BASE PROSPECTUS



GOLDMAN SACHS BANK EUROPE SE

a European public limited liability company incorporated in Germany

as Issuer

UNLIMITED

Certificate of Deposit Programme

in respect of STEP compliant "A" Certificates of Deposit and non-STEP compliant "B" Certificates of Deposit

DEUTSCHE BANK AG

as Issue and Paying Agent

This Base Prospectus is dated 28 September 2022

Disclaimer clauses for Issue and Paying Agent

See the section entitled "Important Notice" on pages 2 to 4 of this Base Prospectus

An investment in CDs under the Programme involves certain risks

See "Risk Factors" on pages 12 to 17 for a discussion of certain factors to be considered in connection with any investment in the CDs.

No credit ratings have been assigned to the CDs.

IMPORTANT NOTICE

The Issuer, subject to compliance with all relevant laws, regulations and directives, may from time to time issue STEP-compliant certificates of deposit with a maturity of not more than 364 days from and including the date of issue to but excluding the maturity date or, in the case of extendible CDs, the Final Maturity Date (as defined herein) (the "A CDs") and non-STEP compliant certificates of deposit with a maturity that exceeds 364 days from and including the date of issue to but excluding the maturity date or, in the case of extendible CDs, the Final Maturity Date (the "B CDs" and, together with the A CDs, the "CDs") under the programme (the "Programme") as described in this base prospectus (the "Base Prospectus").

Application has been made to the Commission de Surveillance du Secteur Financier (the "CSSF") in its capacity as competent authority under the Luxembourg Act dated 16 July 2019 on prospectuses for securities (loi relative aux prospectus pour valeurs mobilières) (the "Prospectus Act 2019") and for the purposes of Article 8(1) of Regulation (EU) 2017/1129 of the European Parliament and of the Council (as amended or superseded, the "EU Prospectus Regulation") to approve this document as a base prospectus in respect of the B CDs. The CSSF only approves this Base Prospectus as meeting the standards of completeness, comprehensibility and consistency imposed by the EU Prospectus Regulation. Such approval should not be considered as an endorsement of the Issuer and of the quality of the B CDs that are the subject of this Base Prospectus. Investors should make their own assessment as to the suitability of investing in any such B CDs. By approving this Base Prospectus, the CSSF shall give no undertaking as to the economic and financial soundness of the operation or the quality or solvency of the Issuer in accordance with Article 6(4) of the Prospectus Act 2019. This document constitutes a base prospectus in respect of the B CDs for the purposes of Article 8 of the EU Prospectus Regulation and should be read together with any supplements thereto, all documents incorporated by reference herein and any final terms ("Final Terms"). The CSSF has neither reviewed nor approved information in respect of the A CDs in this Base Prospectus.

This Base Prospectus in respect of the B CDs shall be valid for 12 months and expires on 28 September 2023. There is no obligation to prepare a supplement in case of important new circumstances, material misstatements or material inaccuracies after this date.

Application has also been made to the Luxembourg Stock Exchange to approve this document as an alleviated prospectus ($prospectus \ all\'eg\'e$) in respect of the A CDs. This document constitutes (i) an alleviated prospectus ($prospectus \ all\'eg\'e$) in respect of the A CDs for the purposes of Part III chapter 2 of the Prospectus Act 2019 and (ii) an information memorandum in respect of A CDs for the purposes of the Short-Term European Paper ("STEP") Initiative.

Application has also been made to the Luxembourg Stock Exchange for the A CDs and the B CDs issued under the Programme to be listed on the official list of the Luxembourg Stock Exchange and admitted to trading on the Euro MTF trading venue or the professional segment of the Euro MTF of the Luxembourg Stock Exchange, which is a multilateral trading facility for the purposes of Directive 2014/65/EU (as amended or superseded, "MiFID II"). Application may also be made for the A CDs and the B CDs issued under the Programme to (i) the Luxembourg Stock Exchange to be listed on the official list of the Luxembourg Stock Exchange and admitted to trading on the regulated market or the professional segment of the regulated market of the Luxembourg Stock Exchange, which is a regulated market for the purposes of MiFID II, (ii) the Frankfurt Stock Exchange to be listed and admitted to trading on the unofficial market (*Freiverkehr*) of the Frankfurt Stock Exchange which is a multilateral trading facility for the purposes of MiFID II; and (iii) the Frankfurt Stock Exchange to be listed on the official list of the Frankfurt Stock Exchange and admitted to trading on the regulated market of the official list of the Frankfurt Stock Exchange, which is a regulated market for the purposes of MiFID II. The Issuer may also issue unlisted A CDs and unlisted B CDs and/or A CDs and B CDs not admitted to trading on any market. Any Extendible A CDs (as defined herein) will be unlisted.

The expression "necessary information" means, in relation to any of the CDs, the information necessary to enable investors in such notes to make an informed assessment of the assets and liabilities, financial position, profits and losses and prospects of the Issuer and of the rights attaching to the CDs. In relation to the different types of CDs that may be issued under the programme, the Issuer has included in this Base Prospectus all of the necessary information except for information which is not known at the date of this Base Prospectus and which can only be determined at the time of an individual issue of the CDs.

Any information relating to the CDs which is not included in this Base Prospectus and which is required in order to complete the necessary information in relation to an issue of the CDs will be contained either in the relevant Final Terms, in a supplement to this Base Prospectus or a further base prospectus for the Programme. For issues of CDs which are the subject of Final Terms, those Final Terms will, for the purposes of that issue only, complete this Base Prospectus and must be read in conjunction with this Base Prospectus.

The distribution of this Base Prospectus and any Final Terms and the offering or sale and delivery of the CDs in certain jurisdictions may be restricted by law. Persons into whose possession this Base Prospectus or any Final Terms come are required by the Issuer to inform themselves about, and to observe, any such restrictions. Subject to certain exceptions, the CDs may not be offered, sold or delivered, directly or indirectly, in the United States of America or to US persons. The CDs have not been and will not be registered under the United States Securities Act of 1933, as amended (the "Securities Act"), or under the securities or blue sky laws of any state. Neither the US Securities and Exchange Commission nor any other regulatory body has approved or disapproved of the CDs or passed upon the accuracy or inaccuracy of this Base Prospectus. This Base Prospectus is not for use in, and may not be delivered to or inside, the United States.

This Base Prospectus or any Final Terms do not constitute an offer to sell, or a solicitation of an offer to buy, any CDs offered hereby by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation. Neither the delivery of this Base Prospectus nor the delivery of any Final Terms nor any sale made hereunder shall under any circumstances imply that there has been no adverse change in the financial situation of the issuer since the date hereof or, as the case may be, the date upon which this Base Prospectus has been most recently supplemented.

In accordance with the STEP Initiative, this Programme will be submitted to the STEP Secretariat in order to apply for the STEP label in respect of the A CDs. The STEP label will not apply to the B CDs. The status of STEP compliance of this Programme can be determined from the STEP Market website (www.stepmarket.org). This website is not sponsored by the Issuer and the Issuer is not responsible for its content or availability. The CSSF expresses no opinion on the STEP label. Certain prescribed information required by the STEP label is included in the sections entitled "Information concerning the Issuer's request for a STEP label" and "Certification of information".

The Issuer accepts responsibility for the information contained in this Base Prospectus. To the best of the knowledge of the Issuer, the information contained in this Base Prospectus is in accordance with the facts and the Base Prospectus makes no omission likely to affect its import. Where information contained in this Base Prospectus has been sourced from a third party, such information has been accurately reproduced and so far as issuer is aware and is able to ascertain from information published by that third party, no facts have been omitted which would render the reproduced information inaccurate or misleading.

The Issuer has been assigned a long-term debt credit rating of A+ and a short-term debt credit rating of A-1 by S&P Global Ratings Europe Limited ("**S&P**"); a long-term debt credit rating of A+ and a short-term debt credit rating of F1 by Fitch Ratings, Inc. ("**Fitch**"); and a long-term debt credit rating of A1 and a short-term debt credit rating of P-1 by Moody's Investors Services, Inc. ("**Moody's**").

The credit ratings of the Issuer referred to in this Base Prospectus have been issued by S&P, Fitch and Moody's, of which only S&P is registered under Regulation (EU) No. 1060/2009, as amended or superseded (the "EU CRA Regulation"). S&P is established in Ireland and is included in the list of credit rating agencies published by the European Securities and Markets Authority ("ESMA") on its website in accordance with the EU CRA Regulation. Neither Fitch nor Moody's is established in the European Union, and neither is registered under the EU CRA Regulation. Fitch Ratings Ireland Limited currently endorses credit ratings published by Fitch and Moody's Deutschland GmbH currently endorses credit ratings issued by Moody's for regulatory purposes in the European Union in accordance with the EU CRA Regulation. Fitch Ratings Ireland Limited is established in Ireland and Moody's Deutschland GmbH is established in Germany and each has been registered under the EU CRA Regulation and is included in the list of credit rating agencies published by ESMA on its website in accordance with the EU CRA Regulation. There can be no assurance that Fitch Ratings Ireland Limited and Moody's Deutschland GmbH will continue to endorse credit ratings issued by Fitch and Moody's, respectively.

In general, European regulated investors are restricted from using a rating for regulatory purposes in the European Union if such rating is not either (1) issued by a credit rating agency established in the European Union and registered with ESMA under the EU CRA Regulation or, (2) in the case of ratings issued by third country non-EU credit rating agencies, either endorsed by an EU-registered credit rating agency or the relevant non-EU credit rating agency is certified under the EU CRA Regulation (and such endorsement action or certification, as the case may be, has not been withdrawn or suspended, subject to transitional provisions that apply in certain circumstances). A security rating is not a recommendation to buy, sell or hold securities and may be subject to suspension, reduction or withdrawal at any time by the assigning rating agency.

BENCHMARKS REGULATION

Amounts payable under the CDs may be calculated or otherwise determined by reference to certain reference rates. Any such reference rate may constitute a benchmark for the purposes of Regulation (EU) 2016/1011 (as amended, the "Benchmarks Regulation"). If any such reference rate does constitute such a benchmark, the applicable Final Terms will indicate whether or not the benchmark is provided by an administrator included in the register of administrators and benchmarks established and maintained by ESMA pursuant to Article 36 of the Benchmarks Regulation (the "ESMA Register"). Not every reference rate will fall within the scope of the Benchmarks Regulation. Furthermore, transitional provisions in the EU Benchmarks Regulation may have the result that the administrator of a particular benchmark is not required to appear in either the ESMA Register. The registration status of any administrator under the Benchmarks Regulation is a matter of public record and, save where required by applicable law, the Issuer does not intend to update the applicable Final Terms to reflect any change in the registration status of the administrator.

PRESENTATION OF INFORMATION

In this Base Prospectus, unless otherwise specified or the context otherwise requires, references to "US dollars", "USD" and "US\$" are to the lawful currency of the United States; references to "Sterling" and "₤" are to the lawful currency of the United Kingdom; and references to "euro" and "€" are to the single currency introduced at the start of the third stage of the European Economic and Monetary Union pursuant to the treaty establishing the European Community, as amended from time to time. Certain monetary amounts included in this base prospectus have been subject to rounding adjustments. Accordingly, figures shown as totals in certain tables may not be an exact arithmetic aggregation of the figures that precede them.

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DESCRIPTION OF THE PROGRAMME

The following description provides a general overview of the Programme for the purposes of Article 25.1(b) of Commission Delegated Regulation (EU) 2019/980 supplementing the EU Prospectus Regulation, should be read as an introduction to the Base Prospectus, and is qualified in its entirety by the more detailed information appearing elsewhere in the Base Prospectus, including the documents incorporated by reference and, in relation to the terms and conditions of any particular issuances of CDs, the applicable Final Terms. Terms used in the following section but not defined have the meanings given to them elsewhere in this Base Prospectus.

Name of the Programme Goldman Sachs Bank Europe SE Certificate of Deposit

Programme.

Type of Programme Certificates of Deposit Programme.

A CDs Certificates of Deposit, STEP compliant.

B CDs Certificates of Deposit, non-STEP compliant.

Name of the Issuer Goldman Sachs Bank Europe SE.

Type of Issuer Monetary financial institution.

Purpose of the ProgrammeUnless otherwise specified in the relevant Final Terms, the

net proceeds of the issue of the CDs will be used by the

Issuer for general banking purposes.

Programme Size (ceiling) Unlimited.

Contact Details Email: gsbe-treasury@gs.com

Telephone: +49 69 75 321 000

Additional information on the Extendible CDs:

programme

The initial Maturity Date of the CDs may be extended at the option of the Issuer if specified in the Final Terms.

Issue Price:

The issue price of each CD (the "**Issue Price**") will be specified in the applicable Final Terms.

Redemption:

Unless previously redeemed or purchased and cancelled or extended, each CD will be redeemed at 100 per cent. of the Nominal Amount of such CD on the Maturity Date, as specified in the applicable Final Terms.

Optional Redemption:

The CDs may be redeemed before their Maturity Date or in case of Extendible CDs their Final Maturity Date, at the option of the Issuer, in whole or in part, if specified in the applicable Final Terms. The Issuer will also have the option to redeem the CDs in the event of a change in law or it becomes unlawful for it to perform any of its obligations under the CDs.

Final Terms:

Each tranche of CDs will be issued on the terms set out in the Terms and Conditions of the A CDs or B CDs, as applicable, as completed by the applicable Final Terms.

Risk Factors:

Investment in the CDs may involve a certain degree of risk. The principal risk factors that may affect the ability of the Issuer to fulfil its obligations under the CDs, are set out in the section headed "Risk Factors" on pages 12 to 17 of this Base Prospectus.

Auditor of the Issuer, who has audited the accounts of the Issuer's Annual Report For the annual report 2021:

Mazars GmbH & Co. KG Wirtschaftsprüfungsgesellschaft Steuerberatungsgesellschaft Theodor-Stern-Kai 1 60596 Frankfurt am Main

For the annual report 2020:

PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft Friedrich-Ebert-Anlage 35 – 37 60327 Frankfurt am Main

Information on A CDs

Characteristics and Form of A CDs

A CDs will be in bearer form and each issue of A CDs will initially be represented by one or more global A CDs (each, a "Global A CD" and together, the "Global A CDs"). A Global A CD will be exchangeable into definitive A CDs only in the limited circumstances set out in that Global A CD.

Application will be made to the STEP Secretariat in order to apply for the STEP label in respect of the A CDs. The A CDs have maturities of 364 days or less from (and including) the date of issue to (but excluding) the maturity date. The STEP market has been accepted as a non-regulated market for collateral purposes in credit operations of Eurosystem from 2 April 2007 (see also "Eurosystem eligibility" above).

Yield Basis

A CDs may be interest bearing or non-interest bearing. Interest (if any) may accrue at a fixed rate or a floating rate and will be determined in the manner specified in the applicable Final Terms. A CDs may be issued at a discount or premium as specified in the applicable Final Terms.

Currencies of Issue of the A CDs

A CDs may be denominated in euro, Sterling, US dollars or any other currency subject to compliance with any applicable legal and regulatory requirements.

Maturity of the A CDs

The tenor of the A CDs shall be 364 days or less from and including the date of issue to but excluding the Final Maturity Date, subject to compliance with any applicable legal and regulatory requirements.

Minimum Issuance Amount

At least EUR 100,000 (or the equivalent in any other currency).

Minimum Denomination of the A

The minimum denomination of each A CD will be EUR 100,000 (or the equivalent in any other currency) unless otherwise specified in the applicable Final Terms and integral multiples of amounts as specified in the applicable Final Terms (subject in each case to compliance with all applicable legal and regulatory requirements).

Status of the A CDs

A CDs shall represent direct, unconditional, unsubordinated and unsecured obligations of the Issuer and shall at all times rank *pari passu* with all other present and future unsubordinated and unsecured obligations for funds borrowed or guaranteed by the Issuer (other than in the case of obligations preferred by mandatory provisions of law).

Governing Law that applies to the CDs

A CDs, and any non-contractual obligations arising out of or in connection with A CDs, will be governed by, and construed in accordance with, laws of the Federal Republic of Germany.

Listing and Admission to Trading

Application has been made for A CDs to be listed on the official list of the Luxembourg Stock Exchange and admitted to trading on the Euro MTF or the professional segment of the Euro MTF of the Luxembourg Stock Exchange.

Application may also be made for the A CDs (i) to be listed on the official list of the Luxembourg Stock Exchange and admitted to trading on the regulated market or the professional segment of the regulated market of the Luxembourg Stock Exchange, (ii) to be listed and admitted to trading on the unofficial market (*Freiverkehr*) of the Frankfurt Stock Exchange; and (iii) to be listed on the official list of the Frankfurt Stock Exchange and admitted to trading on the regulated market of the official list of the Frankfurt Stock Exchange. The Issuer may also issue A CDs that are unlisted.

Settlement System

Euroclear Bank S.A./N.V. ("Euroclear") and/or Clearstream Banking S.A. ("Clearstream") and/or or any other clearing system as may be specified in the Final Terms (the "Relevant Clearing Systems").

Guarantor(s)

None.

Issuing and Paying Agent

Deutsche Bank AG.

Arranger

Not Applicable.

Selling Restrictions

Offers and sales of A CDs and the distribution of this Base Prospectus and other information relating to the Issuer and the A CDs are subject to certain restrictions, details of which are set out under "Subscription and Sale" on pages 98 to 100 of this Base Prospectus.

Taxation

All payments under A CDs will be made free and clear of withholding for or on account of any taxes imposed by the jurisdiction of incorporation of the Issuer (being, as of the date hereof, Federal Republic of Germany) or any

jurisdiction through or from which payments by or on behalf of the Issuer are made, save as set out in § 9 of the Terms and Conditions of the A CD.

Information on B CDs

Characteristics and Form of B CDs

B CDs will be in bearer form and each issue of B CDs will initially be represented by one or more global B CDs (each, a "Global B CD" and together, the "Global B CDs"). A Global B CD will be exchangeable into definitive B CDs only in the limited circumstances set out in that Global B CD.

The STEP label will not apply to the B CDs.

Yield Basis

B CDs may be interest bearing or non-interest bearing. Interest (if any) may accrue at a fixed rate or a floating rate B CDs may be issued at a discount or premium.

In the case of the B CDs, the applicable Final Terms will state whether the B CDs will include an interest step-up provision or an interest step-down provision, in which case the rate of interest in respect of the B CDs may increase ("Step-Up B CDs") or decrease ("Step-Down B CDs") as the term of the CDs progresses, on dates specified in the applicable Final Terms.

Currencies of Issue of the B CDs

B CDs may be denominated in euro, Sterling, US dollars or any other currency subject to compliance with any applicable legal and regulatory requirements.

Maturity of the B CDs

The tenor of the B CDs shall be more than 364 days from and including the date of issue to but excluding the Final Maturity Date, subject to compliance with any applicable legal and regulatory requirements.

Minimum Issuance Amount

At least EUR 100,000 (or the equivalent in any other currency).

Minimum Denomination of the B CDs

The minimum denomination of each B CD will be EUR 100,000 (or the equivalent in any other currency) unless otherwise specified in the applicable Final Terms and integral multiples of amounts as specified in the applicable Final Terms (subject in each case to compliance with all applicable legal and regulatory requirements). For any B CDs admitted to trading on the Euro MTF or regulated market on Luxembourg Stock Exchange or the *Freiverkehr* or the official list of the Frankfurt Stock Exchange, the minimum denomination of each CD will not be less than EUR 100,000 (or the equivalent in any other currency).

Status of the B CDs

B CDs shall represent direct, unconditional, unsubordinated and unsecured obligations of the Issuer and shall at all times rank *pari passu* with all other present and future unsubordinated and unsecured obligations for funds borrowed or guaranteed by the Issuer (other than in the case of obligations preferred by mandatory provisions of law).

Governing Law that applies to the CDs

B CDs, and any non-contractual obligations arising out of or in connection with B CDs, will be governed by, and construed in accordance with, laws of the Federal Republic of Germany.

Listing and Admission to Trading

Application has been made for B CDs to be listed on the official list of the Luxembourg Stock Exchange and to be admitted to trading on the Euro MTF or the professional segment of the Euro MTF of the Luxembourg Stock Exchange.

Application may also be made for the B CDs (i) to be listed on the official list of the Luxembourg Stock Exchange and admitted to trading on the regulated market or the professional segment of the regulated market of the Luxembourg Stock Exchange, (ii) to be listed and admitted to trading on the unofficial market (*Freiverkehr*) of the Frankfurt Stock Exchange; and (iii) to be listed on the official list of the Frankfurt Stock Exchange and admitted to trading on the regulated market of the official list of the Frankfurt Stock Exchange. The Issuer may also issue B CDs that are unlisted.

Settlement System

Euroclear and/or Clearstream and/or or any other clearing system as may be specified in the Final Terms.

Guarantor(s)

None.

Issuing and Paying Agent

Deutsche Bank AG.

Arranger

Not Applicable.

Selling Restrictions

Offers and sales of B CDs and the distribution of this Base Prospectus and other information relating to the Issuer and the B CDs are subject to certain restrictions, details of which are set out under "Subscription and Sale" on pages 98 to 100 of this Base Prospectus.

Taxation

All payments under B CDs will be made free and clear of withholding for or on account of any taxes imposed by the jurisdiction of incorporation of the Issuer (being, as of the date hereof, Federal Republic of Germany) or any jurisdiction through or from which payments by or on behalf of the Issuer are made, save as set out in § 9 of the Terms and Conditions of the B CD.

RISK FACTORS

This Base Prospectus describes the material risks that are specific to the Issuer and the CDs and that may affect the Issuer's ability to fulfil its obligations under the CDs. This Base Prospectus does not describe all of the risks of an investment in the CDs. The Issuer disclaims any responsibility to advise investors of such risks as they change from time to time. Further, the Issuer makes no representations as to (i) the suitability of any CDs for any particular investor, (ii) the appropriate accounting treatment or possible tax consequences of an investment in any CDs or (iii) the expected performance of any CDs, either in absolute terms or relative to competing investments. Prospective CD holders should obtain their own independent accounting, tax and legal advice and should consult their own professional investment adviser to ascertain the suitability of the CDs as an investment and should conduct such independent investigation and analysis regarding the risks and cash-flows associated with the CDs as they deem appropriate to evaluate the merits and risks of an investment in the CDs. In particular, prospective CD holders should note that an investment in the CDs is only suitable for persons who (i) have the knowledge and experience in financial and business matters necessary to enable them to evaluate the information contained in the Base Prospectus and Final Terms and the risks of the CDs in the context of their own financial, tax and regulatory circumstances and investment objectives; (ii) are able to bear the economic risk of an investment in the CDs for an indefinite period of time; and (iii) are acquiring the CDs for their own account for investment, not with a view to resale.

A. FACTORS THAT MAY AFFECT THE ISSUER'S ABILITY TO FULFIL ITS OBLIGATIONS UNDER THE CDS

The risk factors relating to the Issuer contained on pages 3 to 40 of the registration document of the Issuer dated 20 July 2022 approved by the German Federal Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht*; the "**BaFin**") (the "**GSBE Registration Document**") are hereby incorporated by reference into this Base Prospectus.

The risks are presented in seven categories (section I to VII) which are disclosed below. The risk factors are presented in the subsections (subsections 1, 2 et seq.). The two most material risk factors in each category are mentioned at the beginning, i.e. in the first two subsections of the second level (see Sections 1,2, 3 et seq.). The risk factors following the two most material risk factors are not mentioned in order of their materiality.

The Issuer has based its assessment of materiality on the probability of their occurrence and the expected magnitude of their negative impact. Holder should note the risks can be cumulative and apply simultaneously which may unpredictably affect the CDs.

1. Liquidity Risks

All risk factors under the category "I. Liquidity Risks" on pages 3 to 7 of the GSBE Registration Document shall be incorporated by reference in this Base Prospectus.

2. Market Risks

All risk factors under the category "II. Market Risks" on pages 7 to 13 of the GSBE Registration Document shall be incorporated by reference in this Base Prospectus.

3. Credit Risks

All risk factors under the category "III. Credit Risks" on pages 13 to 17 of the GSBE Registration Document shall be incorporated by reference in this Base Prospectus.

4. **Operational Risks**

All risk factors under the category "IV. Operational Risks" on pages 17 to 26 of the GSBE Registration Document shall be incorporated by reference in this Base Prospectus.

5. Legal and Regulatory Risks

All risk factors under the category "V. Legal and Regulatory Risks" on pages 26 to 35 of the GSBE Registration Document shall be incorporated by reference in this Base Prospectus.

6. **Competition Risks**

The risk factors under the category "VI. Competition Risks" on pages 35 to 37 of the GSBE Registration Document shall be incorporated by reference in this Base Prospectus.

7. Market Developments and General Business Environment Risks

All risk factors under the category "VII. Market Developments and General Business Environment Risks" on pages 38 to 40 of the GSBE Registration Document shall be incorporated by reference in this Base Prospectus.

B. FACTORS WHICH ARE MATERIAL FOR THE PURPOSES OF ASSESSING THE MARKET RISKS IN RELATION TO THE CDS

The risks are presented in two categories (section 1 and 2). The risk factors are presented in the subsections. The two most material risk factors in each category are mentioned at the beginning, i.e. in the first two subsections of the second level. The risk factors following the two most material risk factors are not mentioned in order of their materiality.

The Issuer has based its assessment of materiality on the probability of their occurrence and the expected magnitude of their negative impact. Holder should note the risks can be cumulative and apply simultaneously which may unpredictably affect the CD.

1. Risks related to the value and liquidity of the CDs

The CDs may not have an active trading market.

Although application will be made for admission and to trading of the CDs to the Euro MTF of the Luxembourg Stock Exchange and for admission to the official list of the Luxembourg Stock Exchange and may also be made to trading on the regulated market of the Luxembourg Stock Exchange as well as for admission and to trading of the CDs to the *Freiverkehr* of the Frankfurt Stock Exchange and may also be made for admission to the official list of the Frankfurt Stock Exchange and to trading on the regulated market of the Frankfurt Stock Exchange, a secondary market for any CDs issued by the Issuer is unlikely to develop. Even if a secondary market for a CD develops, it may not provide significant liquidity. The Issuer and/or its affiliates have no obligation to make a market with respect to the CDs and make no commitment to make a market in or repurchase the CDs. The Issuer expects that transaction costs in any secondary market would be high. As a result, the difference between bid and asked prices for the CD in any secondary market could be substantial. If the Issuer or its affiliates do make a market

for the CDs, they may cease to do so at any time without notice to investors and are not obligated to provide any quotation of bid or offer price(s) of the CDs which is favourable to investors.

Price discrepancies in the secondary market.

The value or quoted price of the CDs at any time will reflect many factors and cannot be predicted, and if a purchaser sells his or her CDs prior to its maturity, such purchaser may receive less than its Issue Price. Such factors, most of which are beyond the control of the Issuer, will influence the market price of the CDs, and will include national and international economic, financial, regulatory, political, terrorist, military and other events that affect securities generally, interest and yield rates in the market, the time remaining until the CDs mature, the creditworthiness of the Issuer, whether actual or perceived. Furthermore, if any purchaser sells their CDs, the purchaser will likely be charged a commission for secondary market transactions, or the price will likely reflect a dealer discount.

