmark Event Date has occurred in respect of such Commodity Index, or
- (b) on any Reference Date, Averaging Reference Date or other relevant date, (i) in the determination of the Calculation Agent, the Closing Level of the relevant Commodity Index contains a manifest error, or (ii) in the absence of a Disruption Event, the Commodity Index Sponsor fails to calculate and announce the Closing Level of such Commodity Index and a Successor Commodity Index is not calculated and announced (a "**Commodity Index Failure**" and, together with a Commodity Index Modification, a Commodity Index Cancellation and an Administrator/Benchmark Event, each a "**Commodity Index Adjustment Event**"),

then the Calculation Agent shall determine if such Commodity Index Adjustment Event has a material effect on the Commodity Linked Securities and, if so,

- (A) shall calculate the relevant Closing Level using, in lieu of a published level for that Commodity Index, the level for such Commodity Index as at that Reference Date, Averaging Reference Date or other relevant date, as the case may be, in accordance with the formula for, and method of, calculating the Closing Level of such Commodity Index last in effect prior to the relevant Commodity Index Adjustment Event, utilising any adjustment to such formula for or the method of calculating the Closing Level of such Commodity Index as it determines to be commercially reasonable, or
- (B) may rebase the Commodity Linked Securities against another commodity index or basket of indices, as applicable, selected by the Calculation Agent to be reasonably comparable to the relevant Commodity Index, and, following such rebasing, the Calculation Agent will make such adjustment(s) that it determines to be appropriate, if any, to any variable, calculation methodology, valuation, settlement, payment terms or any other terms of the Commodity Index Linked Securities to account for such rebasing; or
- (C) may determine the appropriate adjustment, if any, to be made to any one or more of the terms of the Commodity Linked Securities, including without limitation, any variable or term relevant to the settlement or payment under the Commodity Linked Securities, as the Calculation Agent determines appropriate

to account for such Commodity Index Adjustment Event, and shall determine the effective date of that adjustment but,

- (D) if:
- (1) it (aa) is or would be unlawful at any time under any applicable law or regulation; or (bb) would contravene any applicable licensing requirements for the Calculation Agent to perform the actions prescribed in paragraphs (A) or (B) above (or it would be unlawful or would contravene those licensing requirements were a determination to be made at such time); or
  - (2) the Calculation Agent determines that neither paragraph (A), (B) nor (C) above, as is applicable, would achieve a commercially reasonable result, for any of the Issuer, the Calculation Agent or the Holders,

then on giving notice to Holders in accordance with General Instrument Condition 22 (*Notices*) or General Note Condition 20 (*Notices*), as the case may be, the Issuer shall redeem the Commodity Linked Securities in whole but not in part, each Commodity Linked Security being redeemed by payment of an amount equal to the Non-scheduled Early Repayment Amount of such Commodity Linked Security taking into account such Commodity Index Adjustment Event, as determined by the Calculation Agent. Payments will be made in such manner as shall be notified to the Holders in accordance with General Instrument Condition 22 (*Notices*) or General Note Condition 20 (*Notices*), as the case may be.

- (E) Notwithstanding paragraphs (i), (ii) and (iii) above, if such Commodity Index Adjustment Event has a material effect on the Commodity Linked Securities, the Calculation Agent may, in its discretion, instead determine the relevant level of the Commodity Index, in lieu of a published level for the Commodity Index, in a commercially reasonable manner.

In any such circumstances as described in the preceding paragraph or in paragraphs (A), (B), (D) and (E) above, the Calculation Agent will have no responsibility (in the absence of manifest error) to any person for errors or omissions made in the calculation of the Commodity Index. The Calculation Agent shall not act as agent of the Holders."

