

**PROSPECTUS SUPPLEMENT NO. 5
TO THE BASE PROSPECTUS DATED 14 NOVEMBER 2018**



GOLDMAN SACHS INTERNATIONAL
(Incorporated with unlimited liability in England)

**as Issuer and as Guarantor in respect of Securities issued by
Goldman, Sachs & Co. Wertpapier GmbH**

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

as Issuer

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

This Prospectus Supplement

This prospectus supplement (the "**Prospectus Supplement**") to the base prospectus dated 14 November 2018 prepared by Goldman, Sachs & Co. Wertpapier GmbH ("**GSW**") as issuer and Goldman Sachs International ("**GSI**") as issuer and as guarantor in respect of Securities issued by GSW (the "**Original Base Prospectus**") under their Series K 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) (the "**Luxembourg Law**") and should be read in conjunction therewith and with Prospectus Supplement No. 1 to the Original Base Prospectus dated 28 January 2019, Supplement No. 2 to the Original Base Prospectus dated 28 March 2019, Supplement No. 3 to the Original Base Prospectus dated 17 May 2019 and Supplement No. 4 to the Original Base Prospectus dated 3 July 2019 (the Original Base Prospectus as so supplemented, the "**Base Prospectus**"). On 14 November 2018, 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 23 July 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 to make certain changes to the information in the "Risk Factors", "General Terms and Conditions of the Instruments" and "General Terms and Conditions of the Notes" sections of the Base Prospectus in relation to the "IBORs".

This Prospectus Supplement will be available on the website of the Luxembourg Stock Exchange at www.bourse.lu.

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 by deleting risk factor 5.7 (*Regulation and reform of "benchmarks", including LIBOR, EURIBOR and other interest rate, equity, commodity, foreign exchange rate and other types of benchmarks could have a material adverse effect on the value of, and return on, the Securities*) on pages 82 to 83 of the Original Base Prospectus in its entirety and replacing it with the following (and each reference to such risk factor in the Original Base Prospectus shall be deemed to be amended accordingly):

"5.7 Regulation and reform of "benchmarks", including LIBOR, EURIBOR and other interest rate, equity, commodity, foreign exchange rate and other types of benchmarks could have a material adverse effect on the value of, and return on, the Securities

A number of major interest rates, other rates, indices and other published values or benchmarks are the subject of national and international regulatory reforms. These reforms may cause such benchmarks to perform differently than in the past, to disappear entirely, or have other consequences which cannot be predicted. Any such consequence could have a material adverse effect on the value of and return on Securities linked to any such value or benchmark.

The EU Regulation on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds (the "**Benchmark Regulation**") is a key element of ongoing regulatory reform in the EU and has applied, subject to certain transitional provisions, since 1 January 2018. In addition to so-called "critical benchmarks" such as LIBOR and EURIBOR, other interest rates, foreign exchange rates, and indices, including equity, commodity and "proprietary" indices or strategies, will in most cases be within scope of the Benchmark Regulation as "benchmarks" where they are used to determine the amount payable under, or the value of, certain financial instruments (including Securities listed on an EU regulated market or EU multilateral trading facility (MTF)), and in a number of other circumstances.

The Benchmark Regulation applies to the contribution of input data to a benchmark, the administration of a benchmark, and the use of a benchmark in the EU. Amongst other things, the Benchmark Regulation requires EU benchmark administrators to be authorised or registered as such and to comply with extensive requirements relating to benchmark administration. It also prohibits certain uses by EU supervised entities of (a) benchmarks provided by EU administrators which are not authorised or registered in accordance with the Benchmark Regulation and (b) benchmarks provided by non-EU administrators where (i) the administrator's regulatory regime has not been determined to be "equivalent" to that of the EU, (ii) the administrator has not been recognised in accordance with the Benchmark Regulation, and (iii) the benchmark has not been endorsed in accordance with the Benchmark Regulation.