Changes in interest rates are likely to affect the market price of any CDs issued by the Issuer.

The Issuer expects that the market price of any CDs it may issue will be affected by changes in interest rates, although these changes may affect such CDs and a traditional debt security to different degrees. In general, if interest rates increase, the Issuer expects that the market value of a fixed income instrument which paid interest and an amount equal to the outstanding nominal amount of a CD an investor may purchase on the same schedule as that CD would decrease, whereas if interest rates decrease, the Issuer expects that the market value of such a fixed income instrument would increase.

Changes in the Issuer's credit ratings may affect the market price of a CD.

The Issuer's credit ratings are an assessment of its ability to pay its obligations, including those on any CDs it may issue. Consequently, actual or anticipated changes in the Issuer's credit ratings may affect the market price of a CD. However, because the return on a CD is typically dependent upon certain factors in addition to the Issuer's ability to pay its obligations on the CD, an improvement in the Issuer's credit ratings will not reduce the other investment risks related to any such CDs.

Risks relating to the regulation and reform of certain published rates, indices and other values or "benchmarks".

A number of major interest rates, other rates, indices and other published values or benchmarks are the subject of on-going 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 CDs linked to any such value or benchmark.

Regulation (EU) 2016/1011 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds (the "Benchmarks Regulation") are a key element of the ongoing regulatory reform in the EU. In addition to "critical benchmarks" such as 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 one or both of the Benchmarks Regulation as "benchmarks" where they are used to determine the amount payable under, or the value of, certain financial instruments (including CDs listed on an EU regulated market or EU multilateral trading facility), and in a number of other circumstances.

The Benchmarks 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 Benchmarks 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, subject to transitional provisions, certain uses by EU supervised entities of (a) benchmarks provided by EU administrators which are not authorised or registered in accordance with the Benchmarks Regulation and (b) benchmarks provided by non-EU administrators where (i) the non-EU administrator is not authorised or registered in a jurisdiction with a regulatory regime that has been determined to be "equivalent" to that of the EU in accordance with the Benchmarks Regulation, (ii) the administrator has not been recognised in accordance with the Benchmarks Regulation, and (iii) the benchmark has not been endorsed in accordance with the Benchmarks Regulation.

ESMA maintains a public register of EU-approved benchmark administrators and non-EU benchmarks pursuant to the Benchmarks Regulation (the "ESMA Register"). Benchmarks and benchmark administrators which were approved by the FCA prior to 31 December 2020 were removed from the ESMA Register on 1 January 2021.

The Benchmarks Regulation could have a material impact on CDs 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 Benchmarks Regulation, or (b) its administrator (i) is based in a non-EU jurisdiction which does not satisfy the "equivalence" conditions and (ii) is not "recognised" under the Benchmarks Regulation pending such a decision, and the benchmark has not been "endorsed" in accordance with the Benchmarks Regulation. In such case, depending on the particular benchmark and the applicable terms of the CDs, the CDs 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 Benchmarks 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 CDs, including Calculation Agent determination of the rate or level in its discretion.

Ongoing national and international regulatory reforms and the increased regulatory scrutiny of benchmarks generally could increase the costs and risks of administering or otherwise participating in the setting of a benchmark and complying with any applicable regulations or requirements. Such factors may discourage market participants from continuing to administer or contribute to benchmarks, trigger changes in the rules or methodologies used in respect of benchmarks, and/or lead to the disappearance of benchmarks. This could result in (i) the substitution of replacement rates for such benchmark(s), (ii) adjustments to the terms of the relevant CDs, (iii) discretionary valuation of the rate by the Calculation Agent, (iv) delisting of the relevant CDs and/or (v) other consequences for CDs linked to any such benchmark(s). Any such consequence could have a material adverse effect on the value of and return on any CDs linked to, referencing, or otherwise dependent (in whole or in part) upon, a benchmark.

Specifically, regulatory authorities and central banks continue to strongly encourage the transition away from IBORs, such as LIBOR and EURIBOR, and have identified 'risk free rates' to replace such IBORs as primary benchmarks. This includes (amongst others) (i) for GBP LIBOR, the Sterling Overnight Index Average ("SONIA"), (ii) for USD LIBOR, the Secured Overnight Financing Rate ("SOFR"), (iii) for EURIBOR and EONIA, the Euro Short-Term Rate ("ESTR" or "EuroSTR"), (iv) for CHF LIBOR, the Swiss Average Rate Overnight ("SARON") and (v) for JPY LIBOR, the Tokyo Overnight Average Rate ("TONA"). The reform and eventual replacement of IBORs with risk-free rates cause the relevant IBOR to perform differently than in the past, to disappear entirely, or have other consequences which cannot be predicted. These risk-free rates may have a different methodology and other important differences from the IBORs they have replaced or will replace. Any of these developments could have a material adverse effect on the value of and return on CDs linked to any such rates.

2. Risks related to certain product terms or features

Risks associated with CDs that reference overnight risk-free rates as the Reference Rate.

The market continues to develop with respect to overnight risk-free rates (including SONIA, SOFR, ESTR or EuroSTR, SARON, TONA, the Hong Kong Dollar Overnight Index Average ("HONIA"), the Singapore Overnight Rate Average ("SORA") or the Reserve Bank of Australia's Interbank Overnight Cash Rate ("AONIA") ("Overnight Risk-Free Rates")) as reference rates in the capital markets and their adoption as an alternative to their respective IBOR counterparts. In particular, whilst CDs may be issued under the Programme that reference the Overnight Risk-Free Rates using a compounded in arrear or weighted average formula, it is possible that the market or a significant part thereof may adopt a different application of such rate. The key terms to calculate and determine the applicable reference rate in respect of the Overnight Risk-Free Rates, such as for example the compounding structure applied (if any), the use of term rates (if any), the spread over the index reflected in interest rate provisions or the applicable observation method, may evolve over time in the debt capital markets and trading prices of

CDs that reference an Overnight Risk-Free Rate as the Reference Rate may be lower than those of later-issued indexed debt securities as a result.

Interest on CDs which reference an Overnight Risk-Free Rate as the Reference Rate is only capable of being determined at the end of an observation period and shortly prior to the relevant interest payment date. It may therefore be difficult (if not impossible) for investors in CDs which reference an Overnight Risk-Free Rate as the Reference Rate to reliably estimate the amount of interest which will be payable on such CDs. Some investors may be unable or unwilling to trade such CDs without changes to their information technology or other operational systems, which could adversely impact their liquidity. Further, if the CDs become due and payable prior to their stated maturity, the rate of interest payable shall be determined on the date the CDs became due and payable and shall not be reset thereafter.

The manner of adoption or application of the Overnight Risk-Free Rates as reference rates in the debt capital markets may differ materially compared with the application and adoption of such Overnight Risk-Free Rates in other markets, such as the derivatives and loan markets. Investors should carefully consider how any mismatch across these markets may impact any hedging or other financial arrangements which they may put in place in connection with any acquisition, holding or disposal of CDs referencing an Overnight Risk-Free Rate.

Further, the composition and characteristics of the Overnight Risk-Free Rates are not the same and are different from the composition and characteristics of their respective IBOR counterparts. For example, the Overnight Risk-Free Rates are backward-looking overnight rates measuring the rate paid by banks on overnight wholesale funds, compared to IBORs such as LIBOR which are forward-looking term rates measuring the cost of borrowing for a future period. Certain Overnight Risk-Free Rates, such as SONIA, €STR and TONA are unsecured overnight rates, whereas others, such as SOFR, are secured overnight rates. As a result, there can be no assurance that the Overnight Risk-Free Rates (or any term reference rate derived on any of them) will perform in the same way as their respective IBOR counterparts 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 the Overnight Risk-Free Rates are published based on data received from a variety of sources, the Issuer has no control over their methods of calculation, publication schedule, rate revision practices or availability at any time without notice. There can be no guarantee, particularly given the relatively recent introduction and publication of these rates and their adoption as replacements for their respective IBOR counterparts, that these rates will not be discontinued or fundamentally altered in a manner that is materially adverse to the interests of investors in the CDs that reference an Overnight Risk-Free Rate as the Reference Rate. If the manner in which the Overnight Risk-Free Rates are calculated is changed, that change may result in a reduction of the amount of interest payable on the CDs and the trading prices of the CDs.

In addition, the administrators of Overnight Risk-Free Rates (such as the Bank of England (in the case of SONIA), the Federal Reserve Bank of New York (in the case of SOFR) or the European Central Bank (in the case of €STR), as the case may be) may withdraw, modify or amend published data relating to the relevant rate in its sole discretion and without notice. In respect of any floating rate CDs for which "Screen Rate Determination" is specified as being applicable in the applicable Final Terms, the interest rate under the CDs for any day will not be adjusted for any modifications or amendments to data that the Bank of England, the Federal Reserve Bank of New York or the European Central Bank (as the case may be) may publish after the interest rate for that day has been determined. Equally, although the Bank of England, the Federal Reserve Bank of New York and the European Central Bank publish historical data (or historical indicative data) in respect of SONIA, SOFR and €STR respectively, investors should not rely on any historical changes or trends in SONIA, SOFR or €STR as an indicator of future changes in such rates.

Furthermore, since the Overnight Risk-Free Rates are relatively new reference rates, CDs that reference an Overnight Risk-Free Rate as the Reference Rate may not have an established trading market and an established trading market may not develop or may not be very liquid. Similarly, if the Overnight Risk-Free Rates do not prove to be widely used in securities like the CDs, the trading price of the CDs that reference an Overnight Risk-Free Rate as the Reference Rate may be lower than those of CDs linked to reference rates that are more widely used. Investors in CDs that reference an Overnight Risk-Free Rate as the Reference Rate may not be able to sell such CDs 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.

Risks relating to CDs that reference EURIBOR as the Reference Rate.

If, in respect of CDs that reference EURIBOR as the Reference Rate, the Calculation Agent determines that EURIBOR has been discontinued or has otherwise ceased to exist, the Calculation Agent shall select a substitute or successor rate of interest to replace it. The substitute rate selected shall be the rate that the Calculation Agent determines to be most comparable to the original reference rate, except that if the Calculation Agent determines that there is an industry-accepted substitute or successor rate of interest, it will select such rate of interest. The Calculation Agent may also apply such adjustments as it determines to be appropriate. The disappearance of a rate could have other potential consequences in relation to the CDs

Risks relating to floating rate CDs that reference the 2021 ISDA Interest Rate Derivative Definitions

If, in respect of floating rate CDs in respect of which the Reference Rate is to be determined by reference to the 2021 ISDA Interest Rate Derivative Definitions, the Calculation Agent determines that a Temporary Non-Publication Trigger or a Permanent Cessation Trigger has occurred in relation to the relevant Reference Rate, the Calculation Agent shall apply the relevant provisions of the 2021 ISDA Interest Rate Derivative Definitions and Matrices (as defined in the 2021 ISDA Interest Rate Derivative Definitions), as amended, in the relevant terms and conditions of the CD, in order to determine the appropriate fallback rate that may be used to calculate the relevant reference rate or to select a replacement or substitute reference rate. The temporary unavailability or permanent cessation of any such Reference Rate may result in a different reference rate being used to determine the determine the interest amount payable under such CDs.

Extendible CDs may be redeemed after their initial Maturity Date and the interest rates may alter.

The initial Maturity Date of extendible CDs may be extended automatically until an Extended Maturity Date as specified in the Final Terms. The payment of the unpaid amount may be automatically deferred and will be become due and payable on the applicable Extended Maturity Date if so specified in the relevant Final Terms. In addition, the provisions relating to interest payable relating to the extendible CDs may differ from the initial CDs.

Extendible CDs are subject to restrictions on transfer.

If the Issuer exercises its Issuer Extension Option, the relevant Extendible A CDs or Extendible B CDs will be non-transferable in the period between the relevant Exercise Deadline and the relevant Extension Date.

DESCRIPTION OF THE ISSUER

Legal name Goldman Sachs Bank Europe SE.

Legal form/status The Issuer is a European public limited company incorporated in

the Federal Republic of Germany.

Date of incorporation/

establishment

The company known as Goldman Sachs AG ("GSAG") until 15 January 2019 has been established on 1 November 1990. On 15 January 2019, GSAG merged with its wholly-owned subsidiary, Goldman Sachs Gestión S.A., on a retroactive basis as of 1 January 2018. At the same time, the legal form was changed to a *Societas Europaea* (SE) and the legal and commercial name to Goldman Sachs Bank Europe SE.

Registered office Goldman Sachs Bank Europe SE

Marienturm

Taunusanlage 9-10 60329 Frankfurt am Main

Germany

Registration number and place of registration

The Issuer is registered under the number HRB 114190 in the commercial register of the local court in Frankfurt am Main and mainly operates under the laws of Federal Republic of Germany.

Issuer's mission

The object of the Issuer is the transaction of banking business and the provision of financial services. The objects and purposes of the Issuer are provided for in Article 2 (object of the company) of the articles of association of the Issuer and include, for the avoidance of doubt, the right to establish branches in Germany and abroad, to acquire or invest in other companies, to acquire or establish such companies and to conduct any other business which is suitable to promote the object of the company.

Brief description of current activities

Goldman Sachs Bank Europe SE provides a wide range of financial services to a diversified client base that includes corporations, financial institutions, and high-net-worth individuals, from its registered office in Frankfurt am Main and branches in Amsterdam, Athens, Copenhagen, Dublin, London, Luxembourg, Madrid, Milan, Paris, Stockholm and Warsaw. The major markets in which the Issuer operates are Germany and Europe. As an affiliate of The Goldman Sachs Group, Inc. (together with its affiliates "GS Group"), the Issuer also enters into transactions with affiliates in the normal course of business as part of its market-making activities and general operations. The Issuer generates revenues from the following business activities: Investment Banking, Fixed Income, Currency and Commodities (FICC), Equities (including the issuance of equity derivative securities), and Investment Management, which includes Asset Management and Wealth Management. Following the end of the Brexit transition period, the Issuer has further expanded business activities across Investment Banking, FICC, Equities, and Investment Management. On 12 February 2021 certain business activities of Goldman Sachs Paris Inc. et Cie (GSPIC) pertaining to the Investment Banking business and the major part of the FICC and Equities business were transferred to the Issuer. In addition to the funding the Issuer sources from Funding IHC, a wholly-owned subsidiary of Group Inc., during the financial year 2021 the Issuer started to source material parts of its funding from (i) Goldman Sachs Bank USA, being a wholly-owned subsidiary of Group Inc. (and which became the sole shareholder of the Issuer on 1 July

2021), and (ii) from its deposit taking activities. Other than that there have not been any material changes in the borrowing and funding structure of the Issuer since the last financial year (31 December 2021).

Capital	or	equivalent
(31 Decem	ber 202	21)

	€ in millions
Ordinary share capital	329
Capital surplus	4,612
Profit reserves	
Other profit reserves	433
Distributable profit	377

List of main shareholders

The Issuer is a wholly-owned subsidiary of Goldman Sachs Bank USA, a company incorporated and registered in New York. The ultimate parent company of the Issuer is The Goldman Sachs Group, Inc. ("**Group, Inc.**"), a company incorporated in the United States of America.

Listing of the shares of the Issuer

Not applicable.

Composition of governing bodies and supervisory bodies

Board of Directors

The administrative, management and supervisory bodies of the Issuer comprise its Executive Board and its Supervisory Board. Set forth below are the names and occupations as well as the Supervisory Board at the date of this Prospectus.

The business address of each director is Marienturm, Taunusanlage 9-10, 60329 Frankfurt am Main, Germany.

Executive Board

Name	Occupation	Principal Outside Activities
Dr. Wolfgang Fink (Chairman)	Managing Director	 Member of the Board of the Association of German Banks
Thomas Degn- Petersen	Managing Director	 Member of the Board of Goldman Sachs Poland Services Sp. z o.o.
		Non-executive director of Goldman Sachs Saudi Arabia
		 Member of the International Banking Committee of the German Banking Association
		• Accountant and member of the

Chartered Institute of
Management
Accountants

Dr. Matthias	Managing
Bock	Director

- Deputy chairman of the Bankenverband Mitte e.V.
- Chairman of the Committee for Foreign Banks of the German Banking Association and member of the Legal Committee of the German Banking Association
- Serves on the board of the Civitas Bernhard-Vogel foundation

Peter Hermann	Managing
	Director

• No outside activities

Hei Man Lo Managing Director

No outside activities

Michael Managing Holmes Director

- Chair of the board of OOO Goldman Sachs Bank
- Non-executive
 Director Goldman
 Sachs International
 Service Entities
 Holdings Limited
- Non-executive
 Director Goldman
 Sachs Realty
 Management Europe
 GmbH

Supervisory Board

Name	Occupation / Business Address	Principal Activities	Outside
Dermot W. McDonogh	Plumtree Court	No outside ac	tivities.
(Chairman)	25 Shoe Lane		
	London EC4A 4AU		

Esta Stecher (Deputy Chairman)	Managing Director	•	Director of Goldman Sachs International
Chairman)	200 West Street New York,	•	Director and Chairperson of Goldman Sachs Bank USA
	NY 10282	•	Chairperson of Boards of Directors of the Goldman Sachs Philanthropy Fund
		•	Director of Columbia Investment Management Company LLC
		•	Member of Council on Foreign Relations (U.S.A.)
		•	Member of the President's Council of Columbia World Project (U.S.A.)
		•	Leadership Council Member of Tax Policy Center (U.S.A.)
		•	Member emeritus of the Association of General Counsel
		•	Finance Committee Member of UJA Federation of New York
Lisa Donnelly	Managing Director	•	Director of Goldman Sachs International
	Plumtree Court	•	Director of Goldman Sachs International
	25 Shoe Lane		Bank
	London EC4A 4AU		
Dr. Wolfgang	Lawyer	•	No outside activities
Feuring	Taunusanlage 9-10, 60329 Frankfurt am Main		
Ulrich Pukropski	Retired (Partner in	•	No outside activities

Financial Services)

Taunusanlage 9-10, 60329 Frankfurt am Main

Conflicts of Interest

There are no material potential conflicts of interest between any duties owed to the Issuer by the members of the Executive Board or the Supervisory Board of the Issuer identified above and their private interests and/or other obligations.

Accounting Method German GAAP (HGB)

Accounting Year Starting on 1 January, ending on 31 December

Fiscal Year Starting on 1 January, ending on 31 December

Other short term programmes of the Issuer

The Issuer has not set up any other commercial paper programmes or similar short term programmes.

P-1

Rating of the Issuer	Rating Agency	Long Rating	Term	Debt	Short Rating	Term	Debt
	S&P	A+			A-1		
	Fitch	A+			F1		

Moody's A1

Additional Information on the Issuer

The Issuer can be reached via telephone under +49 69 75 321 000 or via www.gs.de (whereby the information contained on such website shall not form part of this Base Prospectus).

The Issuer is supervised by the European Central Bank (ECB) within the context of the European Single Supervisory Mechanism, the Federal Financial Supervisory Authority (BaFin) and the Deutsche Bundesbank.

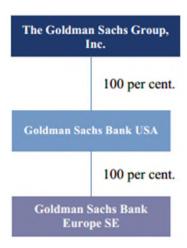
There have been no recent events particular to the Issuer which are to a material extent relevant to the evaluation of the Issuer's solvency.

It has the following legal entity identifier (LEI): 8IBZUGJ7JPLH368JE346.

Organisational Structure

The sole shareholder of the Issuer is Goldman Sachs Bank USA with its registered office in New York, New York which in turn is a wholly-owned subsidiary of The Goldman Sachs Group Inc. The Issuer has its registered office in Frankfurt am Main and branches in Amsterdam, Athens, Copenhagen, Dublin, London, Luxembourg, Madrid, Milan, Paris, Stockholm and Warsaw. A description of the branches' activities may be found in the section "Branches of the bank" on PDF-page 41 of the GSBE Annual Report 2021 (as defined in Section VII.1. below). The Goldman Sachs Group, Inc. together with its affiliated companies is a globally active financial institution. Through its offices in the USA and the leading financial centres of the world Group Inc. is active in the financial services industry and reports its activities in four 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 and also corporate lending, (ii) Global Markets which includes client execution activities related to making markets in credit products, interest rate products, mortgages, currencies, commodities and shares, (iii) Asset Management which includes in particular 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) Consumer & Wealth Management which includes a broad range of wealth advisory and banking services, including financial planning, investment management, deposit taking and lending.



Trend Information

Since the end of the last financial period for which financial information has been published (31 December 2021), there has been no significant change in the financial performance of the Issuer.

In 2021, the global economy continued to recover from the impact of the COVID-19 pandemic, as the distribution of vaccines helped facilitate an increase in global economic activity. Economic activity continued to benefit from ongoing fiscal stimulus from governments and continued accommodative monetary policy from global central banks. In the second half of the year, the growth in economic activity and demand for goods and services, alongside supply chain complications, contributed to inflationary pressures. Late in the year, the surge in Omicron cases sparked renewed concerns globally, contributing to increased market volatility and increased pressures on labor supply. This may result in a negative impact on economic activity.

As at the date of this Base Prospectus, despite broad improvements in the overall economy since the initial impact of the COVID-19 pandemic, uncertainty remains on the pace of the recovery going forward, reflecting concerns about virus resurgence from the Omicron variant and other possible variants and related concerns regarding vaccine distribution, efficacy and hesitancy, as well as concerns relating to inflation, supply chain complications and geopolitical risks.

Litigation

During the last 12 months, there were no governmental, legal or arbitration proceedings which may have, or have had in the recent past, significant effects on the Issuers financial position or profitability, and none of them were settled during the last 12 months, respectively. Neither are there any such proceedings pending or threatened of which the Issuer is aware.

Material Contracts

On 1 October 2021, GSW, the Issuer and GSI have entered into an agreement to transfer securities issued by GSW which are offered either in The Netherlands, Belgium and/or France or in Germany and Austria (the "**Transferred Securities**") to the Issuer. The transfer is based on the issuer substitution clause set forth in the terms and conditions in the related securities prospectuses for the respective Transferred Securities. GSW, the Issuer and GSI will publish notice(s) with respect to the transfer(s) of the securities (the "**Transfer Notice(s)**"). The transfer(s) will become effective on the date(s) the Transfer Notice(s) is/are published (each the "Effective Date"). The Transfer Notice(s) contain a list of the Transferred Securities. As of the Effective Date, the Issuer substitutes GSW as the new issuer and assumes all

obligations of GSW under or in connection with the Transferred Securities. At the same time GSW gives an unconditional and irrevocable guarantee for all obligations of the Issuer as new issuer of the Transferred Securities.

Auditors

The statutory auditor for the financial statements of the Issuer as of and for the financial year ended 31 December 2021 was Mazars GmbH & Co. KG Wirtschaftsprüfungsgesellschaft Steuerberatungsgesellschaft ("Mazars"), Theodor-Stern-Kai 1, 60596 Frankfurt am Main. The statutory auditor for the financial statements of the Issuer as of and for the financial year ended 31 December 2020 was PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft ("PwC"), Friedrich-Ebert-Anlage 35 – 37, 60327 Frankfurt am Main. Mazars and PwC are members of the German Chamber of Public Accountants (*Wirtschaftsprüferkammer*), a public body (*Körperschaft des öffentlichen Rechts*), Rauchstraße 26, 10787 Berlin.

INFORMATION CONCERNING THE ISSUER'S REQUEST FOR A STEP LABEL

An application to obtain a STEP label for this Programme will be made to the STEP Secretariat in relation to the A CDs eligible under the STEP Market Convention. Information as to whether the STEP label has been granted for this Programme may be made available on the STEP market website (www.stepmarket.org).

This website is not sponsored by the Issuer and the Issuer is not responsible for its content or availability.

Unless otherwise specified in this Base Prospectus, the expressions "STEP", "STEP Market Convention", "STEP label", "STEP Secretariat", and "STEP market website" shall have the meaning assigned to them in the Market Convention on Short-Term European Paper dated 19 May 2015 and adopted by Euribor-ACI – the Financial Markets Association and the European Money Markets Institute (as amended from time to time).

CERTIFICATION OF INFORMATION

Person responsible for the Base Prospectus

Goldman Sachs Bank Europe SE.

Declaration of the person(s) responsible for Base Prospectus

The Issuer certifies that, to the best of its knowledge, the information contained in the Base Prospectus and its supplements, if any, is in accordance with the facts and the Base Prospectus makes no omission likely to affect its import, and does not contain any misrepresentation that would make it misleading.

Date, Place of Signature, Signature

28 September 2022, Frankfurt am Main

Name: Max Kirchner

Title: Managing Director

Name: Dr. Tobias Wohlfarth

Title: Executive Director and Counsel

FINANCIAL INFORMATION CONCERNING THE ISSUERS ASSETS AND LIABILITIES, FINANCIAL POSITION AND PROFIT AND LOSSES

1. Historical financial information for the financial year 2021 (German Commercial Code (Handelsgesetzbuch - HGB))

The annual financial statements and the management report of GSBE for the financial year ended 31 December 2021 (German Commercial Code (*Handelsgesetzbuch – HGB*)) ("**GSBE Annual Report 2021**") are incorporated by reference pursuant to Article 19 of the Prospectus Regulation (detailed information about the pages in the financial statements can be found in section "Information incorporated by reference").

2. Historical financial information for the financial year 2020 (German Commercial Code (Handelsgesetzbuch - HGB))

The annual financial statements and the management report of GSBE for the financial year ended 31 December 2020 (German Commercial Code (*Handelsgesetzbuch – HGB*)) ("**GSBE Annual Report 2020**") are incorporated by reference pursuant to Article 19 of the Prospectus Regulation (detailed information about the pages in the financial statements can be found in section "Information incorporated by reference").

3. Auditing of historical financial information

Mazars audited the annual financial statements of the Issuer as of and for the financial year ended 31 December 2021 and PwC audited the annual financial statements of the Issuer as of and for the financial year ended 31 December 2020. Mazars and PwC issued in each case an unqualified auditor's report (*Bestätigungsvermerk*).

4. Significant change in the Issuers financial position

Since the end of the last financial period for which financial information have been published (31 December 2021), there has been no significant change of the financial position of the Issuer.

5. No material adverse change

There has been no material adverse change in the prospects of the Issuer since 31 December 2021.

6. Statements in relation to prospects, financial performance or financial position

In this Base Prospectus, where the Issuer makes statements that "there has been no material adverse change in the prospects", "there has been no significant change in the financial performance" and "no significant change in the financial position" of the Issuer, references in these statements to the "prospects", "financial performance" and "financial position" of the Issuer are specifically to the respective ability of the Issuer to meet its full payment obligations under the Securities in a timely manner. Material information about the Issuers prospects, financial performance and financial position is included in the GSBE Annual Report 2021 and the GSBE Annual Report 2020, which are incorporated by reference pursuant to Article 19 of the Prospectus Regulation into this Base Prospectus (detailed information about the pages in the financial statements can be found in section "Information incorporated by reference").