- (d) the definition of "Disruption Event" in paragraph 9 (General Definitions) on pages 407 to 408 of the Original Base Prospectus shall be deleted in its entirety and replaced with the following:

**"Disruption Event"** means:

- (a) in respect of a Commodity, the occurrence on any day of any one or more of the following, as determined by the Calculation Agent:
  - (i) Disappearance of Commodity Reference Price;
  - (ii) Material Change in Content;
  - (iii) Material Change in Formula;
  - (iv) Price Source Disruption;
  - (v) Tax Disruption;
  - (vi) Trading Disruption; or
  - (vii) Administrator/Benchmark Event; and

- (b) in respect of a Commodity Index, the occurrence on any day of any one or more of the following, as determined by the Calculation Agent:
  - (i) the settlement price for any Commodity Contract included in such Commodity Index is a "limit price" which means that the settlement price for such Commodity Contract for a day has increased or decreased from the previous day's settlement price by the maximum amount permitted under the rules of the relevant Trading Facility;
  - (ii) trading in any Commodity Contract included in such Commodity Index is suspended or interrupted subsequent to the opening of trading and trading in such Commodity Contract does not recommence at least ten (10) minutes prior to the regular scheduled close of trading in such Commodity Contract, or in the event trading does recommence at least ten (10) minutes prior to the regular scheduled close of trading on the relevant Trading Facility, trading does not continue on an uninterrupted basis until the regular scheduled close of trading in such Commodity Contract; or
  - (iii) failure by the relevant Trading Facility to announce or publish the settlement price for any Commodity Contract included in such Commodity Index."
- (e) Commodity Linked Condition 9 (Definitions) on pages 403 to 414 of the Original Base Prospectus shall be amended and supplemented by inserting the following definitions in alphabetical order:

**""Administrator/Benchmark Event"** means, in respect of a Commodity Reference Price or a Commodity Index, the occurrence of a Non-Approval Event, a Rejection Event or a Suspension/Withdrawal Event, in each case being treated as having occurred on the Administrator/Benchmark Event Date."

**""Administrator/Benchmark Event Date"** means, in respect of a Commodity Reference Price or a Commodity Index, the date determined by the Calculation Agent to be:

- (i) in respect of a Non-Approval Event, the date on which the relevant authorisation, registration, recognition, endorsement, equivalence decision, approval, inclusion in any official register or similar regulatory or legal requirement is required under any applicable law or regulation for the use of such Commodity Reference Price or Commodity Index in respect of the Commodity Linked Securities;
- (ii) in respect of a Rejection Event, the date on which following the rejection or refusal of the relevant application for authorisation, registration, recognition, endorsement, an equivalence decision, approval or inclusion in any official register, either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use such Commodity Reference Price or Commodity Index or to perform its or their respective obligations under the Commodity Linked Securities; and
- (iii) in respect of a Suspension/Withdrawal Event, the date on which following (A) the suspension or withdrawal by the relevant competent authority or other relevant official body of the authorisation, registration, recognition, endorsement, equivalence decision or approval, or (B) the date on which such Commodity Reference Price or Commodity Index or the administrator or sponsor of such Commodity Reference Price or Commodity Index is removed from the official register, as applicable, either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use such Commodity Reference Price or Commodity Index or to perform its or their respective obligations under the Commodity Linked Securities,

or, in each case, if such date occurs before the Trade Date, the Trade Date."

**"Non-Approval Event"** means, in respect of a Commodity Reference Price or Commodity Index, the determination by the Calculation Agent that one or more of the following events has occurred:

- (i) any authorisation, registration, recognition, endorsement, equivalence decision or approval in respect of such Commodity Reference Price or Commodity Index or the administrator or sponsor of such Commodity Reference Price or Commodity Index is not obtained;
- (ii) such Commodity Reference Price or Commodity Index or the administrator or sponsor of such Commodity Reference Price or Commodity Index is not included in an official register; or
- (iii) such Commodity Reference Price or Commodity Index or the administrator or sponsor of such Commodity Reference Price or Commodity Index does not fulfil any legal or regulatory requirement applicable to the Issuer or the Calculation Agent or such Commodity Reference Price or Commodity Index,

in each case, with the effect that either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use such Commodity Reference Price or Commodity Index to perform its or their respective obligations under the Commodity Linked Securities, provided that a Non-Approval Event shall not occur if such Commodity Reference Price or Commodity Index or the administrator or sponsor of such Commodity Reference Price or Commodity Index is not included in an official register because its authorisation, registration, recognition, endorsement, equivalence decision or approval is suspended if, at the time of such suspension, the continued provision and use of such Commodity Reference Price or Commodity Index is permitted in respect of the Commodity Linked Securities under the applicable law or regulation."