The Benchmark Regulation could have a material impact on Securities linked to a benchmark rate or index. For example:

- a benchmark could be prohibited from being used in the EU if (subject to applicable transitional provisions) (a) its administrator is based in the EU and is not authorised or registered in accordance with the Benchmark Regulation, or (b) its administrator is based outside the EU and (i) the administrator's regulatory regime has not been determined to be "equivalent" to that of the EU, (ii) the administrator has not been recognised in accordance with the Benchmark Regulation, and (iii) the benchmark has not been endorsed in accordance with the Benchmark Regulation. In such case, depending on the particular benchmark and the applicable terms of the Securities, the Securities could be de-listed, adjusted, redeemed prior to maturity or otherwise impacted; and
- the methodology or other terms of the benchmark could be changed in order to comply with the terms of the Benchmark Regulation, and such changes could reduce or increase the rate or level or affect the volatility of the published rate or level, and could lead to adjustments to the terms of the Securities, including Calculation Agent determination of the rate or level in its discretion.

Amongst other developments, relevant authorities are strongly encouraging the transition away from Interbank Offered Rates ("**IBORs**"), such as LIBOR and EURIBOR, and have identified "risk free rates" to eventually take the place of such IBORs as primary benchmarks. This includes (i) for sterling LIBOR, a reformed Sterling Overnight Index Average ("**SONIA**"), so that SONIA may be established as the primary sterling interest rate benchmark by the end of 2021, (ii) for EONIA and EURIBOR, a new Euro Short-Term Rate (ESTER) as the new euro risk-free rate, and (iii) for USD LIBOR, the Secured Overnight Financing Rate (SOFR) to be eventually established as the primary US dollar interest rate benchmark. The risk free rates have a different methodology and other important differences from the IBORs they will eventually replace and have little, if any, historical track record. It is not known whether certain IBORs will continue long-term in their current form.

Save where the Benchmark Transition Provisions apply, if the Calculation Agent determines that a relevant reference rate (such as LIBOR) has been discontinued or has otherwise ceased to exist, the Calculation Agent shall select a replacement rate of interest to replace it. The replacement rate selected shall be the rate which is formally designated, nominated or recommended by any relevant nominating body or the administrator or sponsor of the relevant reference rate, provided that if the Calculation Agent determines that: (a) there is no such replacement rate; (b) such replacement rate is not a suitable replacement; or (c) such replacement rate will not achieve a commercially reasonable result, the Calculation Agent shall select a replacement rate, taking into account the rate that is recognised, or acknowledged as being an industry standard replacement rate. The Calculation Agent may also apply such adjustments as it determines to be appropriate. If the Calculation Agent determines that it cannot identify a replacement rate, we will pay the non-scheduled early repayment amount in respect of the Securities.

The reforms and eventual replacement of IBORs with risk free rates may cause the relevant IBOR to perform differently than in the past, to disappear entirely, or have other consequences which cannot be predicted. The replacement risk free rate may have little, if any, historical track record and may be subject to changes in its methodology. Any of these developments could have a material adverse effect on the value of and return on Securities linked to any such rates.

5.8. U.K. Regulators will no longer persuade or compel banks to submit rates for calculation of LIBOR after 2021; the interest rate benchmarks could be discontinued

On 27 July 2017, the Chief Executive of the FCA, which regulates LIBOR, announced that the FCA will no longer persuade or compel banks to submit rates for the calculation of LIBOR (which includes USD LIBOR) after 2021. Such announcement indicates that the continuation of LIBOR on the current basis cannot and will not be guaranteed after 2021. Notwithstanding the foregoing, it appears highly likely that LIBOR will be discontinued or modified by 2021. It is not possible to predict the effect that this announcement or any such discontinuance will have on USD LIBOR (of the applicable tenor) on Securities which are directly or indirectly linked to USD LIBOR rates (of the applicable tenor).

If the Calculation Agent determines that a Benchmark Transition Event and its related Benchmark Replacement Date have occurred with respect to USD LIBOR (of the applicable tenor), then a Benchmark Replacement will be selected by the Calculation Agent in accordance with the provisions of the USD LIBOR Fallbacks Schedule (the "**Benchmark Transition Provisions**"). The selection of a Benchmark Replacement, and any decisions, determinations or elections made by the Calculation Agent in connection with implementing a Benchmark Replacement with respect to the Securities in accordance with the Benchmark Transition Provisions, could result in adverse consequences to the interest rate, which could adversely affect the return on, value of and market for the Securities. Further, there is no assurance that the characteristics of any Benchmark Replacement will be similar to USD LIBOR (of the applicable tenor), or that any Benchmark Replacement will produce the economic equivalent of USD LIBOR (of the applicable tenor).