ADDITIONAL INFORMATION

1. Capitalisation

As of the date of this Base Prospectus the Issuers ordinary share capital amounts to EUR 328,642,800. The Issuers equity (German GAAP) as of 31 December 2021 amounted to EUR 5,750,659,633. The sole shareholder of the Issuer is Goldman Sachs Bank USA with its registered office in New York, New York. The ordinary share capital is recognized at nominal value and is fully paid in.

2. Credit Ratings

The credit ratings of the Issuer¹ referred to in the Base Prospectus have been issued by Fitch, Moody's and S&P, none of which entities is established in the European Union or registered under the CRA Regulation. In general, European regulated investors are restricted from using a rating for regulatory purposes if such rating is not either (1) issued or validly endorsed by a credit rating agency established in the European Union and registered with the ESMA under the CRA Regulation) or (2) issued by a credit rating agency established outside the European Union which is certified under the CRA Regulation. The EU affiliates of Fitch, Moody's and S&P are registered under the CRA Regulation. The ESMA has approved the endorsement by such EU affiliates of credit ratings issued by DBRS, Fitch, Moody's and S&P. Accordingly, credit ratings issued by Fitch, Moody's and S&P may be used for regulatory purposes in the EU.

Credit ratings may be adjusted over time, and there is no assurance that these credit ratings will be effective after the date of the Base Prospectus. A credit rating is not a recommendation to buy, sell or hold any securities.

Short-term debt:

Fitch, Inc rating was F1: An 'F1' rating indicates the highest short-term credit quality and the strongest intrinsic capacity for timely payment of financial commitments; may have an added '+' to denote any exceptionally strong credit feature.

Moody's rating was P-1: 'P-1' issuers (or supporting institutions) rated Prime-1 have a superior ability to repay short-term debt obligations. S&P rating was A-1: A short-term obligation rated 'A-1' is rated in the highest category by Standard & Poor's. The obligor's capacity to meet its financial commitment on the obligation is strong. Within this category, certain obligations are designated with a plus sign (+). This indicates that the obligor's capacity to meet its financial commitment on these obligations is extremely strong.

Long-term debt:

Fitch, Inc rating was A: An 'A' rating indicates high credit quality and denotes expectations of low default risk. The capacity for payment of financial commitments is considered strong. This capacity may, nevertheless, be more vulnerable to adverse business or economic conditions than is the case for higher ratings.

Moody's rating was A1: Obligations rated 'A' are considered upper-medium grade and are subject to low credit risk. Note: Moody's appends numerical modifiers 1, 2, and 3 to each generic rating classification from 'Aa' through 'Caa'. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic rating category.

S&P rating was A+: An obligation rated 'A' is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligations in higher-rated categories. However, the obligor's capacity to meet its financial commitment on the obligation is still strong. The ratings from 'AA' to 'CCC' may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within the major rating categories.

¹ The information for this rating has been extracted from information made available by each rating agency referred to below. The Issuer confirms that such information has been accurately reproduced and that, so far as it is aware, and is able to ascertain from information published by such ratings agencies, no facts have been omitted which would render the reproduced information inaccurate or misleading. As at the date of the Base Prospectus the ratings for the Issuer were:

DOCUMENTS AVAILABLE

During the validity of the Base Prospectus, the following documents may be inspected in electronic form on the following websites:

- (1) the up-to-date Articles of Association of Goldman Sachs Bank Europe SE dated 6 July 2022 at: https://www.goldmansachs.com/investor-relations/financials/subsidiary-financial-info/gsbe/2022/GSBE-HV-Satzung-Juli-2022-Satzung.pdf;
- (2) the GSBE Annual Report 2021 at: https://www.goldmansachs.com/investor-relations/financials/subsidiary-financial
 - info/gsbe/2021/gsbe-12-31-21-financial-statements-english.pdf;
- https://www.goldmansachs.com/investor-relations/financials/current/subsidiary-financial-info/gsbe/gsbe-12-31-20-financial-statements-english.pdf;
- (4) the Base Prospectus and any supplements thereto at: www.bourse.lu;

the GSBE Annual Report 2020 at:

(3)

- (5) any Final Terms relating to the CDs which are listed on Luxembourg Stock Exchange at: www.bourse.lu; and
- (6) all other reports, letters and other documents, valuations and statements prepared by any expert at the Issuer's request any part of which is included or referred to in this Base Prospectus at:

 https://www.goldmansachs.com/disclosures/gsbank-europe-se-disclosures.html.

A copy of this Base Prospectus and any supplements thereto will be available for inspection for a period of 10 years following the date of this Base Prospectus at Taunusanlage 9-10 (Marienturm), 60329 Frankfurt am Main.

Information contained on such websites shall not form part of this Base Prospectus and has not been scrutinized or approved by a competent authority pursuant to Article 2(o) of the Prospectus Regulation (the "Competent Authority"), unless specified differently in section "Information incorporated by reference" below.

INFORMATION INCORPORATED BY REFERENCE

The Base Prospectus should be read and construed in conjunction with the information incorporated by reference into this Base Prospectus. The information set forth under 2. (Information) below contained in the documents set forth under 1. (Documents) below which have been previously published and filed with the Competent Authority or the German Federal Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht* (the "**BaFin**")) and which is hereby incorporated by reference into this Base Prospectus and deemed to form a part of this Base Prospectus.

1. **Documents**

- the registration document of the Issuer dated 20 July 2022 approved by BaFin (the "GSBE Registration Document");
- the annual financial statements and management report of the Issuer 2021 (the "Annual Financial Statements 2021"); and
- the annual financial statements and management report of the Issuer 2020 (the "Annual Financial Statements 2020").

2. **Information**

The table below sets out the relevant page references for the information incorporated into this Base Prospectus by reference. Information contained in the documents is incorporated by reference into this Base Prospectus. Insofar as reference is made to certain parts of the documents only these parts shall form part of the Base Prospectus and all other information contained in the documents is either not relevant for the investor or is covered elsewhere in this Base Prospectus.

Inform	ation incorporated by reference	Page references in the Document*	Section and pages in this Base Prospectus
GSBE I	Registration Document		
Risk fac	ctors relating to GSBE	pages 3-40	Risk Factors, page 12/13
I. Liqui	dity Risks	pages 3-7	Risk Factors, page 12/13
1.	Loss of deposits could increase GSBE's funding costs and adversely affect GSBE's liquidity and ability to grow GSBE's business.	pages 3-4	Risk Factors, page 12/13
2.	GSBE's businesses have been and may in the future be adversely affected by disruptions or lack of liquidity in the credit markets, including reduced access to credit and higher costs of obtaining credit.	page 4	Risk Factors, page 12/13
3.	GSBE's liquidity, profitability and businesses may be adversely affected by an inability of GSBE's immediate parent, Goldman Sachs Bank USA and ultimate parent, The Goldman Sachs Group, Inc. to access the debt capital markets or to sell assets.	pages 4- 5	Risk Factors, page 12/13

4.	Reductions in the credit ratings or an increase in the credit spreads of GSBE or its immediate parent, GS Bank USA or the ultimate parent, or the ultimate parent, Group Inc., may adversely affect GSBE's liquidity and cost of funding.	pages 5-6	Risk Factors, page 12/13
II. Marl	ket Risks	pages 7-13	Risk Factors, page 12/13
1.	GSBE's businesses have been and may in the future be adversely affected by conditions in the global financial markets and broader economic conditions.	pages 7-8	Risk Factors, page 12/13
2.	GSBE's businesses have been and may in the future be adversely affected by declining asset values, particularly where GSBE has net "long" positions, or receives or posts.	pages 8-9	Risk Factors, page 12/13
3.	GSBE's market-making activities have been and may in the future be affected by changes in the levels of market volatility.	page 10	Risk Factors, page 12/13
4.	GSBE's investment banking and investment management businesses have been adversely affected and may in the future be adversely affected by market uncertainty or lack of confidence among investors and CEOs due to declines in economic activity and other unfavorable economic, geopolitical or market conditions.	page 10	Risk Factors, page 12/13
5.	GSBE's asset management and wealth management business has been and may in the future be adversely affected by the poor investment performance of its investment products or a client preference for products other than those which GSBE offers or for products that generate lower fees.	page 11	Risk Factors, page 12/13
6.	Changes in market interest rates could adversely affect GSBE's revenues and expenses, the value of assets and obligations, and the availability and cost of funding.	page 11	Risk Factors, page 12/13
III. Cre	dit Risks	pages 13-17	Risk Factors, page 12/13
1.	GSBE's businesses, profitability and liquidity may be adversely affected by deterioration in the credit quality of or defaults by third parties.	pages 13-14	Risk Factors, page 12/13
2.	Concentration of risk increases the potential for significant losses in	page 14	Risk Factors, page 12/13

	GSBE's market-making, underwriting, financing and lending activities.		
3.	Derivative transactions and delayed documentation or settlements may expose GSBE to credit risk, unexpected risks and potential losses.	page 15-16	Risk Factors, page 12/13
4.	GSBE might underestimate the credit losses inherent in its loan portfolio and have credit losses in excess of the amount reserved.	page 16	Risk Factors, page 12/13
IV. Operational Risks		pages 17-26	Risk Factors, page 12/13
1.	A failure in GSBE's operational systems or infrastructure, or those of third parties or Group Inc.'s affiliates, as well as human error, malfeasance or other misconduct, could impair its liquidity, disrupt its businesses, result in the disclosure of confidential information, damage its reputation and cause losses.	pages 17-20	Risk Factors, page 12/13
2.	A failure to protect GSBE's computer systems, networks and information, and its clients' information, against cyber attacks and similar threats could impair its ability to conduct its businesses, result in the disclosure, theft or destruction of confidential information, damage its reputation and cause losses.	pages 20-22	Risk Factors, page 12/13
3.	GSBE may incur losses as a result of ineffective risk management processes and strategies.	pages 22-23	Risk Factors, page 12/13
4.	GSBE may incur losses as a result of unforeseen or catastrophic events, including pandemics, terrorist attacks, extreme weather events or other natural disasters.	page 24	Risk Factors, page 12/13
5.	GSBE is reliant on Group Inc. and other of its affiliates for client business, various services, liquidity and capital.	page 24	Risk Factors, page 12/13
V. Legal and Regulatory Risks		pages 26-35	Risk Factors, page 12/13
1.	GSBE's businesses and those of its clients, are subject to extensive and pervasive regulation in various jurisdictions in which GSBE or its branches operate.	pages 26-28	Risk Factors, page 12/13
2.	As a significant credit institution within the Eurozone, GSBE operates under an extensive regulatory regime, including direct supervision by the ECB.	pages 29-30	Risk Factors, page 12/13

3.	GSBE is subject to resolution and recovery regulation and planning in Europe and Germany.	pages 30-32	Risk Factors, page 12/13
4.	A failure to appropriately identify and address potential conflicts of interest could adversely affect GSBE's businesses.	page 32	Risk Factors, page 12/13
5.	Substantial civil or criminal liability or significant regulatory action against GSBE could have material adverse financial effects, or cause significant reputational harm, which in turn could seriously harm its business prospects.	page 33	Risk Factors, page 12/13
6.	In conducting its business in various jurisdictions, GSBE is subject to political, legal, regulatory and other risks that are inherent in operating in many countries.	page 34	Risk Factors, page 12/13
7.	The application of regulatory strategies and requirements to facilitate the orderly resolution of large financial institutions could create greater risk of loss for GSBE's security holders.	page 34	Risk Factors, page 12/13
VI. Competition Risks		pages 35-37	Risk Factors, page 12/13
1.	GSBE's results have been and may in the future be adversely affected by the composition of its client base.	page 35	Risk Factors, page 12/13
2.	The financial services industry is highly competitive.	pages 35-36	Risk Factors, page 12/13
3.	GSBE's businesses would be adversely affected if it was unable to hire and retain qualified employees.	pages 36-37	Risk Factors, page 12/13
VII. Market Developments and General Business Environment Risks		pages 38-40	Risk Factors, page 12
1.	GSBE's businesses, financial condition, liquidity and results of operations have been and may in the future be adversely affected by the COVID-19 pandemic.	pages 38-39	Risk Factors, page 12/13
2.	GSBE may be adversely affected by negative publicity.	page 39	Risk Factors, page 12/13
3.	Certain of GSBE's businesses, its funding instruments and financial products may be adversely affected by changes in other reference rates, currencies, indices, baskets or exchange-traded funds to which products it offers or funding it raises are linked.	page 40	Risk Factors, page 12/13

4. Climate change could disrupt GSBE's businesses, adversely affect client activity levels, and the creditworthiness of its clients, counterparties and GSBE's efforts to address concerns relating to climate change could result in damage to its reputation.	pages 40-41	Risk Factors, page 12/13	
5. GSBE faces enhanced risks as new business initiatives and acquisitions lead it to engage in new activities, operate in new locations, transact with a broader array of clients and counterparties and expose it to new assets, activities and new markets.	page 41	Risk Factors, page 12/13	
GSBE Annual Report 2021			
Branches of the bank	page 40	Description of the Issuer, Organisational Structure, page 22/23	
Management Report for the Financial Year 2021	pages 2-29	Financial Information concerning the Issuers assets and liabilities, financial position and	
Balance Sheet	page 29		
Income Statement for the Financial Year 2021	page 30	profit and losses, page 27	
Notes to the Financial Statements	pages 32-40		
Independent auditors' report	pages 41-47		
GSBE Annual Report 2020	pages 41-47		
Management Report for the Financial Year 2020	pages 3-23	Financial Information concerning the Issuers	
Balance Sheet	page 24	assets and liabilities, financial position and profit and losses, page 27	
Income Statement for the Financial Year 2020	page 25		
Notes to the Financial Statements	pages 26-33		
Independent auditors' report	pages 34-37		

^{*} The page numbers referenced above relate to the order in which the pages appear in the PDF version of such document.

The GSBE Registration Document has been published on the website https://www.gs.de/en/services/documents/registration and can be downloaded on this page.

 $\label{thm:composition} The $GSBE$ Annual Report 2021 has been published on the website $$ $https://www.goldmansachs.com/investor-relations/financials/subsidiary-financial-info/gsbe/2021/gsbe-12-31-21-financial-statements-english.pdf.$

The GSBE Annual Report 2020 has been published on the website https://www.goldmansachs.com/investor-relations/financials/current/subsidiary-financial-info/gsbe/gsbe-12-31-20-financial-statements-english.pdf.

TERMS AND CONDITIONS OF THE A CDS

Each A CD issued under the Programme will be subject to the following terms and conditions that, subject to completion and amendment and as supplemented or varied in accordance with the applicable Final Terms, shall be applicable to bearer A CDs in definitive form (if any) issued in exchange for a Global A CD representing the relevant issue of A CDs. The applicable Final Terms will be attached to each Global A CD and each bearer A CD in definitive form. The following terms and conditions of A CDs must be read in conjunction with this Base Prospectus and the relevant Global A CD and the Final Terms attached thereto:

§ 1 Currency, Denomination, Form, Definitions

(1) Currency, Denomination.

This series of notes (the "A CDs") of Goldman Sachs Bank Europe SE (the "Issuer") is issued in the currency specified in the Final Terms in the aggregate principal amount and the denomination (the "Nominal Amount") specified in the Final Terms, with a minimum denomination of EUR 100,000 (or the equivalent in any other currency) unless otherwise specified in the applicable Final Terms and integral multiples thereof as specified in the applicable Final Terms (subject in each case to compliance with all applicable legal and regulatory requirements).

(2) Minimum Issuance Amount.

The minimum aggregate principal amount will be EUR 100,000 (or the equivalent in any other currency).

(3) Form.

The A CDs are being issued in bearer form.

(4) A CD Global.

The A CDs will initially be represented by one or more global A CDs without coupons (each, a "Global A CD" and together, the "Global A CDs"). The Global A CDs shall each be signed by authorised signatories of the Issuer and shall each be authenticated by or on behalf of the Paying Agent. Definitive notes and interest coupons will not be issued.

(5) Relevant Clearing System.

The Global A CD will be deposited with a common depositary or, as the case may be, a Common Safekeeper for Euroclear, Clearstream or any other STEP recognised.

(6) **Definitions.**

"Common Safekeeper" means, in respect of any Global A CD which is in new global form, the common safekeeper which is appointed by the Relevant Clearing Systems in respect thereof, if such Global A CD is in new global form and intended to be held in a manner that would allow Eurosystem eligibility, the common safekeeper which is appointed for the Issuer and eligible to hold such Global A CD for the purpose of the requirements relating to collateral for Eurosystem monetary and intra-day credit operations. If the common safekeeper as at the relevant issue date ceases to be so eligible after the relevant issue date, the relevant A CDs will no longer qualify for Eurosystem eligibility unless a new common safekeeper is appointed who is so eligible.

"**Holder**" means any holder of a proportionate co-ownership or other beneficial interest or fight in the A CDs.

"Relevant Clearing System" means Euroclear Bank S.A./N.V. ("Euroclear") and/or Clearstream Banking S.A. ("Clearstream") and/or or any other clearing system as may be specified in the Final Terms.

§ 2 Status, Title and Transfer

(1) Status of the A CDs.

The A CDs shall represent direct, unconditional, unsubordinated and unsecured obligations of the Issuer and shall at all times rank *pari passu* with all other present and future unsubordinated and unsecured obligations for funds borrowed or guaranteed by the Issuer (other than in the case of obligations preferred by mandatory provisions of law).

(2) *Title and Transfer.*

Definitive securities and interest coupons will not be issued and the right of the Holders to request the issue and delivery of definitive securities shall be excluded. The Holders shall receive co-ownership participations or rights in the Global A CDs which are transferable in accordance with applicable law and the rules and regulations of the Relevant Clearing System.

§ 3 Interest

(1) Rate of Interest and Interest Payment Dates.

The applicable Final Terms will specify if the A CDs may accrue interest on a fixed rate basis, a floating rate basis or be non-interest bearing A CDs.

The "Interest Rate" payable from time to time in respect of A CDs issued on a fixed rate basis will be specified in the applicable Final Terms.

The "Interest Rate" payable from time to time in respect of A CDs issued on a floating rate basis will be determined in the manner specified in the applicable Final Terms and the provisions below.

"Interest Payment Date" shall be each date specified as such in the applicable Final Terms.

(2) Interest Commencement Date.

The "Interest Commencement Date" is the Issue Date or as otherwise specified in the Final Terms.

(3) **Interest Period.**

The "Interest Period" shall be each period from and including the Interest Commencement Date for the A CDs to but excluding the first Interest Payment Date for the A CDs, and each successive period from and including the first day following the end of the preceding Interest Period to but excluding the following Interest Payment Date until the principal of the A CDs is paid or made available for payment. An Interest Period may be adjusted or unadjusted in accordance with the provision in § 4(4).

(4) Interest Amount Payable.

Interest due on the Interest Payment Date will be an amount equal to the product of (a) the aggregate nominal amount of A CDs outstanding on the first day of the Interest Period, (b) the Day Count Fraction, and (c) the Interest Rate as specified in the applicable Final Terms. Interest due will be rounded up or down as specified in the applicable Final Terms, in such units as specified in the applicable Final Terms.

(5) Reference Rates

Reference Rates for A CDs with a floating rate and Screen Rate Determination

If the applicable Final Terms specify Screen Rate Determination as applicable for the A CDs issued on a floating rate basis, the "**Reference Rate**" shall be either:

- a) the Euro zone interbank offered rate ("**EURIBOR**");
- b) SOFR (as defined below);
- c) SONIA (as defined below);
- d) €STR (as defined below), or
- e) any other reference rate as may be selected by the Issuer, in each case, as specified in the applicable Final Terms.

The Interest Rate for each Interest Period will be the rate determined by the Calculation Agent and as specified in the applicable Final Terms for the Reference Rate (a) (in the case of A CDs where the Reference Rate is specified in the applicable Final Terms as EURIBOR) which appears on the Relevant Screen Page as at 11:00 a.m. (Brussels time) on the day that is two TARGET Banking Days preceding the Interest Reset Date; or (b) (in the case of A CDs where the Reference Rate is specified in the applicable Final Terms as SOFR, SONIA or €STR), as determined in accordance with the following provisions, in each case, plus or minus the spread (if any) specified in the applicable Final Terms.

EURIBOR

If, in the case of A CDs where the Reference Rate is specified in the applicable Final Terms as EURIBOR, such rate does not appear on the Relevant Screen Page, the Interest Rate will be the rate as determined by the Calculation Agent on the basis of the rates at which deposits in euro are offered by the Reference Banks at approximately 11:00 a.m. (Brussels time) on the day that is two TARGET Banking Days preceding the Interest Reset Date to prime banks in, the Eurozone inter-bank market for a period equal to that which would have been used for the Reference Rate, commencing on the Interest Reset Date and in a Representative Amount. The Calculation Agent will request the principal Euro-zone office of each of the Reference Banks to provide a quotation of its rate. If at least two such quotations are provided, the Interest Rate for that Interest Reset Date will be the arithmetic mean of the quotations. If fewer than two quotations are provided as requested, the Interest Rate for that Interest Reset Date will be the arithmetic mean of the rates quoted by major banks in New York City, selected by the Calculation Agent, at approximately 11:00 a.m. (New York City time) on the Interest Reset Date for loans in euro to leading European banks for a period equal to that which would have been used for the Reference Rate, commencing on the Interest Reset Date and in a Representative Amount.

SOFR, SONIA or €STR

In respect of A CDs where the applicable Final Terms specify that the Reference Rate is SOFR, SONIA or €STR, the Interest Rate for each Interest Period will be the rate determined by the Calculation Agent and as specified in the applicable Final Terms as follows plus or minus the spread (if any) specified in the applicable Final Terms:

(A) Where the Calculation Method is specified in the applicable Final Terms as being "Compounded Daily (Non-Index Determination)", the Reference Rate for each Interest Period will, subject as provided below, be the Compounded Daily Reference Rate, as determined by the Calculation Agent.

As used in this provision:

"Compounded Daily Reference Rate" means, with respect to an Interest Period, the rate of return of a daily compound interest investment (with SOFR, SONIA or €STR as the Reference Rate for the calculation of interest as specified in the

applicable Final Terms), which will be calculated by the Calculation Agent, as at the relevant Reference Rate Determination Date as follows, and the resulting percentage will be rounded, if necessary, (in the case of SONIA) to the fourth decimal place, with 0.00005 being rounded upwards and (in the case of SOFR or €STR) to the fifth decimal place, with 0.000005 being rounded upwards:

$$\left[\prod_{i=1}^{d_0} (1 + \frac{r_i - p^{BD} x n_i}{D}) \right] x \frac{D}{d}$$

where:

"Business Day" or "BD" means (i) where "SOFR" is specified as the Reference Rate in the applicable Final Terms, a US Government Securities Business Day; (ii) where "SONIA" is specified as the Reference Rate in the applicable Final Terms, a London Banking Day; and (iii) where "€STR" is specified as the Reference Rate in the applicable Final Terms, a TARGET Banking Day;

"D" is the number specified in the applicable Final Terms;

"d" means (where "Lag" or "Lock-out" is specified in the applicable Final Terms as the Observation Method) the number of calendar days in the relevant Interest Period or (where "Shift" is specified in the applicable Final Terms as the Observation Method) the number of calendar days in the relevant Observation Period;

"d₀" means (where "Lag" or "Lock-out" is specified in the applicable Final Terms as the Observation Method) the number of Business Days in the relevant Interest Period, or (where "Shift" is specified in the applicable Final Terms as the Observation Method) the number of Business Days in the relevant Observation Period;

"*ECB's Website*" means the website of the European Central Bank currently at http://www.ecb.europa.eu, or any successor website officially designated by the European Central Bank (any information on the ECB's website does not form part of the Base Prospectus and has not been scrutinised or approved by the competent authority unless incorporated by reference into the Base Prospectus);

"ESTR" means, in respect of any Business Day, a reference rate equal to the daily euro short-term rate as provided by the European Central Bank, as administrator of such rate (or any successor administrator of such rate), on the ECB's Website, in each case on or before 9:00 a.m. (Central European Time) on the Business Day immediately following such Business Day;

"i" means a series of whole numbers from one to " d_0 ", each representing the relevant Business Day in chronological order from, and including, the first Business Day (where "Lag" or "Lock-out" is specified in the applicable Final Terms as the Observation Method) in the relevant Interest Period or (where "Shift" is specified in the applicable Final Terms as the Observation Method) in the relevant Observation Period;

"London Banking Day" means any day on which commercial banks are open for general business (including dealing in foreign exchange and foreign currency deposits) in London;

" n_i " means, for any Business Day "i", the number of calendar days from, and including, such Business Day "i" up to, but excluding, the following Business Day;

"New York Fed's Website" means the website of the Federal Reserve Bank of New York currently at http://www.newyorkfed.org, or any successor website officially designated by the Federal Reserve Bank of New York (any information

on the New York Fed's website or any successor website does not form part of the Base Prospectus and has not been scrutinised or approved by the competent authority unless incorporated by reference into the Base Prospectus);

"Observation Period" means, in respect of an Interest Period, the period from, and including, the date which is "p" Business Days prior to the first day of the relevant Interest Period (and the first Interest Period shall begin on, and include, the Issue Date) and ending on, but excluding, the date which is "p" Business Days prior to the Interest Payment Date for such Interest Period (or the date falling "p" Business Days prior to such earlier date, if any, on which the applicable Global A CD becomes due and payable);

"p" means, for any Interest Period (unless otherwise specified in the applicable Final Terms):

- (1) where "Lag" or "Shift" is specified as the Observation Method in the applicable Final Terms, the number of Business Days included in the Observation Look-back Period specified in the applicable Final Terms (or, if no such number is specified, five Business Days); or
- (2) where "Lock-out" is specified as the Observation Method in the applicable Final Terms, zero;

"Reference Rate Determination Date" means the date falling "p" Business Days prior to each Interest Reset Date;

"**r**" means:

- (1) where "Lag" or "Shift" is specified as the Observation Method in the applicable Final Terms, in respect of any Business Day, the Reference Rate in respect of such Business Day;
- (2) where "Lock-out" is specified as the Observation Method in the applicable Final Terms, in respect of any Business Day "i" falling in the relevant Interest Period, the Reference Rate for the Business Day immediately preceding such day; and in respect of any Business Day "i" falling on or after the "Lock-out Date" specified in the applicable Final Terms (or, where no "Lock-out Date" is specified, five Business Days prior to each Interest Reset Date), the Reference Rate in respect of the Business Day immediately preceding the last Business Day in the relevant Interest Period (such last Business Day coinciding with the relevant Reference Rate Determination Date);

"*ri-p^{BD}*" means, in relation to any Interest Period, the applicable Reference Rate as set out in the definition of "r" above for, where "Lag" is specified as the Observation Method in the applicable Final Terms, the Business Day (being a Business Day falling in the relevant Observation Period) falling "p" Business Days prior to the relevant Business Day "i" or, where "Lock-out" or "Shift" is specified as the Observation Method in the applicable Final Terms, the relevant Business Day "i";

"SOFR" means, in respect of any Business Day, a reference rate equal to the daily Secured Overnight Financing Rate as provided by the Federal Reserve Bank of New York ("New York Fed"), as the administrator of such rate (or any successor administrator of such rate) on the New York Fed's Website, in each case on or about 5:00 p.m. (New York City Time) on the Business Day immediately following such Business Day;

"SONIA" means, in respect of any Business Day, a reference rate equal to the daily Sterling Overnight Index Average for such Business Day as provided by the administrator of SONIA to authorised distributors and as then published on the Relevant Screen Page or, if the Relevant Screen Page is unavailable, as otherwise

published by such authorised distributors, in each case on the Business Day immediately following such Business Day; and

"US Government Securities Business Day" means any day except for a Saturday, Sunday or a day on which the Securities Industry and Financial Markets Association recommends that the fixed income departments of its members be closed for the entire day for purposes of trading in U.S. government securities.