**"Rejection Event"** means, in respect of a Commodity Reference Price or Commodity Index, the determination by the Calculation Agent that the relevant competent authority or other relevant official body has rejected or refused any application for authorisation, registration, recognition, endorsement, an equivalence decision, approval or inclusion in any official register in relation to such Commodity Reference Price or Commodity Index or the administrator or sponsor of such Commodity Reference Price or Commodity Index, with the effect that either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use such Commodity Reference Price or Commodity Index to perform its or their respective obligations under the Commodity Linked Conditions."

**"Suspension/Withdrawal Event"** means, in respect of a Commodity Reference Price or Commodity Index, the determination by the Calculation Agent that one or more of the following events has occurred:

- (i) the relevant competent authority or other relevant official body suspends or withdraws any authorisation, registration, recognition, endorsement, equivalence decision or approval in relation to such Commodity Reference Price or Commodity Index or the administrator or sponsor of such Commodity Reference Price or Commodity Index; or
- (ii) such Commodity Reference Price or Commodity Index or the administrator or sponsor of such Commodity Reference Price or Commodity Index is removed from any official register,

in each case, with the effect that either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use such Commodity Reference Price or Commodity Index to perform its or their respective obligations under the Commodity Linked Securities, provided that a Suspension/Withdrawal Event

shall not occur if such authorisation, registration, recognition, endorsement, equivalence decision or approval is suspended or where inclusion in any official register is withdrawn if, at the time of such suspension or withdrawal, the continued provision and use of such Commodity Reference Price or Commodity Index is permitted in respect of the Commodity Linked Securities under the applicable law or regulation."

9. **Amendments to the section entitled "Introduction to the FX Linked Conditions"**

The information in the section entitled "Introduction to the FX Linked Conditions" is amended and supplemented by inserting the following new sub-section immediately after the sub-section entitled "FX Rate Basket and Reference Dates – Common Fixing Day" on page 429 of the Original Base Prospectus:

**"Administrator/Benchmark Event**

Following the occurrence of an Administrator/Benchmark Event in respect of an FX Rate, the Calculation Agent will base its determination on the Fallback Reference Rate, or if no Fallback Reference Rate is specified, the FX Linked Securities may be redeemed early.

**Administrator/Benchmark Event** means any relevant authorisation, registration, recognition, endorsement, equivalence decision, approval, or inclusion in any official register or similar regulatory or legal requirement in respect of the relevant FX Rate or the administrator or sponsor of the FX Rate has not been, or will not be, obtained or has been, or will be, rejected, refused, suspended or withdrawn by the relevant competent authority or other relevant official body, in each case with the effect that either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use the FX Rate to perform its or their respective obligations under the relevant FX Linked Securities."

10. **Amendments to the section entitled "FX Linked Conditions"**

The information in the section entitled "FX Linked Conditions" is amended and supplemented as follows:

- (a) by inserting the following new FX Linked Condition 3 immediately after FX Linked Conditions 2 (*BRL Disruption Event Fallbacks*) on pages 435 to 438 of the Original Base Prospectus

**"3. Administrator/Benchmark Event**

If, in respect of an FX Rate, the Calculation Agent determines that, on or prior to any Reference Date, Averaging Reference Date or other relevant date, an Administrator/Benchmark Event Date has occurred in respect of such FX Rate and such Administrator/Benchmark Event has a material effect on the FX Linked Securities, then the FX Rate for the relevant date will be the exchange rate determined by reference to the Alternative Price Source(s) specified in the relevant Final Terms for such FX Rate (the "**Fallback Reference Rate**"), and FX Linked Condition 1 shall apply to such Fallback Reference Rate and such relevant date as if each reference to "FX Rate" were a reference to such Fallback Reference Rate, provided that if no Fallback Reference Rate is specified in the relevant Final Terms, or the Calculation Agent determines that:

- (a) it (i) is or would be unlawful at any time under any applicable law or regulation, or (ii) would contravene any applicable licensing requirements, for the Calculation Agent to perform the actions prescribed in this FX Linked Condition 3 (or it would be unlawful or would contravene those licensing requirements were a determination to be made at such time); or
- (b) the first paragraph above would not achieve a commercially reasonable result for any of the Issuer, the Calculation Agent or the Holders,

then on giving notice to Holders in accordance with General Instrument Condition 22 (*Notices*) or General Note Condition 20 (*Notices*), as the case may be, the Issuer shall redeem the FX Linked Securities in whole but not in part, each FX Linked Security being redeemed by payment of an amount equal to the Non-scheduled Early Repayment Amount of such FX Linked Security taking into account such Administrator/Benchmark Event, as determined by the Calculation Agent. Payments will be made in such manner as shall be notified to the Holders in accordance with General Instrument Condition 22 (*Notices*) or General Note Condition 20 (*Notices*), as the case may be."

- (b) FX Linked Condition 3 (Definitions) on pages 438 to 447 of the Original Base Prospectus shall be amended and supplemented by inserting the following definitions in alphabetical order:

**"Administrator/Benchmark Event"** means, in respect of an FX Rate, the occurrence of a Non-Approval Event, a Rejection Event or a Suspension/Withdrawal Event, in each case being treated as having occurred on the Administrator/Benchmark Event Date."

**"Administrator/Benchmark Event Date"** means, in respect of an FX Rate, the date determined by the Calculation Agent to be:

- (a) in respect of a Non-Approval Event, the date on which the relevant authorisation, registration, recognition, endorsement, equivalence decision, approval, inclusion in any official register or similar regulatory or legal requirement is required under any applicable law or regulation for the use of such FX Rate in respect of the FX Linked Securities;
- (b) in respect of a Rejection Event, the date on which following the rejection or refusal of the relevant application for authorisation, registration, recognition, endorsement, an equivalence decision, approval or inclusion in any official register, either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use such FX Rate or to perform its or their respective obligations under the FX Linked Securities; and
- (c) in respect of a Suspension/Withdrawal Event, the date on which following (A) the suspension or withdrawal by the relevant competent authority or other relevant official body of the authorisation, registration, recognition, endorsement, equivalence decision or approval, or (B) the date on which such FX Rate or the administrator or sponsor of such FX Rate is removed from the official register, as applicable, either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use such FX Rate or to perform its or their respective obligations under the FX Linked Securities,

or, in each case, if such date occurs before the Trade Date, the Trade Date."

**"Non-Approval Event"** means, in respect of an FX Rate, the determination by the Calculation Agent that one or more of the following events has occurred:

- (a) any authorisation, registration, recognition, endorsement, equivalence decision or approval in respect of such FX Rate or the administrator or sponsor of such FX Rate is not obtained;
- (b) such FX Rate or the administrator or sponsor of such FX Rate is not included in an official register; or
- (c) such FX Rate or the administrator or sponsor of such FX Rate does not fulfil any legal or regulatory requirement applicable to the Issuer or the Calculation Agent or such FX Rate,

in each case, with the effect that either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use such FX Rate to perform its or their respective obligations under the FX Linked Securities, provided that a Non-Approval Event shall not occur if such FX Rate or the administrator or sponsor of such FX Rate is not included in an official register because its authorisation, registration, recognition, endorsement, equivalence decision or approval is suspended if, at the time of such suspension, the continued provision and use of such FX Rate is permitted in respect of the FX Linked Securities under the applicable law or regulation."

**"Rejection Event"** means, in respect of an FX Rate, the determination by the Calculation Agent that the relevant competent authority or other relevant official body has rejected or refused any application for authorisation, registration, recognition, endorsement, an equivalence decision, approval or inclusion in any official register in relation to such FX Rate or the administrator or sponsor of such FX Rate, with the effect that either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use such FX Rate to perform its or their respective obligations under the FX Linked Conditions."