5.9 Risks associated with SOFR

Under the Benchmark Transition Provisions of the Securities, if a Benchmark Transition Event and its related Benchmark Replacement Date have occurred with respect to USD LIBOR (of the applicable

tenor), then the rate of interest on the Securities will be determined based on SOFR.

On 22 June 2017, the Alternative Reference Rates Committee ("**ARRC**"), convened by the Board of Governors of the Federal Reserve System and the Federal Reserve Bank of New York, identified SOFR, a broad U.S. treasuries repurchase financing rate to be published by the Federal Reserve Bank of New York, as the rate that, in the consensus view of the ARRC, represented best practice for use in certain new U.S. dollar derivatives and other financial contracts. SOFR is a broad measure of the cost of borrowing cash overnight collateralized by U.S. treasury securities and has been published by the Federal Reserve Bank of New York since April 2018. The Federal Reserve Bank of New York has also begun publishing historical indicative Secured Overnight Financing Rates going back to 2014. Investors should not rely on any historical changes or trends in SOFR as an indicator of future changes in SOFR.

The composition and characteristics of SOFR are not the same as those of USD LIBOR and SOFR is fundamentally different from USD LIBOR for two key reasons. First, SOFR is a secured rate, while USD LIBOR is an unsecured rate. Second, SOFR is an overnight rate, while USD LIBOR is a forward-looking rate that represents interbank funding over different maturities (e.g., three months). As a result, there can be no assurance that SOFR (including a term SOFR or compounded SOFR) will perform in the same way as USD LIBOR would have at any time, including, without limitation, as a result of changes in interest and yield rates in the market, market volatility or global or regional economic, financial, political, regulatory, judicial or other events.

Because SOFR is published by the Federal Reserve Bank of New York based on data received from other sources, we have no control over its methods of calculation, publication schedule, rate revision practices or availability of SOFR at any time without notice. There can be no guarantee, particularly given its relatively recent introduction, that SOFR will not be discontinued or fundamentally altered in a manner that is materially adverse to the interests of investors in the Securities. If the manner in which SOFR is calculated is changed, that change may result in a reduction of the amount of interest payable on the Securities and the trading prices of the Securities. In addition, the Federal Reserve Bank of New York may withdraw, modify or amend published SOFR data in its sole discretion and without notice. The interest rate for any day will not be adjusted for any modifications or amendments to SOFR data that the Federal Reserve Bank of New York may publish after the interest rate for that day has been determined.

Since SOFR is a relatively new reference rate, the Securities may not have an established trading market if a Benchmark Transition Event and its related Benchmark Replacement Date have occurred with respect to USD LIBOR (of the applicable tenor), and an established trading market may never develop or may not be very liquid. Market terms for floating-rate debt securities linked to SOFR, such as the spread over the base rate reflected in interest rate provisions or the manner of compounding the base rate, may evolve over time, and trading prices of the applicable Securities may be lower than those of later-issued SOFR-based debt securities as a result. Similarly, if SOFR does not prove to be widely used in securities like the Securities, the trading price of the Securities may be lower than those of Securities linked to reference rates that are more widely used. Investors in the Securities may not be able to sell the Securities at all or may not be able to sell the Securities at prices that will provide them with a yield comparable to similar investments that have a developed secondary market, and may consequently suffer from increased pricing volatility and market risk.

2. **Amendments to the section entitled "General Terms and Conditions of the Instruments"**

The information in the section entitled "General Terms and Conditions of the Instruments" of the Original Base Prospectus is amended and supplemented as follows:

- (a) General Instrument Condition 2 (*Definitions and Interpretation*) on pages 134 to 155 of the Original Base Prospectus shall be amended and supplemented by inserting the following

definitions in alphabetical order:

"Benchmark Transition Provisions" means the provisions set out in the USD LIBOR Fallbacks Schedule."