(B) Where the Calculation Method is specified in the applicable Final Terms as being "Weighted Average", the Reference Rate for each Interest Period will, subject as provided below, be the Weighted Average Reference Rate, as determined by the Calculation Agent.

As used in this provision:

"Weighted Average Reference Rate" means, with respect to any Interest Period, the arithmetic mean of SOFR, SONIA or €STR in effect during such Interest Period as specified in the applicable Final Terms, which will be calculated by the Calculation Agent as at the relevant Reference Rate Determination Date as follows, and the resulting percentage will be rounded, if necessary, (in the case of SONIA) to the fourth decimal place, with 0.00005 being rounded upwards and (in the case of SOFR or €STR) to the fifth decimal place, with 0.000005 being rounded upwards:

$$\left[\sum_{i=1}^{d_o} \left(\frac{r_i - p^{BD} \times n_i}{D}\right)\right] \times \frac{D}{d}$$

where:

"Business Day", "BD", "D", "d", " d_0 ", "i", "n" and "p" have the meanings given to them in the provision relating to "Compounded Daily Reference Rate" specified above;

" r_{i-p}^{BD} " means (unless otherwise specified in the applicable Final Terms):

- (1) (where "Lag" is specified as the Observation Method in the applicable Final Terms) in respect of any Business Day "i" falling in the relevant Interest Period, the relevant Reference Rate for the Business Day falling "p" Business Days prior to such day "i";
- (2) (where "Lock-out" is specified as the Observation Method in the applicable Final Terms) the Reference Rate determined in accordance with paragraph a) above, except that in respect of each Business Day "i" falling on or after the "Lock-out Date" specified in the applicable Final Terms (or, where no "Lock-out Date" is specified, five Business Days prior to each Interest Reset Date) until the end of each relevant Interest Period, the relevant Reference Rate determined in accordance with paragraph a) above in respect of such "Lock-out Date"; and
- (3) (where "Shift" is specified as the Observation Method in the applicable Final Terms) in respect of any Business Day "i" falling in the relevant Observation Period, the relevant Reference Rate in respect of such day "i"; and

"Reference Rate Determination Date" means (unless otherwise defined in the applicable Final Terms) the date falling five Business Days prior to each Interest Payment Date.

(C) Where "SOFR" is specified as the Reference Rate in the applicable Final Terms and the Calculation Method is specified in the applicable Final Terms as being "Compounded Daily (Non-Index Determination)", if, in respect of any Business

Day, the Calculation Agent determines the Reference Rate is not available, such Reference Rate shall be SOFR for the first preceding Business Day on which SOFR was published on the Relevant Screen Page and "r" shall be interpreted accordingly.

- (D) Where "SONIA" is specified as the Reference Rate in the applicable Final Terms and the Calculation Method is specified in the applicable Final Terms as being "Compounded Daily (Non-Index Determination)", if, in respect of any Business Day in the relevant Interest Period or Observation Period, the Calculation Agent determines SONIA is not available on the Relevant Screen Page and has not otherwise been published by the relevant authorised distributors, such Reference Rate shall be:
 - (1) (i) the Bank of England's Bank Rate (the "*Bank Rate*") prevailing at 5:00 p.m. (London time) on the relevant Business Day; plus (ii) the mean of the spread of SONIA to the Bank Rate over the previous five days on which SONIA has been published, excluding the highest spread (or, if there is more than one highest spread, one only of those highest spreads) and lowest spread (or, if there is more than one lowest spread, one only of those lowest spreads) to the Bank Rate; or
 - (2) if such Bank Rate is not available, SONIA published on the Relevant Screen Page (or otherwise published by the relevant authorised distributors) for the first preceding Business Day on which SONIA was published on the Relevant Screen Page (or otherwise published by the relevant authorised distributors),

and, in each case, "r" shall be interpreted accordingly.

- (E) Where "€STR" is specified as the Reference Rate in the applicable Final Terms and the Calculation Method is specified in the applicable Final Terms as being "Compounded Daily (Non-Index Determination)", if, in respect of any Business Day, the Calculation Agent determines the Reference Rate is not available, such Reference Rate shall be €STR for the first preceding Business Day on which €STR was published on the Relevant Screen Page and "r" shall be interpreted accordingly.
- (F) In the event that the Reference Rate cannot be determined in accordance with the foregoing provisions, the Reference Rate shall be (i) that determined as at the last preceding Reference Rate Determination Date to which the foregoing provisions shall have applied or (ii) if there is no such preceding Reference Rate Determination Date, the initial Reference Rate which would have been applicable to the relevant A CDs for the first Interest Period had the relevant A CDs been in issue for a period equal in duration to the scheduled first Interest Period but ending on (and excluding) the Issue Date.
- (G) Where the Calculation Method is specified in the applicable Final Terms as being "Compounded Daily (Index Determination)", the Reference Rate for each Interest Period will, subject as provided below, be the Compounded Daily Reference Rate, as determined by the Calculation Agent.

As used in this provision:

"Compounded Daily Reference Rate" means, with respect to an Interest Period, the rate of return of a daily compound interest investment (with SOFR or SONIA as the Reference Rate for the calculation of interest as specified in the applicable Final Terms), which will be calculated by the Calculation Agent, as at the relevant Reference Rate Determination Date as follows, and the resulting percentage will be rounded, if necessary, (in the case of SONIA) to the fourth decimal place, with 0.00005 being rounded upwards and (in the case of SOFR) to the fifth decimal place, with 0.000005 being rounded upwards:

$$\left(\frac{Reference\ Rate\ Compounded\ index_{End}}{Referenace\ Rate\ Compounded\ Index_{Start}}-1\right)x\ \frac{D}{d}$$

where:

"Business Day" or "BD" means (i) where "SOFR" is specified as the Reference Rate in the applicable Final Terms, a US Government Securities Business Day; and (ii) where "SONIA" is specified as the Reference Rate in the applicable Final Terms, a London Banking Day;

"D" is the number specified in the applicable Final Terms;

"d" means the number of calendar days from (and including) the day in relation to which Reference Rate Compounded Index_{Start} is determined to (but excluding) the day in relation to which Reference Rate Compounded Index_{End} is determined;

"London Banking Day" means any day on which commercial banks are open for general business (including dealing in foreign exchange and foreign currency deposits) in London;

"p" means, for any Interest Period (unless otherwise specified in the applicable Final Terms) five Business Days;

"Reference Rate Compounded Index" means:

- (1) where "SONIA" is specified as the Reference Rate and the Calculation Method is specified as "Compounded Daily (Index Determination) in the applicable Final Terms, the screen rate or index for compounded daily SONIA rates administered by the administrator of the SONIA reference rate that is published or displayed by such administrator or other information service from time to time on the relevant Reference Rate Determination Date, as further specified in the applicable Final Terms; and
- (2) where "SOFR" is specified as the Reference Rate and the Calculation Method is specified as "Compounded Daily (Index Determination)" in the applicable Final Terms, with respect to any U.S. Government Securities Business Day, the SOFR index value as published by the administrator of the SOFR reference rate as such index appears on the New York Fed's Website at or around 3.00 p.m. (New York time) on such US Government Securities Business Day;

"Reference Rate Compounded IndexStart" means, with respect to an Interest Period, the Reference Rate Compounded Index determined in relation to the day falling the Relevant Number of Business Days prior to the first day of such Interest Period;

"Reference Rate Compounded Index_{End}" means, with respect to an Interest Period, the Reference Rate Compounded Index determined in relation to the day falling the Relevant Number of Business Days prior to (A) the Interest Payment Date for such Interest Period, or (B) such other date on which the relevant payment of interest falls due (but which by its definition or the operation of the relevant provisions is excluded from such Interest Period);

"Reference Rate Determination Date" means the date falling "p" Business Days prior to each Interest Reset Date;

"*Relevant Number*" means the number specified as such in the applicable Final Terms (or, if no such number is specified, five); and

"US Government Securities Business Day" means any day except for a Saturday, Sunday or a day on which the Securities Industry and Financial Markets

Association recommends that the fixed income departments of its members be closed for the entire day for purposes of trading in U.S. government securities.

If the relevant Reference Rate Compounded Index is not published or displayed by the administrator of the Reference Rate or other information service by i) in respect of the SONIA reference rate, 5.00 p.m. (London time); or ii) in respect of the SOFR reference rate, 3.00 p.m. (New York time) (or, in each case, if later, by the time falling one hour after the customary or scheduled time for publication thereof in accordance with the then-prevailing operational procedures of the administrator of the Reference Rate or of such other information service, as the case may be) on the relevant Reference Rate Determination Date, the Compounded Daily Reference Rate for the applicable Interest Period for which the Reference Rate Compounded Index is not available shall be "Compounded Daily Reference Rate (Non-Index Determination)" above and as if "Compounded Daily (Non-Index Determination)" were specified in the applicable Final Terms as the Calculation Method, and for these purposes: (i) the "Observation Method" shall be deemed to be "Shift" and (ii) the "Observation Look-Back Period" shall be deemed to be equal to the Relevant Number of Business Days, as if those alternative elections had been made in the applicable Final Terms.

Reference Rate Determination Date

If the Global A CD becomes due and payable prior to their Maturity Date, the final Reference Rate Determination Date shall be deemed to be the date on which the relevant Global A CD became due and payable and the Reference Rate on such Global A CD shall, for so long as such Global A CD remains outstanding, be that determined on such date.

Definitions

For the purposes of this provision, unless the context otherwise requires, the following defined terms shall have the meanings set out below:

"*TARGET Banking Day*" means any day on which TARGET2 (the Trans-European Automated Real-time Gross Settlement Express Transfer system) (or any successor transfer system, as determined by the Agent) is open for the settlement of payments in Euro.

"Interest Reset Date" means, with respect to an Interest Period, the first day of that Interest Period, as specified in the applicable Final Terms.

"London Banking Day" means any day on which commercial banks are open for general business (including dealings in foreign exchange and foreign currency deposits) in London, England.

"Reference Banks" means, in the case of a determination of EURIBOR, the principal Euro-zone office of four major banks in the Euro-zone inter-bank market, in each case selected by the Calculation Agent or as specified in the applicable Final Terms.

"Relevant Screen Page" means such page, section, caption, column or other part of a particular information service as may be specified in the applicable Final Terms, including any successor or replacement page, section, caption, column or other part of a particular information service.

"Representative Amount" means an amount that is representative for a single transaction in the relevant market at the relevant time.

"Specified Currency" means the currency specified as such in the applicable Final Terms.

The Issuer will procure that a notice specifying the Interest Rate payable in respect of each Interest Period be published as soon as practicable after the determination of the Interest Rate. Such notice will be delivered to the clearing systems.

Reference Rates for A CDs with a floating rate and ISDA Determination

If the applicable Final Terms specify ISDA Determination and Overnight Rates as applicable and the Reference Rate is either:

Overnight Rates

If the Reference Rate is either:

- a) GBP-SONIA;
- b) USD-SOFR;
- c) EUR-EuroSTR;
- d) CHF-SARON;
- e) HKD-HONIA;
- f) JPY-TONA;
- g) SGD-SORA;
- h) AUD-AONIA;
- i) USD-Federal Funds; or
- j) any other overnight reference rate selected by the Issuer that is designated an Overnight Rate in the Floating Rate Matrix,

the Interest Rate from time to time will be determined in accordance with the provisions below.

The Interest Rate for each Interest Period will be the rate determined by the Calculation Agent as the Reference Rate specified in the applicable Final Terms and determined in accordance with the following provisions plus or minus the spread (if any) specified in the applicable Final Terms:

- (A) Where GBP-SONIA is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is SONIA, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for GBP-SONIA in the Compounding/Averaging Matrix;
- (B) Where USD-SOFR is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is SOFR, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for USD-SOFR in the Compounding/Averaging Matrix;
- (C) Where CHF-SARON is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is SARON, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for CHF-SARON in the Compounding/Averaging Matrix;

- (D) Where EUR-EuroSTR is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is EuroSTR, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for EUR-EuroSTR in the Compounding/Averaging Matrix;
- (E) Where HKD-HONIA is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is HONIA, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for HKD-HONIA in the Compounding/Averaging Matrix;
- (F) Where JPY-TONA is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is TONA, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for JPY-TONA in the Compounding/Averaging Matrix;
- (G) Where SGD-SORA is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is SORA, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for SGD-SORA in the Compounding/Averaging Matrix;
- (H) Where AUD-AONIA is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is AONIA and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for AUD-AONIA in the Compounding/Averaging Matrix;
- (I) Where USD-Federal Funds is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is the EFFR, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for USD-Federal Funds in the Compounding/Averaging Matrix; and
- (J) Where any other overnight reference rate is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is the relevant overnight reference rate specified in the Floating Rate Matrix, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the

nearest percentage point specified for such overnight reference rate in the Compounding/Averaging Matrix.

The Issuer will procure that a notice specifying the Interest Rate payable in respect of each Interest Period be published as soon as practicable after the determination of the Interest Rate. Such notice shall be delivered to the Relevant Clearing Systems.

In this provision:

"2021 ISDA Definitions" means the version of the 2021 ISDA Interest Rate Derivative Definitions, including each Matrix (and any successor matrix), as published by the International Swaps and Derivatives Association, Inc. (or any successor) on its website (www.isda.org) as at the Issue Date provided that (i) references to a "Confirmation" in the 2021 ISDA Definitions should instead be read as references to the applicable Final Terms; and (ii) references to a "Calculation Period" in the 2021 ISDA Definitions should instead be read as references to an "Interest Period" and "Administrator/Benchmark Event" in the 2021 ISDA Definitions shall be disapplied; and

"Reference Rate Determination Date" means the number of Applicable Business Days, Observation Period Shift Business Days or Lockout Period Business Days, as applicable, as specified in the applicable Final Terms prior to the Interest Reset Date.

Capitalised terms used but not otherwise defined in this provision shall bear the meaning given to them in the 2021 ISDA Definitions.

Term Rates

If the Reference Rate is either:

If the applicable Final Terms specify ISDA Determination and Term Rates as being applicable and the Reference Rate is either:

- a) EUR-EURIBOR;
- b) AUD-BBSW;
- c) HKD-HIBOR;
- d) JPY-TIBOR;
- e) SGD-SIBOR; or
- f) any other term reference rate selected by the Issuer that is designated a Term Rate in the Floating Rate Matrix,

the Interest Rate from time to time will be determined in accordance with the provisions below.

The Interest Rate for each Interest Period will be the rate determined by the Calculation Agent as the Reference Rate specified in the applicable Final Terms and determined in accordance with the following provisions plus or minus the spread (if any) specified in the applicable Final Terms:

- (A) Where EUR-EURIBOR shall be determined by the Calculation Agent in accordance with the 2021 Definitions as if (i) the Reset Date was the first day of the relevant Interest Period and (ii) the Designated Maturity was the number of months equal to the Interest Period specified in the applicable Final Terms;
- (B) Where AUD-BBSW shall be determined by the Calculation Agent in accordance with the 2021 Definitions as if (i) the Reset Date was the first day of the relevant Interest Period and (ii) the Designated Maturity was the number of months equal to the Interest Period specified in the applicable Final Terms;

- (C) Where HKD-HIBOR shall be determined by the Calculation Agent in accordance with the 2021 ISDA Definitions as if (i) the Reset Date was the first day of the relevant Interest Period and (ii) the Designated Maturity was the number of months equal to the Interest Period specified in the applicable Final Terms;
- (D) Where JPY-TIBOR shall be determined by the Calculation Agent in accordance with the 2021 ISDA Definitions as if (i) the Reset Date was the first day of the relevant Interest Period and (ii) the Designated Maturity was the number of months equal to the Interest Period specified in the applicable Final Terms;
- (E) Where SGD-SIBOR shall be determined by the Calculation Agent in accordance with the 2021 ISDA Definitions as if (i) the Reset Date was the first day of the relevant Interest Period and (ii) the Designated Maturity was the number of months equal to the Interest Period specified in the applicable Final Terms; and
- (F) Where any other term reference rate is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent in accordance with the 2021 ISDA Definitions as if (i) the Reset Date was the first day of the relevant Interest Period and (ii) the Designated Maturity was the number of months equal to the Interest Period specified in the applicable Final Terms.

provided that where a Temporary Non-Publication Trigger occurs in respect of the relevant above-mentioned Reference Rate, the Temporary Non-Publication Fallback for such rate as applicable under the Floating Rate Matrix shall be amended such that the reference to "Calculation Agent Alternative Rate Determination" shall be replaced by "Temporary Non-Publication Fallback – Previous Day's Rate".

The Issuer will procure that a notice specifying the Interest Rate payable in respect of each Interest Period be published as soon as practicable after the determination of the Interest Rate. Such notice shall be delivered to the Relevant Clearing Systems.

In this provision, "2021 ISDA Definitions" means the version of the 2021 ISDA Interest Rate Derivative Definitions, including each Matrix (and any successor matrix), as published by the International Swaps and Derivatives Association, Inc. (or any successor) on its website (www.isda.org) as at the Issue Date provided that (i) references to a "Confirmation" in the 2021 ISDA Definitions should instead be read as references to the applicable Final Terms; and (ii) references to a "Calculation Period" in the 2021 ISDA Definitions should instead be read as references to an "Interest Period" and "Administrator/Benchmark Event" in the 2021 ISDA Definitions shall be disapplied.

Capitalised terms used but not otherwise defined in this provision shall bear the meaning given to them in the 2021 ISDA Definitions.

OIS Compounding Rates

- a) If the applicable Final Terms specify ISDA Determination and OIS Compounding Rates as being applicable and the Reference Rate is either: AUD-AONIA-OIS Compound;
- b) CHF-SARON-OIS Compound;
- c) EUR-EuroSTR-OIS Compound;
- d) GBP-SONIA-OIS Compound;
- e) HKD-HONIA-OIS Compound;
- f) JPY-TONA-OIS Compound;
- g) SGD-SORA-OIS Compound;
- h) USD-Federal Funds-OIS Compound;

- i) USD-SOFR-OIS Compound; or
- any other OIS compounding reference rate selected by the Issuer and designated an OIS Compounding rate in the Floating Rate Matrix,

the applicable Final Terms, the Interest Rate from time to time will be calculated in accordance with the provisions below.

The Interest Rate for each Interest Period will be the rate determined by the Calculation Agent as the Reference Rate specified in the applicable Final Terms and determined in accordance with the following provisions plus or minus the spread (if any) specified in the applicable Final Terms:

- (A) Where AUD-AONIA-OIS Compound is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding formula, where the Underlying Benchmark is AONIA, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for AUD-AONIA-OIS Compound in the Compounding/Averaging Matrix;
- (B) Where CHF-SARON-OIS Compound is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding formula, where the Underlying Benchmark is SARON, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for CHF-SARON-OIS Compound in the Compounding/Averaging Matrix;
- (C) Where EUR-EuroSTR-OIS Compound is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding formula, where the Underlying Benchmark is EuroSTR, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for EUR-EuroSTR-OIS Compound in the Compounding/Averaging Matrix;
- (D) Where GBP-SONIA-OIS Compound is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding formula, where the Underlying Benchmark is SONIA, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for GBP-SONIA-OIS Compound in the Compounding/Averaging Matrix;
- (E) Where HKD-HONIA-OIS Compound is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding formula, where the Underlying Benchmark is HONIA, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for HKD-HONIA-OIS Compound in the Compounding/Averaging Matrix;
- (F) Where JPY-TONA-OIS Compound is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding formula, where the Underlying Benchmark is TONA, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for JPY-TONA-OIS Compound in the Compounding/Averaging Matrix;

- (G) Where SGD-SORA-OIS Compound is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding formula, where the Underlying Benchmark is SORA, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for SGD-SORA-OIS Compound in the Compounding/Averaging Matrix;
- (H) Where USD-Federal Funds-OIS Compound is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding formula, where the Underlying Benchmark is the EFFR, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for USD-Federal Funds-OIS Compound in the Compounding/Averaging Matrix;
- (I) Where USD-SOFR-OIS Compound is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding formula, where the Underlying Benchmark is SOFR, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for USD-SOFR-OIS Compound in the Compounding/Averaging Matrix; and
- (J) Where any other OIS compounding rate is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding formula, where the Underlying Benchmark is the relevant overnight OIS compounding rate specified in the Floating Rate Matrix, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for such OIS compounding rate in the Compounding/Averaging Matrix.

The Issuer will procure that a notice specifying the Interest Rate payable in respect of each Interest Period be published as soon as practicable after the determination of the Interest Rate. Such notice shall be delivered to the Relevant Clearing Systems.

In this provision:

"2021 ISDA Definitions" means the version of the 2021 ISDA Interest Rate Derivative Definitions, including each Matrix (and any successor matrix), as published by the International Swaps and Derivatives Association, Inc. (or any successor) on its website (www.isda.org) as at the Issue Date provided that (i) references to a "Confirmation" in the 2021 ISDA Definitions should instead be read as references to the applicable Final Terms; and (ii) references to a "Calculation Period" in the 2021 ISDA Definitions should instead be read as references to the Calculation Period specified in the applicable Final Terms and "Administrator/Benchmark Event" in the 2021 ISDA Definitions shall be disapplied; and

"**Reference Rate Determination Date**" means the number of Applicable Business Days specified in the applicable Final Terms prior to the Interest Reset Date.

Capitalised terms used but not otherwise defined in this provision shall bear the meaning given to them in the 2021 ISDA Definitions.

(6) Substitute or Successor Rate of Interest other than where the Reference Rate is USD LIBOR, SONIA, SOFR or €STR.

If, in respect of A CDs where the Reference Rate specified in the applicable Final Terms is EURIBOR, the Calculation Agent determines that the Reference Rate has been discontinued or has otherwise ceased to exist, the Calculation Agent shall, in its sole and absolute discretion, select a substitute or successor rate of interest that the Calculation Agent determines is most

comparable to the Reference Rate to replace the Reference Rate (provided that if the Calculation Agent determines that there is an industry-accepted substitute or successor rate of interest, then the Calculation Agent shall select such substitute or successor rate of interest), and shall replace the Reference Rate by such substitute or successor rate of interest with effect from such date as determined by the Calculation Agent, and such substitute or successor rate of interest will be deemed to be the Reference Rate with effect from such date. The Calculation Agent may make such adjustments that it determines to be appropriate, if any, to any one or more of the terms of the A CDs, including without limitation, any variable or term relevant to the settlement or payment under the A CDs, as the Calculation Agent determines appropriate to account for such replacement and make such substitute or successor rate of interest comparable to the Reference Rate, in a manner that is consistent with industry-accepted practices for such substitute or successor rate of interest.

§ 4 Payments

(1) Business Day

A day (i) which is a Clearing System Business Day for the Relevant Clearing System, and (ii) on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in Frankfurt am Main and the Principal Financial Centre of the Specified Currency or in relation to any sum payable in Euro, a TARGET Banking Day (as defined in § 3(5)); where

"Principal Financial Centre" means the financial centre or centres indicated below with respect to such currency:

Specified Currency	Principal Financial Centre(s)
Australian Dollar	Sydney
Hong Kong Dollar	Hong Kong
Singapore Dollar	Singapore
Sterling	London
Swiss Franc	Zurich
U.S. Dollar	New York
Yen	Tokyo

"Clearing System Business Day" means, in respect of a Relevant Clearing System, any day on which such Relevant Clearing System is open for the acceptance and execution of settlement instructions.

(2) **Day Count Fraction**

In respect of the calculation of an amount of interest for any Interest Period the relevant "Day Count Fraction" shall be:

- a) if "1/1 (ISDA)" is specified in the applicable Final Terms, 1;
- b) if "Actual/Actual (ISDA)" is specified in the applicable Final Terms, the actual number of days in the Interest Period divided by 365 (or, if any portion of the Interest Period falls in a leap year, the sum of (A) the actual number of days in that portion of the Interest Period falling in a leap year divided by 366 and (B) the actual number of days in that portion of the Interest Period falling in a non-leap year divided by 365);
- c) if "Actual/Actual (ICMA)" is specified in the applicable Final Terms, the number of days in the Interest Period, including 29 February in a leap year, divided by the product of (1) the actual number of days in such Interest Period and (2) the number of Interest Periods in any year;

- d) if "Actual/Actual (Bond)" is specified in the applicable Final Terms, the number of calendar days in the Interest Period, divided by the number of calendar days in the Interest Period multiplied by the number of Interest Periods in the calendar year;
- e) if "*Actual/Actual (Euro)*" is specified in the applicable Final Terms, the number of calendar days in the Interest Period divided by 365, or if the Interest Period includes 29 February, 366;
- f) if "*Actual/365 (Fixed*)" is specified in the applicable Final Terms, the actual number of days in the Interest Period divided by 365;
- g) if "Actual/360 (ISMA)" or "Actual/360 (ICMA)" is specified in the applicable Final Terms, the actual number of days in the Interest Period divided by 360;
- h) if "30/360 (ISDA)" is specified in the applicable Final Terms, the number of days in the Interest Period in respect of which payment is being made divided by 360, calculated on a formula basis as follows:

Day Count Fraction =
$$\frac{[360 \times (Y_2 - Y_1)] + [30 \times (M_2 - M_1)] + [D_2 - D_1]}{360}$$

where:

" Y_1 " is the year, expressed as a number, in which the first day of the Interest Period falls;

"Y₂" is the year, expressed as a number, in which the day immediately following the last day included in the Interest Period falls:

" M_I " is the calendar month, expressed as a number, in which the day immediately following the last day included in the Interest Period falls;

" M_2 " is the calendar month, expressed as a number, in which the day immediately following the last day included in the Interest Period falls;

" D_I " is the first calendar day, expressed as a number, immediately following the last day included in the Interest Period, unless such number would be 31 and D1 is greater than 29, in which case D2 will be 30.