**"Suspension/Withdrawal Event"** means, in respect of an FX Rate, the determination by the Calculation Agent that one or more of the following events has occurred:

- (a) the relevant competent authority or other relevant official body suspends or withdraws any authorisation, registration, recognition, endorsement, equivalence decision or approval in relation to such Index or the administrator or sponsor of such FX Rate; or
- (b) such FX Rate or the administrator or sponsor of FX Rate is removed from any official register,

in each case, with the effect that either the Issuer or the Calculation Agent is not, or will not be, permitted under any applicable law or regulation to use such FX Rate to perform its or their respective obligations under the FX Linked Securities, provided that a Suspension/Withdrawal Event shall not occur if such authorisation, registration, recognition, endorsement, equivalence decision or approval is suspended or where inclusion in any official register is withdrawn if, at the time of such suspension or withdrawal, the continued provision and use of such FX Rate is permitted in respect of the FX Linked Securities under the applicable law or regulation."

11. **Amendments to the section entitled "Form of Final Terms (Instruments)"**

The information in the section entitled "Form of Final Terms (Instruments)" is amended and supplemented as follows:

- (a) by inserting a new paragraph 54(xxii) (Index Disruption) immediately after paragraph 54(xxi) of the Contractual Terms on page 546 of the Original Base Prospectus (and the remaining paragraphs shall be re-numbered accordingly):

"(xxii) Administrator/Benchmark Event: [Calculation Agent Adjustment / Index Substitution / Related Exchange Adjustment]."

- (b) by inserting a new paragraph 57(xviii) (BRL FX Linked Conditions (FX Linked Condition 2)) immediately after paragraph 57(xvii) of the Contractual Terms on page 554 of the Original Base Prospectus (and the remaining paragraphs shall be re-numbered accordingly):

"(xviii) Fallback Reference Price (FX[Applicable / Not Applicable]. *(If Not Applicable, delete the remaining sub-paragraph of this paragraph)*)

- [Alternate Price Source(s): [●].]"

12. **Amendments to the section entitled "Form of Final Terms (Notes)"**

The information in the section entitled "Documents Incorporated by Reference" is amended and supplemented as follows:

- (a) by inserting a new paragraph 47(xxiii) immediately after paragraph 47(xxii) (Index Disruption) of the Contractual Terms on page 630 of the Original Base Prospectus (and the remaining paragraphs shall be re-numbered accordingly):

"(xxii) Administrator/Benchmark Event: [Calculation Agent Adjustment / Index Substitution / Related Exchange Adjustment]."

- (b) by inserting a new paragraph 50(xviii) immediately after paragraph 50(xvii) (BRL FX Conditions (FX Linked Condition 2)) of the Contractual Terms on page 637 of the Original Base Prospectus (and the remaining paragraphs shall be re-numbered accordingly):

"(xviii) fallback Reference Price (FX [Applicable / Not Applicable]. *(If Not Applicable, delete the remaining sub-paragraph of this paragraph)*)

- [Alternate Price Source(s): [●].]"

13. **Amendments to the section entitled "Goldman Sachs International"**

The information in the section entitled "Goldman Sachs International" is amended and supplemented by deleting the sub-section entitled "Selected Financial Information", on page 678 of the Base Prospectus and replacing it with the following:

**"Selected Financial Information"**

The selected financial information set out below has been extracted from (i) GSI's 2018 Financial Statements and (ii) GSI's 2017 Financial Statements, which have been audited by PricewaterhouseCoopers LLP and on which PricewaterhouseCoopers LLP issued an unqualified audit report.

GSI's 2018 Financial Statements and GSI's 2017 Financial Statements have been prepared in accordance with FRS 101. The financial information presented below should be read in conjunction with the financial statements included in such documents, the notes thereto and report thereon.

The following table shows selected key historical financial information in relation to GSI:

	<b>As at and for the year ended</b>	
<i>(in USD millions)</i>	<b>30 November 2018</b>	<b>31 December 2017</b>
Operating Profit	3,259	2,389
Profit on ordinary activities before taxation	3,030	2,091
Profit for the financial period	2,198	1,557
	<b>As at</b>	
<i>(in USD millions)</i>	<b>30 November 2018</b>	<b>31 December 2017</b>
Fixed Assets	315	210
Current Assets	886,652	939,683
Total Shareholders' Funds	33,917	31,701"