(b) General Instrument Condition 12(h) (*Original Primary Rate Event*) on page 175 of the Original Base Prospectus shall be deleted in its entirety and replaced with the following:

(h) *Original Primary Rate Event*: Save for where the Benchmark Transition Provisions apply, the Calculation Agent determines, in its discretion and acting in good faith and in a commercially reasonable manner, that an Original Primary Rate Event has occurred in respect of an Original Primary Rate which may adversely affect the interests of the Holders (including but not limited to the fact that such Original Primary Rate, as the case may be, is no longer relevant to and does not reflect the original economic objective and rationale of the Instruments):

(i) the Calculation Agent shall attempt to identify a Replacement Primary Rate, as the case may be;

(ii) the Calculation Agent shall attempt to determine the Adjustment Spread;

(iii) if the Calculation Agent identifies a Replacement Primary Rate pursuant to paragraph (i) above and determines an Adjustment Spread pursuant to paragraph (ii) above, then:

(A) the terms of the Instruments shall, without the consent of the Holders, be amended so that each reference to "**Reference Rate**" or "**ISDA Rate**", as the case may be, shall be replaced by a reference to "Replacement Primary Rate plus the Adjustment Spread" (provided that the result of the Replacement Primary Rate plus the Adjustment Spread plus or minus (as indicated in the relevant Final Terms) the Margin, may not be less than zero) with effect from the Adjustment Date;

(B) the Calculation Agent shall, without the consent of the Holders, make such other adjustments (the "**Replacement Primary Rate Amendments**") to the Conditions (including, but not limited to, any Business Day, Business Day Convention, Day Count Fraction, Interest Determination Date, Interest Amount, Interest Payment Date, Interest Period and Rate of Interest) with effect from the Adjustment Date as it determines necessary or appropriate in order to account for the effect of the replacement of the Original Primary Rate with the Replacement Primary Rate plus the Adjustment Spread and/or to preserve as nearly as practicable the economic equivalence of the Instruments before and after the replacement of the Original Primary Rate with the Replacement Primary Rate plus the Adjustment Spread; and

(C) the Calculation Agent shall deliver a notice to the Holders as soon as practicable in accordance with General Instrument Condition 22 which shall specify any Replacement Primary Rate, Adjustment Spread, Adjustment Date and the specific terms of any Replacement Primary Rate Amendments and such notice shall be irrevocable. Any Replacement Primary Rate, Adjustment Spread and Replacement Primary Rate Amendments will be binding on the Issuer, the Agents and the Holders; and

(iv) if, for the purposes of calculating any Interest Amount, there is more than one Original Primary Rate specified, then the provisions of this General Instrument Condition 12(h) shall apply separately to each such Original Primary Rate.

Neither the Calculation Agent nor the Issuer shall not have any duty to monitor, enquire or satisfy itself as to whether any Original Primary Rate Event has occurred.

If the definition, methodology or formula for an Original Primary Rate, or other means of calculating such Original Primary Rate, is changed or modified (irrespective of the materiality of any such change or changes), then references to that Original Primary Rate shall be to the Original Primary Rate as changed and modified."

3. **Amendments to the section entitled "General Terms and Conditions of the Notes"**

The information in the section entitled "General Terms and Conditions of the Notes" of the Original Base Prospectus is amended and supplemented as follows:

- (a) General Note Condition 2 (*Definitions and Interpretation*) on pages 189 to 209 of the Original Base Prospectus shall be amended and supplemented by inserting the following definitions in alphabetical order:

"Benchmark Transition Provisions" means the provisions set out in the USD LIBOR Fallbacks Schedule."

- (b) General Note Condition 8(h) (*Original Primary Rate Event*) on page 218 of the Original Base Prospectus shall be deleted in its entirety and replaced with the following:

"(h) Original Primary Rate Event: Save where the Benchmark Transition provisions apply, if the Calculation Agent determines, in its discretion and acting in good faith and in a commercially reasonable manner, that an Original Primary Rate Event has occurred in respect of an Original Primary Rate which may adversely affect the interests of the Holders (including but not limited to the fact that such Original Primary Rate, as the case may be, is no longer relevant to and does not reflect the original economic objective and rationale of the Notes):