(3) **Business Day Convention**

If any Interest Payment Date is specified to be subject to adjustment in accordance with a Business Day Convention that would otherwise fall on a day that is not a Business Day, then, if the Business Day Convention specified in the applicable Final Terms is:

- a) (in the case of A CDs issued on a floating rate basis only) the Floating Rate Business
 Day Convention, the Interest Payment Date will be postponed to the next day that is a
 Business Day unless it would thereby fall into the next calendar month, in which event
 (x) such date will be brought forward to the immediately preceding Business Day and
 (y) each subsequent such date will be the last Business Day of the month in which such
 date would have fallen had it not been subject to adjustment;
- b) the Following Business Day Convention, such Interest Payment Date will be postponed to the next day that is a Business Day;
- the Modified Following Business Day Convention, such date will be postponed to the next day that is a Business Day unless it would thereby fall into the next calendar month, in which event such date shall be brought forward to the immediately preceding Business Day; or
- d) the Preceding Business Day Convention, such date will be brought forward to the immediately preceding Business Day.

(4) No adjustments of interest in case of payments due on a non-Business Day

If the Final Terms provide that the Interest Period shall be "adjusted" and if the due date for a payment of interest is brought forward or postponed (as described above), the amount of interest shall be adjusted accordingly.

If the Final Terms provide that the Interest Period shall be "unadjusted" and if the due date for a payment of interest is brought forward or postponed (as described above), the amount of interest shall not be adjusted accordingly.

If the due date for the redemption of the principal amount of the A CD is adjusted the Holder shall not be entitled to payments in respect of such adjustment

§ 5 Scheduled Redemption

(1) **Tenor of the CDs.**

The tenor of the A CDs shall be 364 days or less from and including the date of issue, subject to compliance with any applicable legal and regulatory requirements.

(2) Scheduled Redemption.

Unless previously redeemed, or purchased and cancelled or extended, each A CD will be redeemed by the Issuer at 100 per cent. of the Nominal Amount on the maturity date set out in the Final Terms (the "Maturity Date").

§ 6 Extendible A CDs

(1) Extendible A CDs.

- a) The Final Terms may provide that on the initial Maturity Date and such other date or dates specified (each, an "Extension Date"), the Issuer has the option to extend the initial Maturity Date of the A CDs (the "Issuer Extension Option") to such date or dates as shall be provided in the applicable Final Terms (each, an "Extended Maturity Date" and the last Extended Maturity Date the "Final Maturity Date") (such A CDs, "Extendible A CDs"). Any Final Maturity Date shall in no event exceed a maximum maturity of 364 days from and including the date of issue.
- b) If the Final Terms provide that the relevant series of the A CDs are Extendible A CDs, each time the Issuer elects to exercise the Issuer Extension Option, the Issuer is required to deliver a notice of extension (an "Extension Notice") to the Relevant Clearing System by no later than 5.00 p.m. (Frankfurt time) on the date specified in the Final Terms (each, an "Extension Notice Date"), for communication by the Relevant Clearing System to the Holders of the Extendible A CDs, informing Holders that the Issuer will be exercising the Issuer Extension Option.

Each Extension Notice shall contain the following information:

- (A) confirmation that the Issuer will be exercising the Issuer Extension Option;
- (B) the applicable Extended Maturity Date;
- (C) the applicable Exercise Deadline (as defined below);
- (D) the applicable interest rate for the period between the initial Maturity Date and the applicable Extended Maturity Date (the "**Extended Interest Rate**"); and
- (E) the form of Exercise Notice (as defined below).

- c) If the Issuer does not exercise its Issuer Extension Option on any Extension Date, the Extendible A CDs will be redeemed on the then current Maturity Date.
- d) If the Issuer fails to publish an Extension Notice on an Extension Notice Date, then each holder of Extendible A CDs will be deemed to have exercised its Non-Extension Option, the then current Maturity Date shall not be extended and the Extendible A CDs will be redeemed on the then current Maturity Date.
- e) If the Issuer exercises its Issuer Extension Option, each Holder of Extendible A CDs has the option not to extend the then current Maturity Date in respect of some or all of those Extendible A CDs (the "Non-Extension Option"), in which case the then current Maturity Date shall not be extended in respect of those Extendible A CDs the subject of the Non-Extension Option and the relevant Extendible A CDs shall be redeemed on the then current Maturity Date. In order to exercise its Non-Extension Option in respect of some or all of those Extendible A CDs, the Holder of the Extendible A CDs must deliver a duly completed option exercise notice (the "Exercise Notice") in the form annexed to the applicable Extension Notice by no later than 5.00 p.m. (Frankfurt time) on the date specified in the Final Terms (the "Exercise Deadline") to the Relevant Clearing System for communication by the Relevant Clearing System through the Agent to the Issuer.
- f) There will be a minimum of 10 Business Days between each Extension Notice Date and applicable Exercise Deadline unless otherwise agreed with the Relevant Clearing System.
- g) Upon delivery to the Relevant Clearing System, an Exercise Notice shall be revocable until the applicable Exercise Deadline, at which time such notice will become irrevocable and binding upon the Holder, or any transferee of such Holder, of the Extendible A CDs.
- If a Holder of Extendible A CDs delivers an Exercise Notice in respect of part only of h) its holding of Extendible A CDs, the principal amount of such partial holding of Extendible A CDs (the "Maturing A CDs") will become due and payable on the then current Maturity Date. The aggregate principal amount of the Maturing A CDs will be represented by a new Global CD to be issued on the applicable Extension Date, provided that any such principal amount of the Maturing A CDs will not be less than EUR 100,000 (or the equivalent in any other currency). The Maturing A CDs represented by the new Global A CD will be unlisted. The new Global A CD so issued will have the same terms as the A CDs, except that it will not be extendible, will have a separate International Securities Identification Number ("ISIN") and a separate Common Code and its maturity date will be the then current Maturity Date. The outstanding principal amount of such Extendible A CDs shall be reduced by the amount of the Maturing A CDs with effect from the applicable Extension Date, provided that any such principal amount of the outstanding Extendible A CDs will not be less than EUR 100,000 (or the equivalent in any other currency).
- i) If a Holder of Extendible A CDs does not deliver an Exercise Notice prior to the applicable Exercise Deadline, the then current Maturity Date shall be extended automatically to the next following Extended Maturity Date and interest from the then current Maturity Date will continue to accrue on the Extendible A CDs at the Extended Interest Rate and shall be payable on the applicable Extended Maturity Date.
- j) If the Issuer exercises its Issuer Extension Option and the Holder of Extendible A CDs exercises its Non-Extension Option, the relevant Extendible A CDs will be non-transferable in the period between the relevant Exercise Deadline and the relevant Extension Date. For the avoidance of doubt, no restrictions on transfer will exist during this period for the Holders of the Extendible A CDs who have not exercised its Non-Extension Option.

§ 7 Early Redemption

(1) Redemption at the option of the Issuer.

The Issuer will not be entitled to redeem an A CD before its Maturity Date, or in case of Extendible A CDs its Final Maturity Date, unless the applicable Final Terms specifies a redemption commencement date (the "**Redemption Commencement Date**").

If an A CD specifies a Redemption Commencement Date, it will also specify one or more redemption prices, which may be expressed as a percentage of the principal amount of the A CD. An A CD may also specify one or more redemption periods during which the specified redemption prices relating to a redemption of A CDs during those periods will apply. The minimum redemption price will be 100 per cent. of the Nominal Amount.

If an A CD specifies a Redemption Commencement Date, such A CD will be redeemable at the option of the Issuer, in whole or in part, at any time on or after that date or at a specified time or times. If the Issuer redeems an A CD, it will do so at the specified redemption price, together with any interest accrued to the redemption date. If different prices are specified for different redemption periods, the price paid by the Issuer will be the price that applies to the redemption period during which such A CD is redeemed.

(2) Redemption upon Change in Law.

The Issuer will have the option to redeem an A CD as a result of certain developments involving a change in law (including a change in tax law). The Issuer will have the option to redeem an A CD if, as a result of any change in German tax treatment, the Issuer would be required to pay an additional amount as described in paragraph 6 of the Global A CD or it is or will become unlawful for the Issuer to perform any of its obligations under the A CDs. The redemption price in these circumstances will be 100 per cent. of the Nominal Amount.

If the Issuer exercises an option to redeem any A CD, it will give to the Holder written notice of the principal amount of the A CD to be redeemed, not less than 35 days before the applicable redemption date. In addition, the Issuer will notify the relevant stock exchange of any redemption of A CDs.

§ 8 Agent

(1) Appointment.

The agents act solely as agents of the Issuer and do not assume any obligation or relationship of agency or trust for or with any Holder. The Issuer reserves the right to vary or terminate the appointment of the Agents and to appoint additional or other Agents, provided that the Issuer shall at all times maintain:

- a) a Paying Agent;
- b) one or more Calculation Agent(s);
- such other agents as may be required by any stock exchange on which the A CDs may be listed.

Notice of any termination of appointment and of any changes to the specified office of any Agent will be given to Holders.

(2) Issuing and paying agent.

The Issuing and paying agent shall be Deutsche Bank AG.

(3) Calculation agent.

The Calculation Agent shall be Goldman Sachs Bank Europe SE.

§ 9 Taxation

(1) Withholding taxes.

All payments of principal and interest which are made by the Issuer on the A CDs shall be made without deduction or withholding for or on account of any present or future taxes, duties or governmental charges of any nature whatsoever imposed, levied or collected by or in or on behalf of the country in which the Issuer has its statutory seat or by or on behalf of any political subdivision or authority therein or thereof having power to tax ("Withholding Taxes"), unless such deduction or withholding is required by law. In such latter event, the Issuer shall pay such additional amounts ("Additional Amounts") of principal and interest as may be necessary in order that the net amounts received by the Holders after such deduction or withholding each shall equal the respective amounts of principal and interest which would have been receivable had no such deduction or withholding been required.

Such Additional Amounts shall, however, not be payable on account of taxes, duties or governmental charges which

- a) are payable otherwise than by withholding or deduction from payments made by the Issuer to the Holders, or
- b) are deducted or withheld by any person acting as custodian bank or collecting agent on behalf of the Holders, or otherwise payable in any manner which does not constitute a deduction or withholding by the Issuer from payments of principal or interest made by it, or
- c) are deducted or withheld by a paying agent from a payment if the payment could have been made by another paying agent without such deduction or withholding, or
- d) are deducted or withheld pursuant to (i) any European Union Directive or Regulation concerning the taxation of savings, or (ii) any international treaty or understanding relating to such taxation and to which Germany or the European Union is a party / are parties or (iii) any provision of law implementing, or complying with, or introduced to conform with, such Directive, Regulation, treaty or understanding, or
- e) are payable by reason of the Holders having, or having had, some personal or business connection with Germany or another member state of the European Union and not merely by reason of the fact that payments in respect of the A CDs are, or for purposes of taxation are deemed to be, derived from sources in, or are secured in, Germany, or
- f) are payable by reason of a change in law that becomes effective more than 30 calendar days after the relevant payment of principal and interest becomes due, or is duly provided for, whichever occurs later.

(2) US Internal Revenue Code.

Any amounts to be paid will be paid net of any deduction or withholding imposed or required pursuant to Sections 1471 through 1474 of the US Internal Revenue Code (the "Code"), any current or future regulations or official interpretations thereof, any agreement entered into pursuant to Section 1471(b) of the Code, or any fiscal or regulatory legislation, rules or practices adopted pursuant to any intergovernmental agreement entered into in connection with the implementation of such Sections of the Code, and no additional amounts will be required to be paid on account of any such deduction or withholding.

§ 10 Presentation Period

The period for presentation of the A CDs (§ 801, Paragraph (1), Sentence 1 of the German Civil Code (BGB)) shall be ten years and the period of limitation for claims under the A CDs presented during the period for presentation shall be two years calculated from the expiry of the relevant presentation period.

§ 11 Amendments of the Terms and Conditions

The Terms and Conditions of the A CDs may be amended by the Issuer from time to time without the consent of the Holders if, in the reasonable opinion of the Issuer, the amendment is (a) formal, minor or technical in nature, (b) made to correct an obvious or demonstrable error or omission, (c) made, to comply with mandatory legal requirements and regulations of the Issuer's jurisdiction and/or to comply with changes in applicable laws and regulations, (d) is made to cure, correct or amend an erroneous provision in these Terms and Conditions and/or (e) does not materially adversely affect the interests of the Holders. Any such amendment shall be binding on the Holders and shall become effective upon notice to the Holders.

§ 12 Further issues, purchases and cancellation

(1) Further Issues.

The Issuer may from time to time, without the consent of the Holders, issue further A CDs having the same terms and conditions as the A CDs in all respects (or in all respects except for the issue date, interest commencement date and/or issue price) so as to form a single series with the A CDs.

(2) Purchase.

The Issuer or its affiliates may purchase A CDs from investors who are willing to sell from time to time, either in the open market at prevailing prices or in private transactions at negotiated prices. A CDs that the Issuer or its affiliates purchase may, at the Issuer's discretion, be held, resold or cancelled.

(3) Cancellation.

All A CDs redeemed in full shall be cancelled forthwith and may not be reissued or resold.

§ 13 Notices

(1) Notices to the Issuer.

Notices to the Issuer will be made to its office by mail or telefax and addressed for the attention of the person designated by it for that purpose as set out below:

Goldman Sachs Bank Europe SE
Marienturm
Taunusanlage 9-10
60329 Frankfurt am Main
Germany

Attn: Dr. Tobias Wohlfarth, GSBE Corporate Treasury

(2) Notices to the Holders.

In relation to the A CDs which are admitted to listing on the Official List and to trading on the regulated market of the Luxembourg Stock Exchange as the rules of that stock exchange so require, notices to the Holders shall be validly given if published in the Luxemburger Wort,

being a leading newspaper having general circulation in Luxembourg, or through publication on the website of the Luxembourg Stock Exchange (www.bourse.lu).

§ 14 Governing law, place of jurisdiction and enforcement

(1) Governing law.

The A CDs, and any non-contractual obligations arising out of or in connection with the A CDs, will be governed by, and construed in accordance with, laws of the Federal Republic of Germany.

(2) Place of jurisdiction.

Place of jurisdiction is Frankfurt am Main, Federal Republic of Germany.

(3) Enforcement.

The District Court (*Landgericht*) in Frankfurt am Main shall have non-exclusive jurisdiction for any action or other legal proceedings ("**Proceedings**") arising out of or in connection with the A CDs. Any A CD Holder may in any Proceedings against the Issuer, or to which such Holder and the Issuer are parties, protect and enforce in his own name his rights arising under such CDs on the basis of (i) a statement issued by the Custodian with whom such Holder maintains a securities account in respect of the A CDs (a) stating the full name and address of the Holder, (b) specifying the aggregate principal amount of A CDs credited to such securities account on the date of such statement and (c) confirming that the Custodian has given written notice to the Relevant Clearing System containing the information pursuant to (a) and (b) and (ii) a copy of the CDs in global form certified as being a true copy by a duly authorised officer of the Clearing System or a depository of the Clearing System, without the need for production in such Proceedings of the actual records or the Global A CD.

For purposes of the foregoing, "Custodian" means any bank or other financial institution of recognised standing authorised to engage in securities custody business with which the Holder maintains a securities account in respect of the CDs and includes the Relevant Clearing System. Each Holder may, without prejudice to the foregoing, protect and enforce his rights under these A CDs also in any other way which is admitted in the country of the Proceedings.

TERMS AND CONDITIONS OF THE B CDS

Each B CD issued under the Programme will be subject to the following terms and conditions that, subject to completion in accordance with the applicable Final Terms, shall be applicable to bearer B CDs in definitive form (if any) issued in exchange for a Global B CD representing the relevant issue of B CDs. The applicable Final Terms will be attached to each Global B CD and each bearer B CD in definitive form. The following terms and conditions of B CDs must be read in conjunction with this Base Prospectus and the relevant Global B CD and the Final Terms attached thereto:

§ 1 Currency, Denomination, Form, Definitions

(1) Currency, Denomination.

This series of notes (the "B CDs") of Goldman Sachs Bank Europe SE (the "Issuer") is issued in the currency specified in the Final Terms in the aggregate principal amount and the denomination (the "Nominal Amount") specified in the Final Terms, with a minimum denomination of EUR 100,000 (or the equivalent in any other currency) unless otherwise specified in the applicable Final Terms and integral multiples thereof as specified in the applicable Final Terms (subject in each case to compliance with all applicable legal and regulatory requirements).

(2) Minimum Issuance Amount.

The minimum aggregate principal amount will be EUR 100,000 (or the equivalent in any other currency).

(3) *Form.*

The B CDs are being issued in bearer form.

(4) **B CD Global.**

The B CDs will initially be represented by one or more global B CDs without coupons (each, a "Global B CD" and together, the "Global B CDs"). The Global B CDs shall each be signed by authorised signatories of the Issuer and shall each be authenticated by or on behalf of the Paying Agent. Definitive notes and interest coupons will not be issued.

(5) Relevant Clearing System.

The Global B CD will be deposited with a common depositary or, as the case may be, a Common Safekeeper for Euroclear, Clearstream or any other STEP recognised.

(6) **Definitions.**

"Common Safekeeper" means, in respect of any Global B CD which is in new global form, the common safekeeper which is appointed by the Relevant Clearing Systems in respect thereof, if such Global B CD is in new global form and intended to be held in a manner that would allow Eurosystem eligibility, the common safekeeper which is appointed for the Issuer and eligible to hold such Global B CD for the purpose of the requirements relating to collateral for Eurosystem monetary and intra-day credit operations. If the common safekeeper as at the relevant issue date ceases to be so eligible after the relevant issue date, the relevant B CDs will no longer qualify for Eurosystem eligibility unless a new common safekeeper is appointed who is so eligible.

"Holder" means any holder of a proportionate co-ownership or other beneficial interest or fight in the B CDs.

"Relevant Clearing System" means Euroclear Bank S.A./N.V. ("Euroclear") and/or Clearstream Banking S.A. ("Clearstream") and/or or any other clearing system as may be specified in the Final Terms.

§ 2 Status, Title and Transfer

(1) Status of the B CDs.

The B CDs shall represent direct, unconditional, unsubordinated and unsecured obligations of the Issuer and shall at all times rank *pari passu* with all other present and future unsubordinated and unsecured obligations for funds borrowed or guaranteed by the Issuer (other than in the case of obligations preferred by mandatory provisions of law).

(2) Title and Transfer.

Definitive securities and interest coupons will not be issued and the right of the Holders to request the issue and delivery of definitive securities shall be excluded. The Holders shall receive co-ownership participations or rights in the Global B CDs which are transferable in accordance with applicable law and the rules and regulations of the Relevant Clearing System.

§ 3 Interest

(1) Rate of Interest and Interest Payment Dates.

The applicable Final Terms will specify if the B CDs may accrue interest on a fixed rate basis, a floating rate basis or be non-interest bearing B CDs.

The "Interest Rate" payable from time to time in respect of B CDs issued on a fixed rate basis will be specified in the applicable Final Terms.

The "Interest Rate" payable from time to time in respect of B CDs issued on a floating rate basis will be determined in the manner specified in the applicable Final Terms and the provisions below.

"Interest Payment Date" shall be each date specified as such in the applicable Final Terms.

(2) **Interest Commencement Date.**

The "Interest Commencement Date" is the Issue Date or as otherwise specified in the Final Terms.

(3) **Interest Period.**

The "Interest Period" shall be each period from and including the Interest Commencement Date for the B CDs to but excluding the first Interest Payment Date for the B CDs, and each successive period from and including the first day following the end of the preceding Interest Period to but excluding the following Interest Payment Date until the principal of the B CDs is paid or made available for payment. An Interest Period may be adjusted or unadjusted in accordance with the provision in § 4(4).

(4) Interest Amount Payable.

Interest due on the Interest Payment Date will be an amount equal to the product of (a) the aggregate nominal amount of B CDs outstanding on the first day of the Interest Period, (b) the Day Count Fraction, and (c) the Interest Rate as specified in the applicable Final Terms. Interest due will be rounded up or down as specified in the applicable Final Terms, in such units as specified in the applicable Final Terms.²

² Ashurst comment: in line with previous iterations of the programme, the applicable Day Count Fraction is selected in the Final Terms and therefore the interest amount payable is calculated in accordance with these terms and conditions and Final Terms. An alternative approach which we have seen in some programmes is for the Day Count Fraction to be calculated with reference to the ISDA Definitions (rather than selected in the Final Terms), and so the interest payable is calculated in accordance with the ISDA definitions. Please let us know your preferred approach here.

(5) Reference Rates

Reference Rates for B CDs with a floating rate and Screen Rate Determination

If the applicable Final Terms specify Screen Rate Determination as applicable for the B CDs issued on a floating rate basis, the "**Reference Rate**" shall be either:

- a) the Euro zone interbank offered rate ("**EURIBOR**");
- b) SOFR (as defined below);
- c) SONIA (as defined below); or
- d) €STR (as defined below).

The Interest Rate for each Interest Period will be the rate determined by the Calculation Agent and as specified in the applicable Final Terms for the Reference Rate (a) (in the case of B CDs where the Reference Rate is specified in the applicable Final Terms as EURIBOR) which appears on the Relevant Screen Page as at 11:00 a.m. (Brussels time) on the day that is two TARGET Banking Days preceding the Interest Reset Date; or (b) (in the case of B CDs where the Reference Rate is specified in the applicable Final Terms as SOFR, SONIA or €STR), as determined in accordance with the following provisions, in each case, plus or minus the spread (if any) specified in the applicable Final Terms.

EURIBOR

If, in the case of B CDs where the Reference Rate is specified in the applicable Final Terms as EURIBOR, such rate does not appear on the Relevant Screen Page, the Interest Rate will be the rate as determined by the Calculation Agent on the basis of the rates at which deposits in euro are offered by the Reference Banks at approximately 11:00 a.m. (Brussels time) on the day that is two TARGET Banking Days preceding the Interest Reset Date to prime banks in, the Eurozone inter-bank market for a period equal to that which would have been used for the Reference Rate, commencing on the Interest Reset Date and in a Representative Amount. The Calculation Agent will request the principal Euro-zone office of each of the Reference Banks to provide a quotation of its rate. If at least two such quotations are provided, the Interest Rate for that Interest Reset Date will be the arithmetic mean of the quotations. If fewer than two quotations are provided as requested, the Interest Rate for that Interest Reset Date will be the arithmetic mean of the rates quoted by major banks in New York City, selected by the Calculation Agent, at approximately 11:00 a.m. (New York City time) on the Interest Reset Date for loans in euro to leading European banks for a period equal to that which would have been used for the Reference Rate, commencing on the Interest Reset Date and in a Representative Amount.

SOFR, SONIA or €STR

In respect of B CDs where the applicable Final Terms specify that the Reference Rate is SOFR, SONIA or €STR, the Interest Rate for each Interest Period will be the rate determined by the Calculation Agent and as specified in the applicable Final Terms as follows plus or minus the spread (if any) specified in the applicable Final Terms:

(A) Where the Calculation Method is specified in the applicable Final Terms as being "Compounded Daily (Non-Index Determination)", the Reference Rate for each Interest Period will, subject as provided below, be the Compounded Daily Reference Rate, as determined by the Calculation Agent.

As used in this provision:

"Compounded Daily Reference Rate" means, with respect to an Interest Period, the rate of return of a daily compound interest investment (with SOFR, SONIA or €STR as the Reference Rate for the calculation of interest as specified in the applicable Final Terms), which will be calculated by the Calculation Agent, as at the relevant Reference Rate Determination Date as follows, and the resulting percentage will be rounded, if necessary, (in the case of SONIA) to the fourth

decimal place, with 0.00005 being rounded upwards and (in the case of SOFR or €STR) to the fifth decimal place, with 0.000005 being rounded upwards:

$$\left[\prod_{i=1}^{d_0} (1 + \frac{r_i - p^{BD} x n_i}{D}) \right] x \frac{D}{d}$$

where:

"Business Day" or "BD" means (i) where "SOFR" is specified as the Reference Rate in the applicable Final Terms, a US Government Securities Business Day; (ii) where "SONIA" is specified as the Reference Rate in the applicable Final Terms, a London Banking Day; and (iii) where "€STR" is specified as the Reference Rate in the applicable Final Terms, a TARGET Banking Day;

"D" is the number specified in the applicable Final Terms;

"d" means (where "Lag" or "Lock-out" is specified in the applicable Final Terms as the Observation Method) the number of calendar days in the relevant Interest Period or (where "Shift" is specified in the applicable Final Terms as the Observation Method) the number of calendar days in the relevant Observation Period;

"do" means (where "Lag" or "Lock-out" is specified in the applicable Final Terms as the Observation Method) the number of Business Days in the relevant Interest Period, or (where "Shift" is specified in the applicable Final Terms as the Observation Method) the number of Business Days in the relevant Observation Period:

"*ECB's Website*" means the website of the European Central Bank currently at http://www.ecb.europa.eu, or any successor website officially designated by the European Central Bank (any information on the ECB's website does not form part of the Base Prospectus and has not been scrutinised or approved by the competent authority unless incorporated by reference into the Base Prospectus);

"ESTR" means, in respect of any Business Day, a reference rate equal to the daily euro short-term rate as provided by the European Central Bank, as administrator of such rate (or any successor administrator of such rate), on the ECB's Website, in each case on or before 9:00 a.m. (Central European Time) on the Business Day immediately following such Business Day;

"i" means a series of whole numbers from one to " d_0 ", each representing the relevant Business Day in chronological order from, and including, the first Business Day (where "Lag" or "Lock-out" is specified in the applicable Final Terms as the Observation Method) in the relevant Interest Period or (where "Shift" is specified in the applicable Final Terms as the Observation Method) in the relevant Observation Period;

"London Banking Day" means any day on which commercial banks are open for general business (including dealing in foreign exchange and foreign currency deposits) in London;

"*n_i*" means, for any Business Day "i", the number of calendar days from, and including, such Business Day "i" up to, but excluding, the following Business Day;

"New York Fed's Website" means the website of the Federal Reserve Bank of New York currently at http://www.newyorkfed.org, or any successor website officially designated by the Federal Reserve Bank of New York (any information on the New York Fed's website or any successor website does not form part of the Base Prospectus and has not been scrutinised or approved by the competent authority unless incorporated by reference into the Base Prospectus);

"Observation Period" means, in respect of an Interest Period, the period from, and including, the date which is "p" Business Days prior to the first day of the relevant Interest Period (and the first Interest Period shall begin on, and include, the Issue Date) and ending on, but excluding, the date which is "p" Business Days prior to the Interest Payment Date for such Interest Period (or the date falling "p" Business Days prior to such earlier date, if any, on which the applicable Global B CD becomes due and payable);

"p" means, for any Interest Period (unless otherwise specified in the applicable Final Terms):

- (1) where "Lag" or "Shift" is specified as the Observation Method in the applicable Final Terms, the number of Business Days included in the Observation Look-back Period specified in the applicable Final Terms (or, if no such number is specified, five Business Days); or
- (2) where "Lock-out" is specified as the Observation Method in the applicable Final Terms, zero;

"Reference Rate Determination Date" means the date falling "p" Business Days prior to each Interest Reset Date;

"*r*" means:

- (1) where "Lag" or "Shift" is specified as the Observation Method in the applicable Final Terms, in respect of any Business Day, the Reference Rate in respect of such Business Day;
- (2) where "Lock-out" is specified as the Observation Method in the applicable Final Terms, in respect of any Business Day "i" falling in the relevant Interest Period, the Reference Rate for the Business Day immediately preceding such day; and in respect of any Business Day "i" falling on or after the "Lock-out Date" specified in the applicable Final Terms (or, where no "Lock-out Date" is specified, five Business Days prior to each Interest Reset Date), the Reference Rate in respect of the Business Day immediately preceding the last Business Day in the relevant Interest Period (such last Business Day coinciding with the relevant Reference Rate Determination Date);

"*r_i-p^{BD}*" means, in relation to any Interest Period, the applicable Reference Rate as set out in the definition of "r" above for, where "Lag" is specified as the Observation Method in the applicable Final Terms, the Business Day (being a Business Day falling in the relevant Observation Period) falling "p" Business Days prior to the relevant Business Day "i" or, where "Lock-out" or "Shift" is specified as the Observation Method in the applicable Final Terms, the relevant Business Day "i";

"SOFR" means, in respect of any Business Day, a reference rate equal to the daily Secured Overnight Financing Rate as provided by the Federal Reserve Bank of New York ("New York Fed"), as the administrator of such rate (or any successor administrator of such rate) on the New York Fed's Website, in each case on or about 5:00 p.m. (New York City Time) on the Business Day immediately following such Business Day;

"SONIA" means, in respect of any Business Day, a reference rate equal to the daily Sterling Overnight Index Average for such Business Day as provided by the administrator of SONIA to authorised distributors and as then published on the Relevant Screen Page or, if the Relevant Screen Page is unavailable, as otherwise published by such authorised distributors, in each case on the Business Day immediately following such Business Day; and

"US Government Securities Business Day" means any day except for a Saturday, Sunday or a day on which the Securities Industry and Financial Markets Association recommends that the fixed income departments of its members be closed for the entire day for purposes of trading in U.S. government securities.