14. **Amendments to the section entitled "Goldman Sachs & Co Wertpapier GmbH"**

The information in the section entitled "Goldman Sachs & Co Wertpapier GmbH" is amended and supplemented as follows:

- (a) by deleting the sub-section entitled "GSW Overview", on page 679 of the Base Prospectus and replacing it with the following:

GSW was established for the purpose of issuing securities, in particular warrants. Apart from warrants, GSW also issues certificates and structured bonds. The securities issued by GSW are sold to GSI. For issuances in Germany, Goldman Sachs Bank Europe SE (formerly known as Goldman Sachs AG), Frankfurt am Main acts as the issuing and paying agent and undertakes the processing of all products issued by GSW and deposited with Clearstream Banking Frankfurt. For products deposited with other clearing systems, GSI undertakes these tasks. For issuances in the Netherlands, Goldman Sachs AG, Frankfurt am Main assumes only the function of the issuing agent.

The purpose of GSW is to issue fungible securities and to carry out financial transactions and auxiliary transactions for financial transactions. GSW is neither engaged in banking transactions within the meaning of Section 1 of the German Banking Act (*Kreditwesengesetz*) nor in business operations within the meaning of Section 34c German Industrial Code (*Gewerbeordnung*).

GSW arranges contrary hedging transactions with affiliated companies to hedge against any market price risks. This places GSW in the position to meet its obligations in accordance with the securities issued.

GSW operates its business primarily in Germany and in the Netherlands and, to a lesser extent, also in other European countries including Austria, Switzerland, Luxembourg and the United Kingdom."

- (b) deleting the sub-section entitled "Organisation Structure" on pages 679 to 680 of the Original Base Prospectus and replacing it with the following:

**"Organisational Structure**

GSW is a wholly-owned subsidiary of The Goldman Sachs Group, Inc. ("GSG"). GSG, together with its affiliated companies, is a leading international investment bank. Through its offices in the USA and the leading financial centres of the world, GSG is active in the financial services industry, divided into the segments (i) Investment Banking which includes advice with respect to mergers and acquisitions, divestitures, restructurings and spin-offs as well as public offerings and private placements of a wide range of securities and other financial instruments, (ii) Institutional Client Services which includes client execution activities related to making markets in credit products, interest rate products, mortgages, currencies, commodities and shares, (iii) Investing and Lending which includes investments (directly and indirectly through funds) and loans in various asset classes as well as investments by Goldman Sachs in consolidated investment entities and (iv) Investment Management.

The share capital of GSW amounts to EUR 51,129.19 and has been paid in full. All shares are held by GSG whereby GSW is dependent on the strategic and operational decisions made by GSG.";

- (c) deleting the sub-section entitled "Trend Information" immediately after the sub-section "Organisational Structure" on page 680 of the Original Base Prospectus and replacing it with the following:

**"Trend Information**

GSW's objective is a strong increase in the issuance activity. This is due to increased client demand in warrants and structured products, particularly in the German market as well as additional distribution channels by GSI. Furthermore it is expected that in a

volatile market there will be a multitude of follow-up issuances in the area of turbo warrants, mini-futures and bonus certificates. In addition, it is planned to expand the offer in the sections of warrants and structured products. Previously implemented enhancements to the issuance process allow the issuance of new warrants and certificates to be almost fully automated. Issuance activity in the Netherlands is expected to remain at the current level, as here securities do not have a predetermined maturity date by default, and it is assumed there will not be a great need for follow-up issuances. GSW is part of the firmwide considerations on the UK's exit from the European Union. GSW has considered the impact of multiple scenarios, ultimately this is not expected to have a direct impact on the business model of GSW as it could continue to engage with affiliates as it does today."

- (d) deleting the sub-section entitled "Management" immediately after the sub-section "Trend Information" on page 680 of the Original Base Prospectus and replacing it with the following:

#### **"Management**

The managing director (*Geschäftsführer*) of GSW is Michael Schmitz.

Michael Schmitz is Managing Director at GSI, Frankfurt branch (*Zweigniederlassung Frankfurt*).