- (i) the Calculation Agent shall attempt to identify a Replacement Primary Rate, as the case may be;
- (ii) the Calculation Agent shall attempt to determine the Adjustment Spread;
- (iii) if the Calculation Agent identifies a Replacement Primary Rate pursuant to paragraph (i) above and determines an Adjustment Spread pursuant to paragraph (ii) above, then:
 - (A) the terms of the Notes shall, without the consent of the Holders, be amended so that each reference to "**Reference Rate**" or "**ISDA Rate**", as the case may be, shall be replaced by a reference to "Replacement Primary Rate plus the Adjustment Spread" (provided that the result of the Replacement Primary Rate plus the Adjustment Spread plus or minus (as indicated in the relevant Final Terms) the Margin, may not be less than zero) with effect from the Adjustment Date;
 - (B) the Calculation Agent shall, without the consent of the Holders, make such other adjustments (the "**Replacement Primary Rate Amendments**") to the Conditions (including, but not limited to, any Business Day, Business Day Convention, Day Count Fraction, Interest Determination Date, Interest Amount, Interest Payment Date, Interest Period and Rate of Interest) with effect from the Adjustment Date as it determines necessary or appropriate in order to account for the effect of the replacement of the Original Primary Rate with the Replacement Primary Rate plus the Adjustment Spread and/or to preserve as nearly as practicable the economic equivalence of the Notes before and after the replacement of the Original Primary Rate with the Replacement Primary Rate plus the Adjustment Spread; and
 - (C) the Calculation Agent shall deliver a notice to the Holders as soon as practicable in accordance with General Note Condition 20 which shall specify any Replacement Primary Rate, Adjustment Spread, Adjustment Date and the specific terms of any Replacement Primary Rate Amendments and such notice shall be irrevocable. Any Replacement Primary Rate, Adjustment Spread and Replacement Primary Rate Amendments will be binding on the Issuer, the Agents and the Holders; and
- (iv) if, for the purposes of calculating any Interest Amount, there is more than one Original Primary Rate specified, then the provisions of this General Note Condition 8(h) shall apply separately to each such Original Primary Rate.

Neither the Calculation Agent nor the Issuer shall not have any duty to monitor, enquire or satisfy itself as to whether any Original Primary Rate Event has occurred.

If the definition, methodology or formula for an Original Primary Rate, or other means of calculating such Original Primary Rate, is changed or modified (irrespective of the materiality of any such change or changes), then references to that Original Primary Rate shall be to the Original Primary Rate as changed and modified."

4. **Inclusion of a new the section entitled "USD LIBOR Fallback Schedule"**

The following new section entitled "USD LIBOR Fallbacks Schedule" shall be inserted immediately after the section entitled "General Terms and Conditions of the Notes" of the Base Prospectus:

"USD LIBOR FALLBACKS SCHEDULE

The provisions of this USD LIBOR Fallbacks Schedule forms part of and must be read and construed in conjunction with the "General Note Conditions" and the "General Instrument Conditions", as applicable.

- (a) If the Calculation Agent determines that a Benchmark Transition Event and its related Benchmark Replacement Date have occurred prior to the Reference Time in respect of any determination of the Benchmark Rate on any date, the Benchmark Replacement will replace the then-current Benchmark Rate for all purposes relating to the Securities in respect of such determination on such date and all determinations on all subsequent dates. In connection with the implementation of a Benchmark Replacement, the Calculation Agent will have the right to make Benchmark Replacement Conforming Changes from time to time. For the avoidance of doubt, the provisions of General Instrument Condition 12(h) (*Original Primary Rate Event*) and General Note Condition 8(h) (*Original Primary Rate Event*), as applicable, shall not apply in respect of such Benchmark Rate upon the occurrence of a Benchmark Transition Event.
- (b) Any determination, decision or election that may be made by the Calculation Agent pursuant to this USD LIBOR Fallbacks Schedule, including any determination with respect to a tenor, rate or adjustment or of the occurrence or non-occurrence of an event, circumstance or date and any decision to take or refrain from taking any action or any selection, will be conclusive and binding absent manifest error, may be made in the Calculation Agent's sole discretion, and, notwithstanding anything to the contrary in the General Note Conditions and the General Instrument Conditions relating to a Security, shall become effective without consent from the Holders of the Securities or any other party.
- (c) For the purposes of this USD LIBOR Fallbacks Schedule only, unless the context otherwise requires, the following terms shall have the respective meanings set out below:

"Benchmark Rate" means, initially, USD LIBOR (of the applicable tenor); provided that if a Benchmark Transition Event and its related Benchmark Replacement Date have occurred with respect to USD LIBOR (of the applicable tenor) or the then-current Benchmark Rate, then "Benchmark Rate" means the applicable Benchmark Replacement.