(B) Where the Calculation Method is specified in the applicable Final Terms as being "Weighted Average", the Reference Rate for each Interest Period will, subject as provided below, be the Weighted Average Reference Rate, as determined by the Calculation Agent.

As used in this provision:

"Weighted Average Reference Rate" means, with respect to any Interest Period, the arithmetic mean of SOFR, SONIA or €STR in effect during such Interest Period as specified in the applicable Final Terms, which will be calculated by the Calculation Agent as at the relevant Reference Rate Determination Date as follows, and the resulting percentage will be rounded, if necessary, (in the case of SONIA) to the fourth decimal place, with 0.00005 being rounded upwards and (in the case of SOFR or €STR) to the fifth decimal place, with 0.000005 being rounded upwards:

$$\left[\sum_{i=1}^{d_o} \left(\frac{r_i - p^{BD} \times n_i}{D}\right)\right] \times \frac{D}{d}$$

where:

"Business Day", "BD", "D", "d", " d_o ", "i", "n" and "p" have the meanings given to them in the provision relating to "Compounded Daily Reference Rate" specified above;

" $r_{\vdash}p^{BD}$ " means (unless otherwise specified in the applicable Final Terms):

- (1) (where "Lag" is specified as the Observation Method in the applicable Final Terms) in respect of any Business Day "i" falling in the relevant Interest Period, the relevant Reference Rate for the Business Day falling "p" Business Days prior to such day "i";
- (2) (where "Lock-out" is specified as the Observation Method in the applicable Final Terms) the Reference Rate determined in accordance with paragraph a) above, except that in respect of each Business Day "i" falling on or after the "Lock-out Date" specified in the applicable Final Terms (or, where no "Lock-out Date" is specified, five Business Days prior to each Interest Reset Date) until the end of each relevant Interest Period, the relevant Reference Rate determined in accordance with paragraph a) above in respect of such "Lock-out Date"; and
- (3) (where "Shift" is specified as the Observation Method in the applicable Final Terms) in respect of any Business Day "i" falling in the relevant Observation Period, the relevant Reference Rate in respect of such day "i";

"Reference Rate Determination Date" means (unless otherwise defined in the applicable Final Terms) the date falling five Business Days prior to each Interest Payment Date.

(C) Where "SOFR" is specified as the Reference Rate in the applicable Final Terms and the Calculation Method is specified in the applicable Final Terms as being "Compounded Daily (Non-Index Determination)", if, in respect of any Business Day, the Calculation Agent determines the Reference Rate is not available, such Reference Rate shall be SOFR for the first preceding Business Day on which

SOFR was published on the Relevant Screen Page and "r" shall be interpreted accordingly.

- (D) Where "SONIA" is specified as the Reference Rate in the applicable Final Terms and the Calculation Method is specified in the applicable Final Terms as being "Compounded Daily (Non-Index Determination)", if, in respect of any Business Day in the relevant Interest Period or Observation Period, the Calculation Agent determines SONIA is not available on the Relevant Screen Page and has not otherwise been published by the relevant authorised distributors, such Reference Rate shall be:
 - (1) (i) the Bank of England's Bank Rate (the "*Bank Rate*") prevailing at 5:00 p.m. (London time) on the relevant Business Day; plus (ii) the mean of the spread of SONIA to the Bank Rate over the previous five days on which SONIA has been published, excluding the highest spread (or, if there is more than one highest spread, one only of those highest spreads) and lowest spread (or, if there is more than one lowest spread, one only of those lowest spreads) to the Bank Rate; or
 - (2) if such Bank Rate is not available, SONIA published on the Relevant Screen Page (or otherwise published by the relevant authorised distributors) for the first preceding Business Day on which SONIA was published on the Relevant Screen Page (or otherwise published by the relevant authorised distributors).

and, in each case, "r" shall be interpreted accordingly.

- (E) Where "€STR" is specified as the Reference Rate in the applicable Final Terms and the Calculation Method is specified in the applicable Final Terms as being "Compounded Daily (Non-Index Determination)", if, in respect of any Business Day, the Calculation Agent determines the Reference Rate is not available, such Reference Rate shall be €STR for the first preceding Business Day on which €STR was published on the Relevant Screen Page and "r" shall be interpreted accordingly.
- (F) In the event that the Reference Rate cannot be determined in accordance with the foregoing provisions, the Reference Rate shall be (i) that determined as at the last preceding Reference Rate Determination Date to which the foregoing provisions shall have applied or (ii) if there is no such preceding Reference Rate Determination Date, the initial Reference Rate which would have been applicable to the relevant B CDs for the first Interest Period had the relevant B CDs been in issue for a period equal in duration to the scheduled first Interest Period but ending on (and excluding) the Issue Date.
- (G) Where the Calculation Method is specified in the applicable Final Terms as being "Compounded Daily (Index Determination)", the Reference Rate for each Interest Period will, subject as provided below, be the Compounded Daily Reference Rate, as determined by the Calculation Agent.

As used in this provision:

"Compounded Daily Reference Rate" means, with respect to an Interest Period, the rate of return of a daily compound interest investment (with SOFR or SONIA as the Reference Rate for the calculation of interest as specified in the applicable Final Terms), which will be calculated by the Calculation Agent, as at the relevant Reference Rate Determination Date as follows, and the resulting percentage will be rounded, if necessary, (in the case of SONIA) to the fourth decimal place, with 0.00005 being rounded upwards and (in the case of SOFR) to the fifth decimal place, with 0.000005 being rounded upwards:

$$\left(\frac{Reference\ Rate\ Compounded\ index_{End}}{Referenace\ Rate\ Compounded\ Index_{Start}}-1\right)x\ \frac{D}{d}$$

where:

"Business Day" or "BD" means (i) where "SOFR" is specified as the Reference Rate in the applicable Final Terms, a US Government Securities Business Day; and (ii) where "SONIA" is specified as the Reference Rate in the applicable Final Terms, a London Banking Day;

"D" is the number specified in the applicable Final Terms;

"d" means the number of calendar days from (and including) the day in relation to which Reference Rate Compounded Index_{Start} is determined to (but excluding) the day in relation to which Reference Rate Compounded Index_{End} is determined;

"London Banking Day" means any day on which commercial banks are open for general business (including dealing in foreign exchange and foreign currency deposits) in London;

"p" means, for any Interest Period (unless otherwise specified in the applicable Final Terms) five Business Days;

"Reference Rate Compounded Index" means:

- (1) where "SONIA" is specified as the Reference Rate and the Calculation Method is specified as "Compounded Daily (Index Determination) in the applicable Final Terms, the screen rate or index for compounded daily SONIA rates administered by the administrator of the SONIA reference rate that is published or displayed by such administrator or other information service from time to time on the relevant Reference Rate Determination Date, as further specified in the applicable Final Terms; and
- (2) where "SOFR" is specified as the Reference Rate and the Calculation Method is specified as "Compounded Daily (Index Determination)" in the applicable Final Terms, with respect to any U.S. Government Securities Business Day, the SOFR index value as published by the administrator of the SOFR reference rate as such index appears on the New York Fed's Website at or around 3.00 p.m. (New York time) on such US Government Securities Business Day;

"Reference Rate Compounded IndexStart" means, with respect to an Interest Period, the Reference Rate Compounded Index determined in relation to the day falling the Relevant Number of Business Days prior to the first day of such Interest Period;

"Reference Rate Compounded Index_{End}" means, with respect to an Interest Period, the Reference Rate Compounded Index determined in relation to the day falling the Relevant Number of Business Days prior to (A) the Interest Payment Date for such Interest Period, or (B) such other date on which the relevant payment of interest falls due (but which by its definition or the operation of the relevant provisions is excluded from such Interest Period);

"Reference Rate Determination Date" means the date falling "p" Business Days prior to each Interest Reset Date;

"*Relevant Number*" means the number specified as such in the applicable Final Terms (or, if no such number is specified, five); and

"US Government Securities Business Day" means any day except for a Saturday, Sunday or a day on which the Securities Industry and Financial Markets

Association recommends that the fixed income departments of its members be closed for the entire day for purposes of trading in U.S. government securities.

If the relevant Reference Rate Compounded Index is not published or displayed by the administrator of the Reference Rate or other information service by i) in respect of the SONIA reference rate, 5.00 p.m. (London time); or ii) in respect of the SOFR reference rate, 3.00 p.m. (New York time) (or, in each case, if later, by the time falling one hour after the customary or scheduled time for publication thereof in accordance with the then-prevailing operational procedures of the administrator of the Reference Rate or of such other information service, as the case may be) on the relevant Reference Rate Determination Date, the Compounded Daily Reference Rate for the applicable Interest Period for which the Reference Rate Compounded Index is not available shall be "Compounded Daily Reference Rate" determined as set out under the section entitled "Compounded Daily Reference Rate (Non-Index Determination)" above and as if "Compounded Daily (Non-Index Determination)" were specified in the applicable Final Terms as the Calculation Method, and for these purposes: (i) the "Observation Method" shall be deemed to be "Shift" and (ii) the "Observation Look-Back Period" shall be deemed to be equal to the Relevant Number of Business Days, as if those alternative elections had been made in the applicable Final Terms.

Reference Rate Determination Date

If the Global B CD becomes due and payable prior to their Maturity Date, the final Reference Rate Determination Date shall be deemed to be the date on which the relevant Global B CD became due and payable and the Reference Rate on such Global B CD shall, for so long as such Global B CD remains outstanding, be that determined on such date.

Definitions

For the purposes of this provision, unless the context otherwise requires, the following defined terms shall have the meanings set out below:

"*TARGET Banking Day*" means any day on which TARGET2 (the Trans-European Automated Real-time Gross Settlement Express Transfer system) (or any successor transfer system, as determined by the Agent) is open for the settlement of payments in Euro.

"Interest Reset Date" means, with respect to an Interest Period, the first day of that Interest Period, as specified in the applicable Final Terms.

"London Banking Day" means any day on which commercial banks are open for general business (including dealings in foreign exchange and foreign currency deposits) in London, England.

"Reference Banks" means, in the case of a determination of EURIBOR, the principal Euro-zone office of four major banks in the Euro-zone inter-bank market, in each case selected by the Calculation Agent or as specified in the applicable Final Terms.

"Relevant Screen Page" means such page, section, caption, column or other part of a particular information service as may be specified in the applicable Final Terms, including any successor or replacement page, section, caption, column or other part of a particular information service.

"Representative Amount" means an amount that is representative for a single transaction in the relevant market at the relevant time.

"Specified Currency" means the currency specified as such in the applicable Final Terms.

The Issuer will procure that a notice specifying the Interest Rate payable in respect of each Interest Period be published as soon as practicable after the determination of the Interest Rate. Such notice will be delivered to the clearing systems.

Reference Rates for B CDs with a floating rate and ISDA Determination

If the applicable Final Terms specify ISDA Determination and Overnight Rates as applicable and the Reference Rate is either:

Overnight Rates

If the Reference Rate is either:

- a) GBP-SONIA;
- b) USD-SOFR;
- c) EUR-EuroSTR;
- d) CHF-SARON;
- e) HKD-HONIA;
- f) JPY-TONA;
- g) SGD-SORA;
- h) AUD-AONIA; or
- i) USD-Federal Funds;

the Interest Rate from time to time will be determined in accordance with the provisions below.

The Interest Rate for each Interest Period will be the rate determined by the Calculation Agent as the Reference Rate specified in the applicable Final Terms and determined in accordance with the following provisions plus or minus the spread (if any) specified in the applicable Final Terms:

- (A) Where GBP-SONIA is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is SONIA, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for GBP-SONIA in the Compounding/Averaging Matrix;
- (B) Where USD-SOFR is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is SOFR, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for USD-SOFR in the Compounding/Averaging Matrix;
- (C) Where CHF-SARON is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is SARON, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for CHF-SARON in the Compounding/Averaging Matrix;
- (D) Where EUR-EuroSTR is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference

Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is EuroSTR, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for EUR-EuroSTR in the Compounding/Averaging Matrix;

- (E) Where HKD-HONIA is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is HONIA, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for HKD-HONIA in the Compounding/Averaging Matrix;
- (F) Where JPY-TONA is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is TONA, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for JPY-TONA in the Compounding/Averaging Matrix;
- (G) Where SGD-SORA is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is SORA, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for SGD-SORA in the Compounding/Averaging Matrix;
- (H) Where AUD-AONIA is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is AONIA and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for AUD-AONIA in the Compounding/Averaging Matrix; and
- (I) Where USD-Federal Funds is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the formula set out in the specified Overnight Rate Compounding Method or Overnight Rate Averaging Method, as applicable, where the Underlying Benchmark is the EFFR, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for USD-Federal Funds in the Compounding/Averaging Matrix.

The Issuer will procure that a notice specifying the Interest Rate payable in respect of each Interest Period be published as soon as practicable after the determination of the Interest Rate. Such notice shall be delivered to the Relevant Clearing Systems.

In this provision:

"2021 ISDA Definitions" means the version of the 2021 ISDA Interest Rate Derivative Definitions, including each Matrix (and any successor matrix), as published by the International Swaps and Derivatives Association, Inc. (or any successor) on its website (www.isda.org) as at

the Issue Date provided that (i) references to a "Confirmation" in the 2021 ISDA Definitions should instead be read as references to the applicable Final Terms; and (ii) references to a "Calculation Period" in the 2021 ISDA Definitions should instead be read as references to an "Interest Period" and "Administrator/Benchmark Event" in the 2021 ISDA Definitions shall be disapplied; and

"Reference Rate Determination Date" means the number of Applicable Business Days, Observation Period Shift Business Days or Lockout Period Business Days, as applicable, as specified in the applicable Final Terms prior to the Interest Reset Date.

Capitalised terms used but not otherwise defined in this provision shall bear the meaning given to them in the 2021 ISDA Definitions.

Term Rates

If the Reference Rate is either:

If the applicable Final Terms specify ISDA Determination and Term Rates as being applicable and the Reference Rate is either:

- a) EUR-EURIBOR;
- b) AUD-BBSW;
- c) HKD-HIBOR;
- d) JPY-TIBOR; or
- e) SGD-SIBOR;

the Interest Rate from time to time will be determined in accordance with the provisions below.

The Interest Rate for each Interest Period will be the rate determined by the Calculation Agent as the Reference Rate specified in the applicable Final Terms and determined in accordance with the following provisions plus or minus the spread (if any) specified in the applicable Final Terms:

- (A) Where EUR-EURIBOR shall be determined by the Calculation Agent in accordance with the 2021 Definitions as if (i) the Reset Date was the first day of the relevant Interest Period and (ii) the Designated Maturity was the number of months equal to the Interest Period specified in the applicable Final Terms;
- (B) Where AUD-BBSW shall be determined by the Calculation Agent in accordance with the 2021 Definitions as if (i) the Reset Date was the first day of the relevant Interest Period and (ii) the Designated Maturity was the number of months equal to the Interest Period specified in the applicable Final Terms;
- (C) Where HKD-HIBOR shall be determined by the Calculation Agent in accordance with the 2021 ISDA Definitions as if (i) the Reset Date was the first day of the relevant Interest Period and (ii) the Designated Maturity was the number of months equal to the Interest Period specified in the applicable Final Terms;
- (D) Where JPY-TIBOR shall be determined by the Calculation Agent in accordance with the 2021 ISDA Definitions as if (i) the Reset Date was the first day of the relevant Interest Period and (ii) the Designated Maturity was the number of months equal to the Interest Period specified in the applicable Final Terms; and
- (E) Where SGD-SIBOR shall be determined by the Calculation Agent in accordance with the 2021 ISDA Definitions as if (i) the Reset Date was the first day of the relevant Interest Period and (ii) the Designated Maturity was the number of months equal to the Interest Period specified in the applicable Final Terms;

provided that where a Temporary Non-Publication Trigger occurs in respect of the relevant above-mentioned Reference Rate, the Temporary Non-Publication Fallback for such rate as applicable under the Floating Rate Matrix shall be amended such that the reference to "Calculation Agent Alternative Rate Determination" shall be replaced by "Temporary Non-Publication Fallback – Previous Day's Rate".

The Issuer will procure that a notice specifying the Interest Rate payable in respect of each Interest Period be published as soon as practicable after the determination of the Interest Rate. Such notice shall be delivered to the Relevant Clearing Systems.

In this provision, "2021 ISDA Definitions" means the version of the 2021 ISDA Interest Rate Derivative Definitions, including each Matrix (and any successor matrix), as published by the International Swaps and Derivatives Association, Inc. (or any successor) on its website (www.isda.org) as at the Issue Date provided that (i) references to a "Confirmation" in the 2021 ISDA Definitions should instead be read as references to the applicable Final Terms; and (ii) references to a "Calculation Period" in the 2021 ISDA Definitions should instead be read as references to an "Interest Period" and "Administrator/Benchmark Event" in the 2021 ISDA Definitions shall be disapplied.

Capitalised terms used but not otherwise defined in this provision shall bear the meaning given to them in the 2021 ISDA Definitions.

OIS Compounding Rates

- a) If the applicable Final Terms specify ISDA Determination and OIS Compound Rates as being applicable and the Reference Rate is either: AUD-AONIA-OIS Compound;
- b) CHF-SARON-OIS Compound;
- c) EUR-EuroSTR-OIS Compound;
- d) GBP-SONIA-OIS Compound;
- e) HKD-HONIA-OIS Compound;
- f) JPY-TONA-OIS Compound;
- g) SGD-SORA-OIS Compound;
- h) USD-Federal Funds-OIS Compound; or
- i) USD-SOFR-OIS Compound;

the applicable Final Terms, the Interest Rate from time to time will be calculated in accordance with the provisions below.

The Interest Rate for each Interest Period will be the rate determined by the Calculation Agent as the Reference Rate specified in the applicable Final Terms and determined in accordance with the following provisions plus or minus the spread (if any) specified in the applicable Final Terms:

- (A) Where AUD-AONIA-OIS Compound is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding formula, where the Underlying Benchmark is AONIA, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for AUD-AONIA-OIS Compound in the Compounding/Averaging Matrix;
- (B) Where CHF-SARON-OIS Compound is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding

formula, where the Underlying Benchmark is SARON, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for CHF-SARON-OIS Compound in the Compounding/Averaging Matrix;

- (C) Where EUR-EuroSTR-OIS Compound is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding formula, where the Underlying Benchmark is EuroSTR, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for EUR-EuroSTR-OIS Compound in the Compounding/Averaging Matrix;
- (D) Where GBP-SONIA-OIS Compound is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding formula, where the Underlying Benchmark is SONIA, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for GBP-SONIA-OIS Compound in the Compounding/Averaging Matrix;
- (E) Where HKD-HONIA-OIS Compound is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding formula, where the Underlying Benchmark is HONIA, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for HKD-HONIA-OIS Compound in the Compounding/Averaging Matrix;
- (F) Where JPY-TONA-OIS Compound is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding formula, where the Underlying Benchmark is TONA, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for JPY-TONA-OIS Compound in the Compounding/Averaging Matrix;
- (G) Where SGD-SORA-OIS Compound is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding formula, where the Underlying Benchmark is SORA, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for SGD-SORA-OIS Compound in the Compounding/Averaging Matrix;
- (H) Where USD-Federal Funds-OIS Compound is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding formula, where the Underlying Benchmark is the EFFR, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for USD-Federal Funds-OIS Compound in the Compounding/Averaging Matrix; and
- (I) Where USD-SOFR-OIS Compound is specified as the Reference Rate in the applicable Final Terms, the rate determined by the Calculation Agent on the relevant Reference Rate Determination Date by applying the OIS compounding formula, where the Underlying Benchmark is SOFR, and the resulting percentage is rounded, if necessary, in accordance with the 2021 ISDA Definitions, but to the nearest percentage point specified for USD-SOFR-OIS Compound in the Compounding/Averaging Matrix.

The Issuer will procure that a notice specifying the Interest Rate payable in respect of each Interest Period be published as soon as practicable after the determination of the Interest Rate. Such notice shall be delivered to the Relevant Clearing Systems.

In this provision:

"2021 ISDA Definitions" means the version of the 2021 ISDA Interest Rate Derivative Definitions, including each Matrix (and any successor matrix), as published by the International Swaps and Derivatives Association, Inc. (or any successor) on its website (www.isda.org) as at the Issue Date provided that (i) references to a "Confirmation" in the 2021 ISDA Definitions should instead be read as references to the applicable Final Terms; and (ii) references to a "Calculation Period" in the 2021 ISDA Definitions should instead be read as references to the Calculation Period specified in the applicable Final Terms and "Administrator/Benchmark Event" in the 2021 ISDA Definitions shall be disapplied; and

"Reference Rate Determination Date" means the number of Applicable Business Days specified in the applicable Final Terms prior to the Interest Reset Date.

Capitalised terms used but not otherwise defined in this provision shall bear the meaning given to them in the 2021 ISDA Definitions.

(6) Substitute or Successor Rate of Interest other than where the Reference Rate is USD LIBOR, SONIA, SOFR or €STR.

If, in respect of B CDs where the Reference Rate specified in the applicable Final Terms is EURIBOR, the Calculation Agent determines that the Reference Rate has been discontinued or has otherwise ceased to exist, the Calculation Agent shall, in its sole and absolute discretion, select a substitute or successor rate of interest that the Calculation Agent determines is most comparable to the Reference Rate to replace the Reference Rate (provided that if the Calculation Agent determines that there is an industry-accepted substitute or successor rate of interest, then the Calculation Agent shall select such substitute or successor rate of interest), and shall replace the Reference Rate by such substitute or successor rate of interest with effect from such date as determined by the Calculation Agent, and such substitute or successor rate of interest will be deemed to be the Reference Rate with effect from such date. The Calculation Agent may make such adjustments that it determines to be appropriate, if any, to any one or more of the terms of the B CDs, including without limitation, any variable or term relevant to the settlement or payment under the B CDs, as the Calculation Agent determines appropriate to account for such replacement and make such substitute or successor rate of interest comparable to the Reference Rate, in a manner that is consistent with industry-accepted practices for such substitute or successor rate of interest.

(7) Step-Up B CDs / Step-Down B CDs

The B CDs may include an interest step-up provision whereby the Interest Rate payable increases at pre-determined periods, as indicated in the applicable Final Terms. The B CDs may also indicate an interest step-down provision whereby the Interest Rate payable decreases at pre-determined periods, as indicated in the applicable Final Terms.

§ 4 Payments

(1) Business Day

A day (i) which is a Clearing System Business Day for the Relevant Clearing System, and (ii) on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in Frankfurt am Main and the Principal Financial Centre of the Specified Currency or in relation to any sum payable in Euro, a TARGET Banking Day (as defined in § 3(5)); where

"Principal Financial Centre" means the financial centre or centres indicated below with respect to such currency:

Specified Currency Principal Financial Centre(s)

Australian Dollar

Hong Kong Dollar

Singapore Dollar

Sterling

Sterling

London

Swiss Franc

U.S. Dollar

Yen

Sydney

Hong Kong

Singapore

Singapore

Zurich

New York

Tokyo

"Clearing System Business Day" means, in respect of a Relevant Clearing System, any day on which such Relevant Clearing System is open for the acceptance and execution of settlement instructions.

(2) **Day Count Fraction**

In respect of the calculation of an amount of interest for any Interest Period the relevant "Day Count Fraction" shall be:

- a) if "1/1 (ISDA)" is specified in the applicable Final Terms, 1;
- b) if "Actual/Actual (ISDA)" is specified in the applicable Final Terms, the actual number of days in the Interest Period divided by 365 (or, if any portion of the Interest Period falls in a leap year, the sum of (A) the actual number of days in that portion of the Interest Period falling in a leap year divided by 366 and (B) the actual number of days in that portion of the Interest Period falling in a non-leap year divided by 365);
- c) if "Actual/Actual (ICMA)" is specified in the applicable Final Terms, the number of days in the Interest Period, including 29 February in a leap year, divided by the product of (1) the actual number of days in such Interest Period and (2) the number of Interest Periods in any year;
- d) if "Actual/Actual (Bond)" is specified in the applicable Final Terms, the number of calendar days in the Interest Period, divided by the number of calendar days in the Interest Period multiplied by the number of Interest Periods in the calendar year;
- e) if "*Actual/Actual (Euro)*" is specified in the applicable Final Terms, the number of calendar days in the Interest Period divided by 365, or if the Interest Period includes 29 February, 366;
- f) if "*Actual/365 (Fixed*)" is specified in the applicable Final Terms, the actual number of days in the Interest Period divided by 365;
- g) if "Actual/360 (ISMA)" or "Actual/360 (ICMA)" is specified in the applicable Final Terms, the actual number of days in the Interest Period divided by 360;
- h) if "30/360 (ISDA)" is specified in the applicable Final Terms, the number of days in the Interest Period in respect of which payment is being made divided by 360, calculated on a formula basis as follows:

Day Count Fraction =
$$\frac{[360 \times (Y_2 - Y_1)] + [30 \times (M_2 - M_1)] + [D_2 - D_1]}{360}$$

where:

" Y_I " is the year, expressed as a number, in which the first day of the Interest Period falls;

"Y₂" is the year, expressed as a number, in which the day immediately following the last day included in the Interest Period falls;

" M_I " is the calendar month, expressed as a number, in which the day immediately following the last day included in the Interest Period falls;

" M_2 " is the calendar month, expressed as a number, in which the day immediately following the last day included in the Interest Period falls;

" D_I " is the first calendar day, expressed as a number, immediately following the last day included in the Interest Period, unless such number would be 31 and D1 is greater than 29, in which case D2 will be 30.