GSW may be represented by a managing director jointly with another managing director or jointly with a holder of general commercial power of representation (*Prokurist*) or jointly by two holders of general commercial power of representation (*Prokuristen*). The managing directors are exempt from the restrictions of Section 181 of the German Civil Code (*Bürgerliches Gesetzbuch*) and can be reached via the business address of GSW at MesseTurm, Friedrich-Ebert-Anlage 49, 60308 Frankfurt am Main, Germany, telephone +49 69 7532 1111.

There are no potential conflicts of interest between the obligations of the managing directors with regard to GSW and their private interests and other obligations.

GSW has neither an advisory board nor a supervisory board.

GSW has an audit committee (*Prüfungsausschuss*) in accordance with section 324 of the German Commercial Code (*Handelsgesetzbuch*). The members of the audit committee (*Prüfungsausschuss*) are Dr. Matthias Bock, Michael Bartsch and Michael Holmes. The main tasks of the audit committee (*Prüfungsausschuss*) are the supervision of the legality and usefulness of the accounting and the accounting processes as well as the effectiveness of the internal control system and the risk management system. It also supervises the effectiveness of the internal audit department.

The German Corporate Governance Code is not applicable to GSW. The Corporate Governance Code is not mandatory for companies which are not listed on stock exchanges. GSW does not apply the Corporate Governance Code on a voluntary basis."

- (e) deleting the sub-section entitled "Selected Financial Information" on pages 680 to 681 of the Original Base Prospectus and replacing it with the following:

#### **"Selected Financial Information**

The selected financial information set out below has been extracted from (as applicable) (i) GSW's 2018 Financial Statements, which have been audited by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft ("**PwC GmbH**") and on which PwC GmbH issued an unqualified audit report, and (ii) GSW's 2018 Financial Statements, which have been audited by PwC GmbH and on which PwC GmbH issued an unqualified audit report.

GSW's 2017 Financial Statements and GSW's 2018 Financial Statements are incorporated by reference into this Base Prospectus. The financial information presented below should be read in conjunction with the financial statements included in such documents, the notes thereto and report thereon.

The following table shows selected key historical financial information in relation to GSW:

(in EUR)	As at and for the year ended (audited)	
	31 December 2018	31 December 2017
Operating income	1,219,136.52	931,182.98
Taxation on income	-389,205.93	-278,376.25
Net income	829,930.59	652,821.73

  

(in EUR)	As at (audited)	
	31 December 2018	31 December 2017
Total Assets	7,397,795,665.36	6,466,271,258.32
Total capital and reserves	5,334,715.48	4,504,784.89

#### 15. Amendments to the section entitled "General Information"

The information in the section entitled "General Information" is amended and supplemented by:

- (a) deleting paragraphs (a) and (b) of sub-section 2 (*Financial Statements*) on page 776 of the Original Base Prospectus in its entirety and replacing it with the following:

"(a) Goldman Sachs International

The statutory financial statements of GSI for the periods ended 30 November 2018 and 31 December 2017 have been audited without qualification by PricewaterhouseCoopers LLP, Chartered Accountants and Statutory Auditors, of 7 More London Riverside, London, SE1 2RT in accordance with the laws of England. PricewaterhouseCoopers LLP is a registered member of the Institute of Chartered Accountants in England and Wales.

(b) Goldman, Sachs & Co. Wertpapier GmbH

The annual financial statements of GSW for the periods ended 31 December 2018 and 31 December 2017 have been audited without qualification by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft ("**PwC GmbH**"), of Friedrich-Ebert-Anlage 35 – 37, 60327 Frankfurt am Main in accordance with the laws of Germany. PwC GmbH is a member of the German Chamber of Public Accountants (*Wirtschaftsprüferkammer*), a public body (*Körperschaft des öffentlichen Rechts*), Rauchstraße 26, 10787 Berlin.

- (b) deleting the first two paragraphs in sub-section 3 (No significant change and no material adverse change) on pages 776 to 777 of the Original Base Prospectus and replacing it with the following:

"There has been no significant change in the financial or trading position of GSI since 30 November 2018. There has been no material adverse change in the prospects of GSI since 30 November 2018.

There has been no significant change in the financial or trading position of GSW since 31 December 2018. There has been no material adverse change in the prospects of GSW since 31 December 2018."