"Benchmark Replacement" means the Interpolated Benchmark; provided that if the Calculation Agent cannot determine the Interpolated Benchmark as of the Benchmark Replacement Date, then "Benchmark Replacement" means the first alternative set forth in the order below that can be determined by the Calculation Agent as of the Benchmark Replacement Date:

- (A) the sum of: (a) Term SOFR and (b) the Benchmark Replacement Adjustment;
- (B) the sum of: (a) Compounded SOFR and (b) the Benchmark Replacement Adjustment;

- (C) the sum of: (a) the alternate rate of interest that has been selected or recommended by the Relevant Governmental Body as the replacement for the then-current Benchmark Rate for the applicable Corresponding Tenor and (b) the Benchmark Replacement Adjustment;
- (D) the sum of: (a) the ISDA Fallback Rate and (b) the Benchmark Replacement Adjustment;
- (E) provided that if (i) the Benchmark Replacement cannot be determined in accordance with clause (C) or (D) above as of the Benchmark Replacement Date or (ii) the Calculation Agent shall have determined that the ISDA Fallback Rate determined in accordance with clause (D) above is not an industry-accepted rate of interest as a replacement for the then-current Benchmark Rate for U.S. dollar denominated floating rate Securities at such time, then the Benchmark Replacement shall be the sum of: (a) the alternate rate of interest that has been selected by the Calculation Agent as the replacement for the then current Benchmark Rate for the applicable Corresponding Tenor giving due consideration to any industry accepted rate of interest as a replacement for the then-current Benchmark Rate for U.S. dollar denominated floating rate fixed income Securities at such time and (b) the Benchmark Replacement Adjustment.

"Benchmark Replacement Adjustment" means the first alternative set forth in the order below that can be determined by the Calculation Agent as of the Benchmark Replacement Date:

- (A) the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that has been selected or recommended by the Relevant Governmental Body for the applicable Unadjusted Benchmark Replacement;
- (B) if the applicable Unadjusted Benchmark Replacement is equivalent to the ISDA Fallback Rate, then the ISDA Fallback Adjustment;
- (C) the spread adjustment (which may be a positive or negative value or zero) that has been selected by the Calculation Agent giving due consideration to any industry-accepted spread adjustment, or method for calculating or determining such spread adjustment, for the replacement of the then-current Benchmark Rate with the applicable Unadjusted Benchmark Replacement for U.S. dollar-denominated floating rate fixed income Securities at such time.

"Benchmark Replacement Conforming Changes" means, with respect to any Benchmark Replacement, any technical, administrative or operational changes (including changes to the definition of "Interest Period", "Interest Determination Date" or other applicable periods or dates, as the case may be, timing and frequency of determining rates, and making payments of interest, rounding of amounts or tenors and other administrative matters) that the Calculation Agent decides may be appropriate to reflect the adoption of such Benchmark Replacement in a manner substantially consistent with market practice (or, if the Calculation Agent decides that adoption of any portion of such market practice is not administratively feasible or if the Calculation Agent determines that no market practice for use of the Benchmark Replacement exists, in such other manner as the Calculation Agent determines is reasonably necessary).

"Benchmark Replacement Date" means the earliest to occur of the following events with respect to the then-current Benchmark Rate:

- (A) in the case of clause (A) or (B) of the definition of "Benchmark Transition Event", the later of (a) the date of the public statement or publication of information referenced therein and (b) the date on which the administrator of the Benchmark Rate permanently or indefinitely ceases to provide the Benchmark Rate; or
- (B) in the case of clause (C) of the definition of "Benchmark Transition Event", the date of the public statement or publication of information referenced therein.

For the avoidance of doubt, if the event giving rise to the Benchmark Replacement Date occurs on the same day as, but earlier than, the Reference Time in respect of any determination, the Benchmark Replacement Date will be deemed to have occurred prior to the Reference Time for such determination.

"Benchmark Transition Event" means the occurrence of one or more of the following events with respect to the then-current Benchmark Rate:

- (A) a public statement or publication of information by or on behalf of the administrator of the Benchmark Rate announcing that such administrator has ceased or will cease to provide the Benchmark Rate, permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the Benchmark Rate;
- (B) a public statement or publication of information by the regulatory supervisor for the administrator of the Benchmark Rate, the central bank for the currency of the Benchmark Rate, an insolvency official with jurisdiction over the administrator for the Benchmark Rate, a resolution authority with jurisdiction over the administrator for the Benchmark Rate or a court or an entity with similar insolvency or resolution authority over the administrator for the Benchmark Rate, which states that the administrator of the Benchmark Rate has ceased or will cease to provide the Benchmark Rate permanently or indefinitely, provided that, at the time of such statement or publication, there is no successor administrator that will continue to provide the Benchmark Rate; or
- (C) a public statement or publication of information by the regulatory supervisor for the administrator of the Benchmark Rate announcing that the Benchmark Rate is no longer representative.