(3) **Business Day Convention**

If any Interest Payment Date is specified to be subject to adjustment in accordance with a Business Day Convention that would otherwise fall on a day that is not a Business Day, then, if the Business Day Convention specified in the applicable Final Terms is:

- a) (in the case of B CDs issued on a floating rate basis only) the Floating Rate Business Day Convention, the Interest Payment Date will be postponed to the next day that is a Business Day unless it would thereby fall into the next calendar month, in which event (x) such date will be brought forward to the immediately preceding Business Day and (y) each subsequent such date will be the last Business Day of the month in which such date would have fallen had it not been subject to adjustment;
- b) the Following Business Day Convention, such Interest Payment Date will be postponed to the next day that is a Business Day;
- c) the Modified Following Business Day Convention, such date will be postponed to the next day that is a Business Day unless it would thereby fall into the next calendar month, in which event such date shall be brought forward to the immediately preceding Business Day; or
- d) the Preceding Business Day Convention, such date will be brought forward to the immediately preceding Business Day.

(4) No adjustments of interest in case of payments due on a non-Business Day

If the Final Terms provide that the Interest Period shall be "adjusted" and if the due date for a payment of interest is brought forward or postponed (as described above), the amount of interest shall be adjusted accordingly.

If the Final Terms provide that the Interest Period shall be "unadjusted" and if the due date for a payment of interest is brought forward or postponed (as described above), the amount of interest shall not be adjusted accordingly.

If the due date for the redemption of the principal amount of the B CD is adjusted the Holder shall not be entitled to payments in respect of such adjustment

§ 5 Scheduled Redemption

(1) **Tenor of the CDs.**

The tenor of the B CDs shall be more than 364 days from and including the date of issue, subject to compliance with any applicable legal and regulatory requirements.

(2) Scheduled Redemption.

Unless previously redeemed, or purchased and cancelled or extended, each B CD will be redeemed by the Issuer at 100 per cent. of the Nominal Amount on the maturity date set out in the Final Terms (the "Maturity Date").

§ 6 Extendible B CDs

(1) Extendible B CDs.

- a) The Final Terms may provide that on the initial Maturity Date and such other date or dates specified (each, an "Extension Date"), the Issuer has the option to extend the initial Maturity Date of the B CDs (the "Issuer Extension Option") to such date or dates as shall be provided in the applicable Final Terms (each, an "Extended Maturity Date" and the last Extended Maturity Date the "Final Maturity Date") (such B CDs, "Extendible B CDs"). Any Final Maturity Date shall in no event exceed the maximum maturity from and including the date of issue as specified in the applicable Final Terms.
- b) If the Final Terms provide that the relevant series of the B CDs are Extendible B CDs, each time the Issuer elects to exercise the Issuer Extension Option, the Issuer is required to deliver a notice of extension (an "Extension Notice") to the Relevant Clearing System by no later than 5.00 p.m. (Frankfurt time) on the date specified in the Final Terms (each, an "Extension Notice Date"), for communication by the Relevant Clearing System to the Holders of the Extendible B CDs, informing Holders that the Issuer will be exercising the Issuer Extension Option.

Each Extension Notice shall contain the following information:

- (A) confirmation that the Issuer will be exercising the Issuer Extension Option;
- (B) the applicable Extended Maturity Date;
- (C) the applicable Exercise Deadline (as defined below);
- (D) the applicable interest rate for the period between the initial Maturity Date and the applicable Extended Maturity Date (the "**Extended Interest Rate**"); and
- (E) the form of Exercise Notice (as defined below).
- c) If the Issuer does not exercise its Issuer Extension Option on any Extension Date, the Extendible B CDs will be redeemed on the then current Maturity Date.
- d) If the Issuer fails to publish an Extension Notice on an Extension Notice Date, then each holder of Extendible B CDs will be deemed to have exercised its Non-Extension Option, the then current Maturity Date shall not be extended and the Extendible B CDs will be redeemed on the then current Maturity Date.
- e) If the Issuer exercises its Issuer Extension Option, each Holder of Extendible B CDs has the option not to extend the then current Maturity Date in respect of some or all of those Extendible B CDs (the "Non-Extension Option"), in which case the then current Maturity Date shall not be extended in respect of those Extendible B CDs the subject of the Non-Extension Option and the relevant Extendible B CDs shall be redeemed on the then current Maturity Date. In order to exercise its Non-Extension Option in respect of

some or all of those Extendible B CDs, the Holder of the Extendible B CDs must deliver a duly completed option exercise notice (the "*Exercise Notice*") in the form annexed to the applicable Extension Notice by no later than 5.00 p.m. (Frankfurt time) on the date specified in the Final Terms (the "*Exercise Deadline*") to the Relevant Clearing System for communication by the Relevant Clearing System through the Agent to the Issuer.

- f) There will be a minimum of 10 Business Days between each Extension Notice Date and applicable Exercise Deadline unless otherwise agreed with the Relevant Clearing System.
- g) Upon delivery to the Relevant Clearing System, an Exercise Notice shall be revocable until the applicable Exercise Deadline, at which time such notice will become irrevocable and binding upon the Holder, or any transferee of such Holder, of the Extendible B CDs.
- If a Holder of Extendible B CDs delivers an Exercise Notice in respect of part only of its h) holding of Extendible B CDs, the principal amount of such partial holding of Extendible B CDs (the "Maturing B CDs") will become due and payable on the then current Maturity Date. The aggregate principal amount of the Maturing B CDs will be represented by a new Global CD to be issued on the applicable Extension Date, provided that any such principal amount of the Maturing B CDs will not be less than EUR 100,000 (or the equivalent in any other currency). The Maturing B CDs represented by the new Global B CD will be unlisted. The new Global B CD so issued will have the same terms as the B CDs, except that it will not be extendible, will have a separate International Securities Identification Number ("ISIN") and a separate Common Code and its maturity date will be the then current Maturity Date. The outstanding principal amount of such Extendible B CDs shall be reduced by the amount of the Maturing B CDs with effect from the applicable Extension Date, provided that any such principal amount of the outstanding Extendible B CDs will not be less than EUR 100,000 (or the equivalent in any other currency).
- i) If a Holder of Extendible B CDs does not deliver an Exercise Notice prior to the applicable Exercise Deadline, the then current Maturity Date shall be extended automatically to the next following Extended Maturity Date and interest from the then current Maturity Date will continue to accrue on the Extendible B CDs at the Extended Interest Rate and shall be payable on the applicable Extended Maturity Date.
- j) If the Issuer exercises its Issuer Extension Option and the Holder of Extendible B CDs exercises its Non-Extension Option, the relevant Extendible B CDs will be non-transferable in the period between the relevant Exercise Deadline and the relevant Extension Date. For the avoidance of doubt, no restrictions on transfer will exist during this period for the Holders of the Extendible B CDs who have not exercised its Non-Extension Option.

§ 7 Early Redemption

(1) Redemption at the option of the Issuer.

The Issuer will not be entitled to redeem a B CD before its Maturity Date, or in case of Extendible B CDs its Final Maturity Date, unless the applicable Final Terms specifies a redemption commencement date (the "**Redemption Commencement Date**").

If a B CD specifies a Redemption Commencement Date, it will also specify one or more redemption prices, which may be expressed as a percentage of the principal amount of the B CD. A B CD may also specify one or more redemption periods during which the specified redemption prices relating to a redemption of B CDs during those periods will apply. The minimum redemption price will be 100 per cent. of the Nominal Amount.

If a B CD specifies a Redemption Commencement Date, such B CD will be redeemable at the option of the Issuer, in whole or in part, at any time on or after that date or at a specified time or times. If the Issuer redeems a B CD, it will do so at the specified redemption price, together

with any interest accrued to the redemption date. If different prices are specified for different redemption periods, the price paid by the Issuer will be the price that applies to the redemption period during which such B CD is redeemed.

(2) Redemption upon Change in Law.

The Issuer will have the option to redeem a B CD as a result of certain developments involving a change in law (including a change in tax law). The Issuer will have the option to redeem a B CD if, as a result of any change in German tax treatment, the Issuer would be required to pay an additional amount as described in paragraph 6 of the Global B CD or it is or will become unlawful for the Issuer to perform any of its obligations under the B CDs. The redemption price in these circumstances will be 100 per cent. of the Nominal Amount.

If the Issuer exercises an option to redeem any B CD, it will give to the Holder written notice of the principal amount of the B CD to be redeemed, not less than 35 days before the applicable redemption date. In addition, the Issuer will notify the Luxembourg Stock Exchange of any redemption of B CDs.

§ 8 Agent

(1) Appointment.

The agents act solely as agents of the Issuer and do not assume any obligation or relationship of agency or trust for or with any Holder. The Issuer reserves the right to vary or terminate the appointment of the Agents and to appoint additional or other Agents, provided that the Issuer shall at all times maintain:

- a) a Paying Agent;
- b) one or more Calculation Agent(s);
- such other agents as may be required by any stock exchange on which the B CDs may be listed.

Notice of any termination of appointment and of any changes to the specified office of any Agent will be given to Holders.

(2) Issuing and paying agent.

The Issuing and paying agent shall be Deutsche Bank AG.

(3) **Calculation agent.**

The Calculation Agent shall be Goldman Sachs Bank Europe SE.

§ 9 Taxation

(1) Withholding taxes.

All payments of principal and interest which are made by the Issuer on the B CDs shall be made without deduction or withholding for or on account of any present or future taxes, duties or governmental charges of any nature whatsoever imposed, levied or collected by or in or on behalf of the country in which the Issuer has its statutory seat or by or on behalf of any political subdivision or authority therein or thereof having power to tax ("Withholding Taxes"), unless such deduction or withholding is required by law. In such latter event, the Issuer shall pay such additional amounts ("Additional Amounts") of principal and interest as may be necessary in order that the net amounts received by the Holders after such deduction or withholding each shall equal the respective amounts of principal and interest which would have been receivable had no such deduction or withholding been required.

Such Additional Amounts shall, however, not be payable on account of taxes, duties or governmental charges which

- a) are payable otherwise than by withholding or deduction from payments made by the Issuer to the Holders, or
- b) are deducted or withheld by any person acting as custodian bank or collecting agent on behalf of the Holders, or otherwise payable in any manner which does not constitute a deduction or withholding by the Issuer from payments of principal or interest made by it, or
- c) are deducted or withheld by a paying agent from a payment if the payment could have been made by another paying agent without such deduction or withholding, or
- d) are deducted or withheld pursuant to (i) any European Union Directive or Regulation concerning the taxation of savings, or (ii) any international treaty or understanding relating to such taxation and to which Germany or the European Union is a party / are parties or (iii) any provision of law implementing, or complying with, or introduced to conform with, such Directive, Regulation, treaty or understanding, or
- e) are payable by reason of the Holders having, or having had, some personal or business connection with Germany or another member state of the European Union and not merely by reason of the fact that payments in respect of the B CDs are, or for purposes of taxation are deemed to be, derived from sources in, or are secured in, Germany, or
- f) are payable by reason of a change in law that becomes effective more than 30 calendar days after the relevant payment of principal and interest becomes due, or is duly provided for, whichever occurs later.

(2) US Internal Revenue Code.

Any amounts to be paid will be paid net of any deduction or withholding imposed or required pursuant to Sections 1471 through 1474 of the US Internal Revenue Code (the "Code"), any current or future regulations or official interpretations thereof, any agreement entered into pursuant to Section 1471(b) of the Code, or any fiscal or regulatory legislation, rules or practices adopted pursuant to any intergovernmental agreement entered into in connection with the implementation of such Sections of the Code, and no additional amounts will be required to be paid on account of any such deduction or withholding.

§ 10 Presentation Period

The period for presentation of the B CDs (§ 801, Paragraph (1), Sentence 1 of the German Civil Code (BGB)) shall be ten years and the period of limitation for claims under the B CDs presented during the period for presentation shall be two years calculated from the expiry of the relevant presentation period.

§ 11 Amendments of the Terms and Conditions

The Terms and Conditions of the B CDs may be amended by the Issuer from time to time without the consent of the Holders if, in the reasonable opinion of the Issuer, the amendment is (a) formal, minor or technical in nature, (b) made to correct an obvious or demonstrable error or omission, (c) made, to comply with mandatory legal requirements and regulations of the Issuer's jurisdiction and/or to comply with changes in applicable laws and regulations, (d) is made to cure, correct or amend an erroneous provision in these Terms and Conditions and/or (e) does not materially adversely affect the interests of the Holders. Any such amendment shall be binding on the Holders and shall become effective upon notice to the Holders.

§ 12 Further issues, purchases and cancellation

(1) Further Issues.

The Issuer may from time to time, without the consent of the Holders, issue further B CDs having the same terms and conditions as the B CDs in all respects (or in all respects except for the issue date, interest commencement date and/or issue price) so as to form a single series with the B CDs.

(2) Purchase.

The Issuer or its affiliates may purchase B CDs from investors who are willing to sell from time to time, either in the open market at prevailing prices or in private transactions at negotiated prices. B CDs that the Issuer or its affiliates purchase may, at the Issuer's discretion, be held, resold or cancelled.

(3) *Cancellation*.

All B CDs redeemed in full shall be cancelled forthwith and may not be reissued or resold.

§ 13 Notices

(1) Notices to the Issuer.

Notices to the Issuer will be made to its office by mail or telefax and addressed for the attention of the person designated by it for that purpose as set out below:

Goldman Sachs Bank Europe SE Marienturm Taunusanlage 9-10 60329 Frankfurt am Main Germany

Attn: Dr. Tobias Wohlfarth, GSBE Corporate Treasury

(2) Notices to the Holders.

In relation to the B CDs which are admitted to listing on the Official List and to trading on the regulated market of the Luxembourg Stock Exchange as the rules of that stock exchange so require, notices to the Holders shall be validly given if published in the Luxemburger Wort, being a leading newspaper having general circulation in Luxembourg, or through publication on the website of the Luxembourg Stock Exchange (www.bourse.lu).

§ 14 Governing law, place of jurisdiction and enforcement

(1) Governing law.

The B CDs, and any non-contractual obligations arising out of or in connection with the B CDs, will be governed by, and construed in accordance with, laws of the Federal Republic of Germany.

(2) Place of jurisdiction.

Place of jurisdiction is Frankfurt am Main, Federal Republic of Germany.

(3) Enforcement.

The District Court (*Landgericht*) in Frankfurt am Main shall have non-exclusive jurisdiction for any action or other legal proceedings ("**Proceedings**") arising out of or in connection with the

B CDs. Any B CD Holder may in any Proceedings against the Issuer, or to which such Holder and the Issuer are parties, protect and enforce in his own name his rights arising under such CDs on the basis of (i) a statement issued by the Custodian with whom such Holder maintains a securities account in respect of the B CDs (a) stating the full name and address of the Holder, (b) specifying the aggregate principal amount of B CDs credited to such securities account on the date of such statement and (c) confirming that the Custodian has given written notice to the Relevant Clearing System containing the information pursuant to (a) and (b) and (ii) a copy of the CDs in global form certified as being a true copy by a duly authorised officer of the Clearing System or a depository of the Clearing System, without the need for production in such Proceedings of the actual records or the Global B CD.

For purposes of the foregoing, "Custodian" means any bank or other financial institution of recognised standing authorised to engage in securities custody business with which the Holder maintains a securities account in respect of the CDs and includes the Relevant Clearing System. Each Holder may, without prejudice to the foregoing, protect and enforce his rights under these B CDs also in any other way which is admitted in the country of the Proceedings.

FORM OF FINAL TERMS - A CDS

GOLDMAN SACHS BANK EUROPE SE

(LEI: 8IBZUGJ7JPLH368JE346) Issue of [Aggregate Nominal Amount of Tranche] [Title of A CDs] under the Certificate of Deposit Programme

Terms used herein shall be deemed to be defined as such in the Terms and Conditions of the A CDs set forth in the base prospectus dated 28 September 2022 (the "Base Prospectus") [and the supplement[s] to the Base Prospectus dated [•]]. This document constitutes the Final Terms of the A CDs described herein and must be read in conjunction with such Base Prospectus [as so supplemented].

Full information on the Issuer and the Programme is only available on the basis of the combination of these Final Terms and the Base Prospectus [as so supplemented]. The Base Prospectus [and the supplement[s] to the Base Prospectus] [is] [are] available for viewing at www.bourse.lu and during normal business hours at [address] [and copies may be obtained from [address]].

offinal business hours at [uuuress] [and	copies may be obtained from [dadress]].
Series Number:	[●]
Specified Currency:	[•]
Nominal Amount of A CDs:	[•]
Issue Price:	[•] [Premium] [Discount]
Specified Denomination(s):	[•]
Issue Date:	[•]
Interest Commencement Date:	[●]/[Issue Date]
Maturity Date:	[•]
Interest Basis:	[[●] per cent. Fixed Rate]
	[[specify reference rate] +/- [●] per cent. Floating Rate] [Zero Coupon]
Day Count Fraction:	[[1/1 (ISDA)] [Actual/Actual (ISDA)] [Actual/Actual (ICMA)] [Actual/Actual (Bond)] [Actual/Actual (Euro)] [Actual/365 (Fixed)] [Actual/360 (ISDA)] [Actual/360 (ICMA)] [30/360 (ISDA)]]
Business Day:	Frankfurt/[specify].
Interest Amount Payable:	Interest due will be rounded [up][down] to the nearest whole $[\bullet]$.
Interest Period:	[Adjusted] [Unadjusted]
Provisions relating to interest (if any	y) payable
Fixed rate provisions	[Applicable/Not Applicable]
Interest Rate:	[●] per cent. per annum
Interest Payment Date[s]:	[●]

Business Day Convention]

Applicable/Following

Convention/Modified Business Day Convention/Preceding

Business

Day

[Not

Business Day Convention:

Floating rate provisions [Applicable/Not Applicable]

Interest Rate: The rate per annum equal to the Reference Rate for such

Interest Period [plus]/[minus] [spread] per cent.

Interest Payment Date[s]: [●]

Business Day Convention: [Not Applicable/Floating Rate Business Day

Convention/Following Business Day Convention/Modified Business Day Convention/Preceding Business Day

Convention]

Interest Reset Date[s]: [●]

Reference Rate: [●]-month [EURIBOR] / [SOFR] / [SONIA] / [€STR] /

[GBP-SONIA] / [USD-SOFR] / [EUR-EuroSTR] / [CHF-SARON] / [HKD-HONIA] / [JPY-TONA] / [SGD-SORA] / [AUD-AONIA] / [USD-Federal Funds] / [EUR-EURIBOR] / [AUD-BBSW] / [HKD-HIBOR] / [JPY-TIBOR] / [SGD-SIBOR] / [AUD-AONIA-OIS Compound] / [CHF-SARON-OIS Compound] / [EUR-EuroSTR-OIS Compound] / [GBP-SONIA-OIS Compound] / [HKD-HONIA-OIS Compound] / [JPY-TONA-OIS Compound] / [SGD-SORA-OIS Compound] / [USD-Federal Funds-OIS Compound] / [USD-

SOFR-OIS Compound] / [●]

[The Issuer may select an alternative reference rate in respect of floating rate interest bearing A CDs. If so, the Interest Rate should be determined in accordance with the applicable provisions as set out in the section entitled "Floating Rate Interest" in "Terms and Conditions of the A

CDs".]

Manner in which the Rate of Interest is

to be determined:

[Screen Rate Determination/ISDA Determination]

Calculation Agent: Goldman Sachs Bank Europe SE

Screen Rate Determination [Applicable/Not Applicable]

Reference Banks: [●]/Not Applicable

Relevant Screen Page: [●]/Not Applicable

Calculation Method: [Compounded Daily (Non-Index Determination)/Weighted

Average/Compounded Daily (Index Determination)/Not Applicable] [Delete as appropriate. Complete for floating rate interest bearing A CDs only where the Reference Rate is specified as SONIA, SOFR or €STR. Compounded Daily (Index Determination) only available where the Reference

Rate is specified as SONIA or SOFR.]

Relevant Number: [●]/Not Applicable [Complete for floating rate interest

bearing A CDs only where the Calculation Method is specified as Compounded Daily (Index Determination)]

Observation Method: [Lag/Lock-out/Shift/Not Applicable] [Delete as

appropriate. Complete for floating rate interest bearing A CDs only where the Reference Rate is specified as SONIA,

SOFR or €STR]

Observation Look-back Period:

[•]/Not Applicable [Complete for floating rate interest bearing A CDs only where the Reference Rate is specified as SONIA, SOFR or €STR and the Observation Method is specified as Lag or Shift. Cannot be less than five Business Days prior to the relevant Interest Payment Date.]

Lock-out Date:

[●]/Not Applicable [Complete for floating rate interest bearing A CDs only where the Reference Rate is specified as SONIA, SOFR or €STR and the Observation Method is specified as Lock-out]

p:

[•]/Not Applicable [Cannot be less than five Business Days prior to the relevant Interest Payment Date.]

D:

[•]/Not Applicable [Complete for floating rate interest bearing A CDs only where the Reference Rate is specified as SONIA, SOFR or \in STR]

ISDA Determination

[Applicable/Not Applicable]

Overnight Rates:

[Applicable/Not Applicable]

Compounding/Averaging:

[Applicable/Not Applicable]

[Include Applicable for floating rate interest bearing A CDs only and where the Reference Rate is GBP-SONIA, USD-SOFR, EUR-EuroSTR, CHF-SARON, HKD-HONIA, JPY TONA, SGD-SORA, AUD-AONIA or USD-Federal Funds and complete the line items in the rest of this section

otherwise include Not Applicable]

Compounding

[Compounding with Lookback / Compounding with Observation Period Shift / Compounding with Lockout] [Not Applicable]

Averaging

[Averaging with Lookback / Averaging with Observation Period Shift / Averaging with Lockout]/[Not Applicable]

Lookback

[5] Applicable Business Days / [Not Applicable]

[Delete this field if Compounding with Lookback or Averaging with Lookback is not selected or

Compounding/Averaging is specified as Not Applicable.]

Observation Period Shift

[5] Observation Period Shift Business Days] [Not Applicable]

[Delete this field and the "Observation Period Shift Additional Business Days" field if Compounding with Observation Period Shift or Averaging with Observation Period Shift is not selected or Compounding/Averaging is specified as Not Applicable.]

Lockout:

[5] Lockout Period Shift Business Days

[Delete this field and "Lockout Period Business Days" field if Compounding with Lockout or Averaging with

Lockout is not selected or Compounding/Averaging is specified as Not Applicable.]

Observation Period Shift Additional **Business Days:**

[•] / [Not Applicable]

Lockout Period Business Days:

[•] / [Not Applicable]

[This field is to specify the financial centre(s) for the purposes of the Lockout Business Days. If none are specified and Not Applicable is selected, the Lockout Business Days will be the Applicable Business Days (i.e. the rate business days). This field should be completed and

the parties may wish to refer to the

Compounding/Averaging Matrix. As at December 2021 the number of Lockout Period Business Days for

Compounding with Lockout and Averaging with Lockout in the Compounding/Averaging Matrix has not yet been populated for any of GBP-SONIA, USD-SOFR, EUR-EuroSTR, CHF-SARON, HKD-HONIA, JPY TONA, SGD-SORA, AUD-AONIA or USD-Federal Funds. However, the default designation is 5 Lockout Period Business Days in accordance with the 2021 ISDA Definitions. Note that when populated the Compounding/Averaging Matrix may

not reflect the default designation]

Term Rates:

[Applicable/Not Applicable]

[Include Applicable for floating rate interest bearing A CDs only and where the Reference Rate is EUR-EURIBOR, AUD-BBSW, HKD-HIBOR, JPY-TIBOR, SGD-SIBOR, otherwise include Not Applicable]

[Applicable/Not Applicable]

OIS Compounding Rates:

[Include Applicable for floating rate interest bearing A CDs only where the Reference Rate is AUD-AONIA-OIS Compound, CHF-SARON-OIS Compound, EUR-EuroSTR-OIS Compound, GBP-SONIA-OIS Compound, HKD-HONIA-OIS Compound, JPY-TONA-OIS Compound, SGD-SORA-OIS Compound, USD-Federal Funds-OIS Compound or USD-SOFR-OIS Compound and complete the line items in the rest of this section, otherwise include

Not Applicable]

Calculation Period:

[•] / [Not Applicable]

[Needs to take into account the Fixing Date for the relevant Reference Rate specified in the Floating Rate Matrix]

Reference Rate Determination Date:

[5] Applicable Business Days / [Not Applicable]

[Cannot be less than five Business Days prior to the relevant

Interest Reset Date.]

Zero Coupon

[Applicable/Not Applicable]

Provisions relating to redemption

Redemption at the option of the Issuer: [Applicable/Not Applicable]

(Internal note: please notify the relevant clearing system five Business Days prior to the redemption of the A CDs)

Redemption Commencement Date: [●]/Not Applicable

Redemption price(s): [●]/Not Applicable

Redemption period: [●]/Not Applicable

Provisions relating to Extendible A CDs

Extendible A CDs: [Applicable/Not Applicable] [If the Issuer Extension Option

is to apply more than once, each relevant Extension Date

should be included below]

(Internal note: please notify the relevant clearing system five

Business Days prior to the extension of the A CDs)

[First] Extension Date: [●]

[First] Extended Maturity Date: [●] [date or period]

[First] Extension Notice Date: [●]

[First] Exercise Deadline [●]

General provisions

New global form: [Yes/No]

Intended to be held in a manner which would allow Eurosystem eligibility:

[Yes/No]

[Yes. Note that the designation "yes" simply means that the CDs are intended upon issue to be deposited with one of the ICSDs as common safekeeper and does not necessarily mean that the CDs will be recognised as eligible collateral for Eurosystem monetary policy and intra day credit operations by the Eurosystem either upon issue or at any or all times during their life. Such recognition will depend upon the ECB being satisfied that Eurosystem eligibility criteria have been met.] [include this text if "Yes" selected in which case the A CDs must be issued in new global form].

[No. Whilst the designation is specified as "no" at the date of these Final Terms, should the Eurosystem eligibility criteria be amended in the future such that the A CDs are capable of meeting them the A CDs may then be deposited with one of the ICSDs as common safekeeper. Note that this does not necessarily mean that the A CDs will then be recognised as eligible collateral for Eurosystem monetary policy and intra day credit operations by the Eurosystem at any time during their life. Such recognition will depend upon the ECB being satisfied that Eurosystem eligibility criteria have been met.]