- (c) deleting sub-section 4 (Litigation) on page 777 of the Original Base Prospectus and replacing it with the following:

"Save as disclosed in (i) "Legal Proceedings" of Note 27 to the Financial Statements (pages 179 to 185) of GSG's 2018 Form 10-K and (ii) "Legal Proceedings" of Note 26 to the Financial Statements (pages 77 to 79) of GSI's 2018 Annual Report, there have been no governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened of which GSI, GSW, GSFCEI or GSG is aware) during the 12 months before the date of this Base Prospectus which may have, or have had in the recent past, significant effects on GSI, GSW, GSFCEI, GSG or Goldman Sachs Group's financial position or profitability."

- (d) deleting sub-section 5 (*Availability of Documents*) on pages 777 to 778 of the Original Base Prospectus and replacing it with the following:

**"5 Availability of Documents**

For so long as any Securities shall be outstanding or may be issued under the Programme, copies of the following documents may be obtained free of charge upon request during normal business hours from the specified office of the Issuers and the office of the Paying Agent in Luxembourg and each of the Paying Agents:

- (i) the constitutional documents of GSI;
- (ii) the constitutional documents of GSW;
- (iii) the constitutional documents of GSFCEI;
- (iv) the certificate of incorporation of GSG;
- (v) GSI's Regulatory Ratios, 28 February 2019;
- (vi) GSI's 2018 Annual Report;
- (vii) GSI's 2018 Third Quarter Financial Report;
- (viii) GSI's 2017 Annual Report;
- (ix) GSI's 2016 Annual Report;
- (x) GSI's Notice of Recent Events, 18 January 2019;
- (xi) GSI's Regulatory Ratios, 31 December 2018;
- (xii) GSW's 2018 Financial Statements;
- (xiii) GSW's 2017 Financial Statements;
- (xiv) GSW's 2016 Financial Statements;
- (xv) GSW's 2018 Interim Financial Statements;
- (xvi) GSFCEI's 2018 Interim Financial Report;
- (xvii) GSFCEI's 2017 Financial Statements;
- (xviii) GSFCEI's 2017 Interim Financial Report;
- (xix) GSG's 16 January 2019 Form 8-K;
- (xx) GSG's 16 October 2018 Form 8-K;

- (xxi) GSG's 2018 Third Quarter Form 10-Q;
- (xxii) GSG's 2018 Second Quarter Form 10-Q;
- (xxiii) GSG's 17 July 2018 Form 8-K;
- (xxiv) GSG's 16 July 2018 Form 8-K;
- (xxv) GSG's 17 April 2018 Form 8-K;
- (xxvi) GSG's 2018 Proxy Statement;
- (xxvii) GSG's 2018 Form 10-K;
- (xxviii) GSG's 2017 Form 10-K;
- (xxix) the Guaranty;

- (xxx) the Programme Agency Agreement;
- (xxxi) the Deed of Covenant and the Cayman Deed of Covenant;
- (xxxii) the Final Terms for each Tranche or Series of Securities that are listed on the Official List of the Luxembourg Stock Exchange or any other stock exchange;
- (xxxiii) a copy of the Base Prospectus;
- (xxxiv) a copy of any supplement to the Base Prospectus and Final Terms; and
- (xxxv) all reports, letters and other documents, balance sheets, valuations and statements by any expert any part of which is extracted or referred to in this Base Prospectus."

### **Responsibility**

Each of GSI, GSW, GSFCI and GSG accepts responsibility for the information given in this Prospectus Supplement and confirms that, having taken all reasonable care to ensure that such is the case, the information contained in this Prospectus Supplement is, to the best of their knowledge, in accordance with the facts and does not omit anything likely to affect its import.

### **Interpretation**

To the extent that there is any inconsistency between (a) any statement in this Prospectus Supplement and (b) any other statement in or incorporated by reference into the Base Prospectus, the statements in (a) above will prevail.

### **U.S. notice**

This Prospectus Supplement is not for use in, and may not be delivered to or inside, the United States.

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The date of this Prospectus Supplement is 28 March 2019