"Compounded SOFR" means the compounded average of SOFRs for the applicable Corresponding Tenor, with the rate, or methodology for this rate, and conventions for this rate (which will be compounded in arrears with an observation, lookback and/or suspension period as a mechanism to determine the interest payable prior to the end of each interest period) being established by the Calculation Agent in accordance with:

- (A) the rate, or methodology for this rate, and conventions for this rate selected or recommended by the Relevant Governmental Body for determining Compounded SOFR; provided that:
- (B) if, and to the extent that, the Calculation Agent determines that Compounded SOFR cannot be determined in accordance with clause (A) above, then the rate, or methodology for this rate, and conventions for this rate that have been selected by the Calculation Agent giving due consideration to any industry-accepted market practice for U.S. dollar denominated floating rate fixed income Securities at such time.

For the avoidance of doubt, the calculation of Compounded SOFR shall exclude the Benchmark Replacement Adjustment and the applicable margin of basis points.

"Corresponding Tenor" with respect to a Benchmark Replacement, means a tenor (including overnight) having approximately the same length (disregarding business day adjustment) as the applicable tenor for the then-current Benchmark Rate.

"Federal Reserve Bank of New York's Website" means the website of the Federal Reserve Bank of New York at <http://www.newyorkfed.org>, or any successor source. Information contained in the Federal Reserve Bank of New York's website is not incorporated by reference in, and should not be considered part of this Base Prospectus.

"Interpolated Benchmark" with respect to the Benchmark Rate means the rate determined for

the Corresponding Tenor by interpolating on a linear basis between: (1) the Benchmark Rate for the longest period (for which the Benchmark Rate is available) that is shorter than the Corresponding Tenor and (2) the Benchmark Rate for the shortest period (for which the Benchmark Rate is available) that is longer than the Corresponding Tenor.

"ISDA Fallback Adjustment" means the spread adjustment (which may be a positive or negative value or zero) that would apply for derivatives transactions referencing the 2006 ISDA Definitions to be determined upon the occurrence of an index cessation event with respect to the Benchmark Rate for the applicable tenor.

"ISDA Fallback Rate" means the rate that would apply for derivatives transactions referencing the 2006 ISDA Definitions to be effective upon the occurrence of an index cessation date with respect to the Benchmark Rate for the applicable tenor excluding the applicable ISDA Fallback Adjustment.

"Reference Time" with respect to any determination of the Benchmark Rate means (1) if the Benchmark Rate is USD LIBOR (of the applicable tenor), 11:00 a.m. (London time) on the Interest Determination Date, and (2) if the Benchmark Rate is not USD LIBOR (of the applicable tenor), the time determined by the Calculation Agent in accordance with the Benchmark Replacement Conforming Changes.

"Relevant Governmental Body" means the Federal Reserve Board and/or the Federal Reserve Bank of New York, or a committee officially endorsed or convened by the Federal Reserve Board and/or the Federal Reserve Bank of New York or any successor thereto.

"SOFR" with respect to any day means the secured overnight financing rate published for such day by the Federal Reserve Bank of New York, as the administrator of the benchmark, (or a successor administrator) on the Federal Reserve Bank of New York's website.

"Term SOFR" means the forward-looking term rate for the applicable Corresponding Tenor based on SOFR that has been selected or recommended by the Relevant Governmental Body.

"Unadjusted Benchmark Replacement" means the Benchmark Replacement excluding the Benchmark Replacement Adjustment.

"USD LIBOR" means the London Interbank Offered Rate for deposits in USD."

Applicable Final Terms

The amendments included in this Prospectus Supplement shall only apply to Final Terms, the date of which falls on or after the approval of this Prospectus Supplement.

Responsibility

Each of GSI and GSW 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.

References to the Base Prospectus shall hereafter mean the Base Prospectus as supplemented by this Prospectus Supplement.

U.S. notice

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

The date of this Prospectus Supplement is 19 July 2019

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