Distribution

Method of Distribution: [Syndicated/Non-syndicated]

Listing and admission to trading

Listing: [Official list of the Luxembourg Stock Exchange]

[Unofficial market (Freiverkehr) of the Frankfurt Stock Exchange] [Official list of the Frankfurt Stock

Exchange]/[Not Applicable]

Admission to trading: [Application has been made for the A CDs to be admitted to

trading on the [[Euro MTF] [Professional segment of the Euro MTF market] [and the] [regulated market] [Professional segment of the regulated market] of the Luxembourg Stock Exchange][[Unofficial market (Freiverkehr)][regulated market] of the Frankfurt Stock

Exchange] with effect from [•].] [Not Applicable.]

Estimate of total expenses related to

admission to trading:

[•]/Not Applicable

Yield: Indication of yield [Fixed rate A CDs only: [●] per annum]

[Zero coupon A CDs only: [●] per annum]

The yield is calculated at the Issue Date on the basis of the

issue price. It is not an indication of future yield.

Interests of natural and legal persons involved in the Programme:

[So far as the Issuer is aware, no person involved in the Programme has an interest material to the Programme.]/[●]

Historical interest rates: (Floating rate A CDs only)

Details of historical Reference Rate [•]

can be found:

Operational Information

ISIN Code: [●]

Common Code: [●]

Any clearing system(s) other than Euroclear Bank S.A./N.V. and Clearstream Banking S.A. and the relevant identification number(s):

[Not Applicable/[●]].

Delivery: Delivery [against/free of] payment.

Names and addresses of additional

Paying Agent(s) (if any):

[Not Applicable/ $[\bullet]$ (*specify*)].

Prohibition of Offer to Private Clients [Applicable/Not Applicable] in Switzerland:

Relevant Benchmark[s]

[Include if applicable: [Specify benchmark] is provided by [administrator legal name] [repeat as necessary]. [As at the date of these Final Terms, [administrator legal name] [appears]/[does not appear] [repeat as necessary] in the register of administrators and benchmarks established and maintained by ESMA pursuant to Article 36 of the Benchmarks Regulation.] [As far as the Issuer is aware, the transitional provisions in Article 51 of the Benchmarks Regulation apply, such that [administrator legal name] is not currently required to obtain authorisation or registration (or, if located outside the European Union, recognition, endorsement or equivalence).] / [Not Applicable]

FORM OF FINAL TERMS - B CDs

GOLDMAN SACHS BANK EUROPE SE

(LEI: 8IBZUGJ7JPLH368JE346) Issue of [Aggregate Nominal Amount of Tranche] [Title of B CDs] under the Certificate of Deposit Programme

Terms used herein shall be deemed to be defined as such in the Terms and Conditions of the B CDs set forth in the base prospectus dated 28 September 2022 (the "Base Prospectus") [and the supplement[s] to the Base Prospectus dated [●]] which [together] constitute[s] a base prospectus for the purposes of Regulation (EU) 2017/1129 (as amended or superseded, the "EU Prospectus Regulation"). This document constitutes the Final Terms of the B CDs described herein for the purposes of Article 8 of the EU Prospectus Regulation and must be read in conjunction with such Base Prospectus [as so supplemented] in order to obtain all the relevant information.

Full information on the Issuer and the Programme is only available on the basis of the combination of these Final Terms and the Base Prospectus [as so supplemented]. The Base Prospectus [and the supplement[s] to the Base Prospectus] [is] [are] available for viewing at www.bourse.lu and during normal business hours at [address] [and copies may be obtained from [address]].

ormar outsiness nours at [accress]	[und copies may be obtained from [underess]].
Series Number:	[●]
Specified Currency:	[•]
Nominal Amount of B CDs:	[•]
Issue Price:	[•] [Premium] [Discount]
Specified Denomination(s):	[•]
Issue Date:	[•]
Interest Commencement Date:	[•]/[Issue Date]
Maturity Date:	[•]
Interest Basis:	[[●] per cent. Fixed Rate]
	[[specify reference rate] +/- [●] per cent. Floating Rate]
	[Zero Coupon]
Day Count Fraction:	[[1/1 (ISDA)] [Actual/Actual (ISDA)] [Actual/Actual (ICMA)] [Actual/Actual (Bond)] [Actual/Actual (Euro)] [Actual/365 (Fixed)] [Actual/360 (ISDA)] [Actual/360 (ICMA)] [30/360 (ISDA)]]
Business Day:	[Frankfurt]/[specify]
Interest Amount Payable:	Interest due will be rounded [up][down] to the nearest whole [●].
Interest Period:	[Adjusted] [Unadjusted]
Provisions relating to interest (if any) payable
Fixed rate provisions	[Applicable/Not Applicable]

[[●] per cent. per annum]

Interest Rate:

[For Step-Up B CDs / Step-Down B CDs: [●] per cent. per annum commencing on (and including) [date] until (but not including) [date]

[•] per cent. per annum commencing on (and including) [date] until (but not including) [date]

[•] per cent. per annum commencing on (and including) [date] until (but not including) the Maturity Date]]

Interest Payment Date[s]: [●]

Business Day Convention: [Not Applicable/Following Business Day Convention/Modified Business Day Convention/Preceding Business Day Convention]

Floating rate provisions [Applicable/Not Applicable]

Interest Rate: [The rate per annum equal to the Reference Rate for such Interest

Period [plus]/[minus] [spread] per cent.]

[For Step-Up B CDs / Step-Down B CDs: The rate per annum equal to the Reference Rate for such Interest Period [plus]/[minus] [spread] per cent. commencing on (and including) [date] until (but not including) [date]

The rate per annum equal to the Reference Rate for such Interest Period [plus]/[minus] [spread] per cent. commencing on (and including) [date] until (but not including) [date]

The rate per annum equal to the Reference Rate for such Interest Period [plus]/[minus] [spread] per cent. commencing on (and including) [date] until (but not including) Maturity Date]]

Interest Period: [●]

Interest Payment Date[s]: [●]

Business Day Convention: [Not Applicable/Floating Rate Business Day

Convention/Following Business Day Convention/Modified Business Day Convention/Preceding Business Day Convention]

Interest Reset Date[s]: [•]

Reference Rate: $[\bullet]$ -month [EURIBOR] / [SOFR] / [SONIA] / [<math>ESTR] / [GBP-

SONIA] / [USD-SOFR] / [EUR-EuroSTR] / [CHF-SARON] / [HKD-HONIA] / [JPY-TONA] / [SGD-SORA] / [AUD-AONIA] / [USD-Federal Funds] / [EUR-EURIBOR] / [AUD-BBSW] / [HKD-HIBOR] / [JPY-TIBOR] / [SGD-SIBOR] / [AUD-AONIA-OIS Compound] / [CHF-SARON-OIS Compound] / [EUR-EuroSTR-OIS Compound] / [GBP-SONIA-OIS Compound] / [HKD-HONIA-OIS Compound] / [JPY-TONA-OIS Compound] / [SGD-SORA-OIS Compound] / [USD-Federal Funds-OIS Compound] / [USD-SOFR-OIS

Compound]

Manner in which the Rate of Interest is to be determined:

[Screen Rate Determination/ISDA Determination]

Calculation Agent: Goldman Sachs Bank Europe SE

Screen Rate Determination [Applicable/Not Applicable]

Reference Banks: [•]/Not Applicable Relevant Screen Page: [•]/Not Applicable Calculation Method: [Compounded Daily (Non-Index Determination)/Weighted Average/Compounded Daily (Index Determination)/Not Applicable] [Delete as appropriate. Complete for floating rate interest bearing B CDs only where the Reference Rate is specified as SONIA, SOFR or €STR. Compounded Daily (Index Determination) only available where the Reference Rate is specified as SONIA or SOFR.] Relevant Number: [●]/Not Applicable [Complete for floating rate interest bearing B CDs only where the Calculation Method is specified as Compounded Daily (Index Determination)] Observation Method: [Lag/Lock-out/Shift/Not Applicable] [Delete as appropriate. Complete for floating rate interest bearing B CDs only where the Reference Rate is specified as SONIA, SOFR or €STR] Observation Look-back Period: [•]/Not Applicable [Complete for floating rate interest bearing B CDs only where the Reference Rate is specified as SONIA, *SOFR or €STR and the Observation Method is specified as Lag* or Shift. Cannot be less than five Business Days prior to the relevant Interest Payment Date.] [•]/Not Applicable [Complete for floating rate interest bearing Lock-out Date: B CDs only where the Reference Rate is specified as SONIA, SOFR or €STR and the Observation Method is specified as Lockout] [•]/Not Applicable [Cannot be less than five Business Days prior p: to the relevant Interest Payment Date.] D: [•]/Not Applicable [Complete for floating rate interest bearing B CDs only where the Reference Rate is specified as SONIA, *SOFR or €STR*] **ISDA Determination** [Applicable/Not Applicable] Compounding/Averaging: [Applicable/Not Applicable] [Include Applicable for floating rate interest bearing A CDs only and where the Reference Rate is GBP-SONIA, USD-SOFR, EUR-EuroSTR, CHF-SARON, HKD-HONIA, JPY TONA, SGD-SORA, AUD-AONIA or USD-Federal Funds and complete the line items in the rest of this section, otherwise include Not *Applicable*] [Compounding with Lookback / Compounding with Observation Compounding: Period Shift / Compounding with Lockout] [Not Applicable]] Averaging: [Averaging with Lookback / Averaging with Observation Period

Lookback: [5] Applicable Business Days / [Not Applicable]

Shift / Averaging with Lockout]/[Not Applicable]]

[Delete this field if Compounding with Lookback or Averaging with Lookback is not selected or Compounding/Averaging is specified as Not Applicable.]

Observation Period Shift:

[5] Observation Period Shift Business Days] [Not Applicable]

[Delete this field and the "Observation Period Shift Additional Business Days" field if Compounding with Observation Period Shift or Averaging with Observation Period Shift is not selected or Compounding/Averaging is specified as Not Applicable.]

Lockout:

[5] Lockout Period Shift Business Days [Not Applicable]

[Delete this field and "Lockout Period Business Days" field if Compounding with Lockout or Averaging with Lockout is not selected or Compounding/ Averaging is specified as Not Applicable.]

Observation Period Shift Additional Business Days:

[•] / [Not Applicable]

Lockout Period Business Days:

[•] / [Not Applicable]

[This field is to specify the financial centre(s) for the purposes of the Lockout Business Days. If none are specified and Not Applicable is selected, the Lockout Business Days will be the Applicable Business Days (i.e. the rate business days). This field should be completed and the parties may wish to refer to the Compounding/Averaging Matrix. As at December 2021 the number of Lockout Period Business Days for Compounding with Lockout and Averaging with Lockout in the Compounding/Averaging Matrix has not yet been populated for any of GBP-SONIA, USD-SOFR, EUR-EuroSTR, CHF-SARON, HKD-HONIA, JPY TONA, SGD-SORA, AUD-AONIA or USD-Federal Funds. However, the default designation is 5 Lockout Period Business Days in accordance with the 2021 ISDA Definitions. Note that when populated the Compounding/Averaging Matrix may not reflect the default

designation]

Term Rates: [Applicable/Not Applicable]

[Include Applicable for floating rate interest bearing B CDs only and where the Reference Rate is EUR-EURIBOR, AUD-BBSW, HKD-HIBOR, JPY-TIBOR, SGD-SIBOR, otherwise include Not Applicable]

OIS Compounding Rates:

[Applicable/Not Applicable]

[Include Applicable for floating rate interest bearing B CDs only where the Reference Rate is AUD-AONIA-OIS Compound, CHF-SARON-OIS Compound, EUR-EuroSTR-OIS Compound, GBP-SONIA-OIS Compound, HKD-HONIA-OIS Compound, JPY-TONA-OIS Compound, SGD-SORA-OIS Compound, USD-Federal Funds-OIS Compound or USD-SOFR-OIS Compound and complete the line items in the rest of this section, otherwise include Not Applicable]

Calculation Period: [•] / [Not Applicable]

> [Needs to take into account the Fixing Date for the relevant Reference Rate specified in the Floating Rate Matrix]

Reference Rate Determination

Date:

[5] Applicable Business Days / [Not Applicable]

[Cannot be less than five Business Days prior to the relevant

Interest Reset Date.]

Zero Coupon [Applicable/Not Applicable]

Provisions relating to redemption

Redemption at the option of the

Issuer:

[Applicable/Not Applicable]

(Internal note: please notify the relevant clearing system five

Business Days prior to the redemption of the B CDs)

Redemption Commencement

Date:

[•]/Not Applicable

[•]/Not Applicable Redemption price(s):

Redemption period: [•]/Not Applicable

Provisions relating to Extendible B CDs

Extendible B CDs: [Applicable/Not Applicable] [If the Issuer Extension Option is to

apply more than once, each relevant Extension Date should be

included below]

(Internal note: please notify the relevant clearing system five

Business Days prior to the extension of the B CDs)

[First] Extension Date: [**•**]

[First] Extended Maturity Date: [•] [date or period]

[First] Extension Notice Date: [ullet]

[First] Exercise Deadline [•]

General provisions

New global form: [Yes/No]

Intended to be held in a manner which would allow Eurosystem eligibility:

[Yes/No]

[Yes. Note that the designation "yes" simply means that the B CDs are intended upon issue to be deposited with one of the ICSDs as common safekeeper and does not necessarily mean that the B CDs will be recognised as eligible collateral for Eurosystem monetary policy and intra day credit operations by the Eurosystem either upon issue or at any or all times during their life. Such recognition will depend upon the ECB being satisfied that Eurosystem eligibility criteria have been met.] [include this text if "Yes" selected in which case the B CDs must be issued in new global form].

[No. Whilst the designation is specified as "no" at the date of these Final Terms, should the Eurosystem eligibility criteria be

amended in the future such that the B CDs are capable of meeting them the B CDs may then be deposited with one of the ICSDs as common safekeeper. Note that this does not necessarily mean that the B CDs will then be recognised as eligible collateral for Eurosystem monetary policy and intra day credit operations by the Eurosystem at any time during their life. Such recognition will depend upon the ECB being satisfied that Eurosystem eligibility criteria have been met.]

Distribution

Method of Distribution: [Syndicated/Non-syndicated]

Listing and admission to trading

Listing: [Official list of the Luxembourg Stock Exchange] [Unofficial

market (Freiverkehr) of the Frankfurt Stock Exchange] [Official

list of the Frankfurt Stock Exchange /[Not Applicable]

Admission to trading: [Application has been made for the B CDs to be admitted to

> trading on the [[Euro MTF] [Professional segment of the Euro MTF market] [and the][regulated market] [Professional segment of the regulated market] of the Luxembourg Stock Exchange][[Unofficial market (Freiverkehr)][regulated market] of the Frankfurt Stock Exchange] with effect from [•]] [Not

Applicable.]

Estimate of total expenses related to admission to trading: [•]/Not Applicable

Indication of yield [fixed rate/zero coupon B CDs only]: [•] per annum

Historical interest rates: (Floating rate B CDs only)

Details of historical Reference

Rate can be found:

[•]

Interests of natural and legal persons involved in the

Programme:

[So far as the Issuer is aware, no person involved in the Programme has an interest material to the Programme.]/[●]

Reasons for the offer, estimated net proceeds and total expenses

Reasons for the offer: [•] [See ["Use of Proceeds"] in Base Prospectus / Give Details]

> (See "Use of Proceeds" wording in Base Prospectus – if reasons for offer differ from what is disclosed in the Base Prospectus,

give details here.)

Estimated net proceeds:

Estimated total expenses: [•]

Operational Information

ISIN Code: [•]

Common Code: [•]

Any clearing system(s) other than Euroclear Bank S.A./N.V. [Not Applicable/[●]].

and Clearstream Banking S.A. and the relevant identification number(s):

Delivery: Delivery [against/free of] payment.

Names and addresses of additional Paying Agent(s) (if

[Not Applicable/ $[\bullet]$ (specify)].

Prohibition of offer to Private

[Applicable/Not Applicable]

Clients in Switzerland:

Relevant Benchmark[s]

[Include if applicable: [Specify benchmark] is provided by [administrator legal name] [repeat as necessary]. [As at the date of these Final Terms, [administrator legal name] [appears]/[does not appear] [repeat as necessary] in the register of administrators and benchmarks established and maintained by ESMA pursuant to Article 36 of the Benchmarks Regulation.] [As far as the Issuer is aware, the transitional provisions in Article 51 of the Benchmarks Regulation apply, such that [administrator legal name] is not currently required to obtain authorisation or registration (or, if located outside the European Union, recognition, endorsement or equivalence).] / [Not Applicable]

USE OF PROCEEDS

Unless otherwise specified in the relevant Final Terms, the Issuer is s free in the use of proceeds from the issue of CDs and not obliged to invest the proceeds in any specific asset. The Issuer intends to use the net proceeds from the issue of CDs for its general corporate purposes.

TAXATION

Tax Warning

The tax legislation of the Member State of the investor and of the Member State of incorporation of the Issuer may affect the income generated by the CDs.

Each potential investor should seek advice from a representative of the tax advisory profession with respect to the tax implication of acquiring, holding and selling the Securities.

FORM OF THE GLOBAL CDS

The securities covered hereby have not been registered under the US Securities Act of 1933, as amended (the "Securities Act") and may not be offered or sold within the United States or to, or for the account or benefit of, US persons. Terms used above have the meanings given to them by Regulation S under the Securities Act.

GOLDMAN SACHS BANK EUROPE SE [A] [B] CERTIFICATE OF DEPOSIT

- 1. Goldman Sachs Bank Europe SE (the "**Issuer**") certifies that a sum has been deposited with it upon terms that on the Maturity Date as set out in the final terms and the terms and conditions attached hereto (the "**Final Terms**"), or such earlier date or dates as the same may become payable in accordance with the Final Terms, the Nominal Amount set out in the Final Terms is payable to the bearer together with interest thereon at the rate and at the times (if any) specified in the Final Terms. Terms defined in the Final Terms attached hereto but not otherwise defined in this Global Certificate of Deposit (the "**Global CD**")] shall have the same meaning in this Global CD. If the Final Terms specify that the CDs are Extendible CDs and the Issuer Extension Option is applicable, the references herein to Maturity Date shall be to the then current Maturity Date as further provided in the Final Terms.
- 2. The Final Terms (including the terms and conditions (the "**Terms and Conditions**") attached to this Global CD apply to these Certificates of Deposit. There is no right to request the printing and delivery of definitive Certificates of Deposit.
- 3. [If New Global CD insert: The aggregate principal amount of Certificates of Deposit represented by this Global CD shall be the aggregate amount from time to time entered in the records of each of Euroclear Bank SA/NV and Clearstream Banking S.A. (each a "Relevant Clearing System" and together, the "Relevant Clearing Systems"), which shall be completed and/or amended, as the case may be, upon (i) the issue of Certificates of Deposit represented hereby and (ii) the redemption or purchase and cancellation of Certificates of Deposit represented hereby, all as described below. The records of the Relevant Clearing Systems (which expression in this Global CD means the records that each Relevant Clearing System holds for its customers which reflect the amount of such customer's interest in the Certificates of Deposit) shall be conclusive evidence of the aggregate principal amount of the Certificates of Deposit represented by this Global CD and, for these purposes, a statement issued by a Relevant Clearing System (which statement shall be made available to the bearer upon request) stating the aggregate principal amount of Certificates of Deposit represented by this Global CD at any time shall be conclusive evidence of the records of such Relevant Clearing System at that time. If any redemption is made in respect of, or cancellation of, any of the Certificates of Deposit represented by this Global CD, the Issuer shall procure that details of such redemption or cancellation (as the case may be) shall be entered pro rata in the records of the Relevant Clearing Systems and, upon any such entry being made, the aggregate principal amount of the Certificates of Deposit recorded in the records of the Relevant Clearing Systems and represented by this Global CD shall be reduced by the aggregate principal amount of the Certificates of Deposit so redeemed or cancelled. Payments due in respect of Certificates of Deposit for the time being represented by this Global CD shall be made to the bearer of this Global CD and each payment so made will discharge the Issuer's obligations in respect thereof. Any failure to make the entries referred to above shall not affect such discharge.]
- 4. This Global CD and any non-contractual obligations arising out of or in connection with it are governed by, and shall be construed in accordance with, the laws of the Federal Republic of Germany.
- 5. This Global CD shall only be valid if it bears the handwritten signatures of two authorised officers of the Issuer and the handwritten.
- 6. [If Classical Global CD insert: control signature of a person instructed by the Issuing Agent.]
- 7. [If New Global CD insert: signature of the common safekeeper.]

AUTHENTICATED as Issuing	
and Paying Agent by	
DEUTSCHE BANK AG	
without recourse, warranty or liability and for authentication purposes only	
Ву:	
(Authorised Signatory)	
Signed on behalf of:	Signed on behalf of:
GOLDMAN SACHS BANK EUROPE SE	GOLDMAN SACHS BANK EUROPE SE
Ву:	By:
(Authorised Signatory)	(Authorised Signatory)

[EFFECTUATED by or on behalf of the Common Safekeeper]

[COMMON SAFEKEEPER]

as Common Safekeeper

By: _______

(Authorised Signatory)

[For the purposes of effectuation only]

SUBSCRIPTION AND SALE

Save for the approval of this Base Prospectus as a Base Prospectus for the purpose of Article 8 of the EU Prospectus Regulation by the CSSF, no action has been or will be taken by the Issuer that would permit a public offering of the CDs or possession or distribution of any offering material in relation to the CDs in any jurisdiction where action for that purpose is required. No offers or sales of any CDs, or distribution of any offering material relating to the CDs, may be made in or from any jurisdiction except in circumstances, which will result in compliance with any applicable laws and regulations and will not impose any obligation on the Issuer.

The United States of America

The CDs have not been nor will be registered under the Securities Act and the CDs may not be offered or sold within the United States or to, or for the account or benefit of, US persons except in certain transactions exempt from the registration requirements of the Securities Act. The Issuer will offer and sell, CDs only outside the United States to non-US persons in accordance with Rule 903 of Regulation S under the Securities Act ("Regulation S"). Accordingly, neither the Issuer nor its affiliates nor any person acting on its or their behalf has engaged or will engage in any directed selling efforts with respect to the CDs and will comply with the offering restrictions requirement of Regulation S. At or prior to confirmation of sale of CDs, the Issuer will have sent to each distributor, dealer or person receiving a selling commission, fee or other remuneration that purchases CDs from it a confirmation or notice to substantially the following effect:

"The Securities covered hereby have not been registered under the United States Securities Act of 1933, as amended (the "Securities Act") and may not be offered or sold within the United States or to, or for the account or benefit of, US persons. Terms used above have the meanings given to them by Regulation S under the Securities Act."

Terms used in this paragraph have the meanings given to them by Regulation S.

Prohibition of sales to EEA Retail Investors

The Issuer represents and agrees, and each further dealer appointed under the Programme will be required to represent and agree, that it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available any CDs which are the subject of the offering contemplated by this Base Prospectus as completed by the Final Terms in relation thereto to any retail investor in the European Economic Area. For the purposes of this provision:

- (a) the expression retail investor means a person who is one (or more) of the following:
 - a) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended or superseded, "MiFID II"); or
 - b) a customer within the meaning of Directive (EU) 2016/97 (as amended or superseded, the "**Insurance Distribution Directive**"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or
 - c) not a qualified investor as defined in Regulation (EU) 2017/1129 (as amended or superseded, the "EU Prospectus Regulation"); and
- (b) the expression an "**offer**" includes the communication in any form and by any means of sufficient information on the terms of the offer and the CDs to be offered so as to enable an investor to decide to purchase or subscribe for the CDs.

This Base Prospectus has been prepared on the basis that any offer of the CDs in any member state of the European Economic Area will be made pursuant to an exemption under the EU Prospectus Regulation from the requirement to publish a prospectus for offers of the CDs. Accordingly, any person making or intending to make an offer in any such member state of the CDs which are the subject of the offering contemplated in this Base Prospectus as completed by Final Terms in relation to the offer of those CDs may only do so in circumstances in which no obligation arises for the Issuer to publish a prospectus pursuant to Article 3 of the EU Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the EU Prospectus Regulation, in each case, in relation to such offer. The Issuer has not authorised,

nor does it authorise, the making of any offer of CDs in circumstances in which an obligation arises for the Issuer to publish a prospectus for such offer.

Prohibition of sales to UK Retail Investors

The Issuer has represented and agreed, and each further dealer appointed under the Programme will be required to represent and agree, that it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available any CDs which are the subject of the offering contemplated by this Base Prospectus as completed by the Final Terms in relation thereto to any retail investor in the United Kingdom. For the purposes of this provision:

- (a) the expression retail investor means a person who is one (or more) of the following:
 - a) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of United Kingdom domestic law by virtue of the European Union (Withdrawal) Act 2018 (the "EUWA") and the regulations made under the EUWA; or
 - b) a customer within the meaning of the provisions of the Financial Services and Markets Act 2000 (as amended, the "FSMA") and any rules or regulations made under the FSMA to implement Directive (EU) 2016/97, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of United Kingdom domestic law by virtue of the EUWA and the regulations made under the EUWA; or
 - c) not a qualified investor as defined in Article 2 of Regulation (EU) 2017/1129 as it forms part of United Kingdom domestic law by virtue the EUWA and the regulations made under the EUWA (the "**UK Prospectus Regulation**"); and
- (b) the expression an "**offer**" includes the communication in any form and by any means of sufficient information on the terms of the offer and the CDs to be offered so as to enable an investor to decide to purchase or subscribe for the CDs.

This Base Prospectus has been prepared on the basis that any offer of the CDs in the United Kingdom will be made pursuant to an exemption under the UK Prospectus Regulation from the requirement to publish a prospectus for offers of the CDs. Accordingly, any person making or intending to make an offer in the United Kingdom of the CDs which are the subject of the offering contemplated in this Base Prospectus as completed by Final Terms in relation to the offer of those CDs may only do so in circumstances in which no obligation arises for the Issuer to publish a prospectus pursuant to section 85 of the FSMA or supplement a prospectus pursuant to Article 23 of the UK Prospectus Regulation, in each case, in relation to such offer. the Issuer has not authorised, nor does it authorise, the making of any offer of CDs in circumstances in which an obligation arises for the Issuer to publish a prospectus for such offer.

The United Kingdom

The Issuer has represented and agreed, and each further dealer appointed under the Programme will be required to represent and agree, that:

- (a) in relation to any CDs which have a maturity of less than one year, (i) it is a person whose ordinary activities involve it in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of its business and (ii) it has not offered or sold and will not offer or sell any CDs other than to persons whose ordinary activities involve them in acquiring, holding, managing or disposing of investments (as principal or as agent) for the purposes of their businesses or who it is reasonable to expect will acquire, hold, manage or dispose of investments (as principal or agent) for the purposes of their businesses where the issue of the CDs would otherwise constitute a contravention of Section 19 of the FSMA by the Issuer;
- (b) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of any CDs in circumstances in which Section 21(1) of the FSMA does not apply to the Issuer; and

(c) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to such CDs in, from or otherwise involving the United Kingdom.

Switzerland

The Issuer has represented and agreed, and each further dealer appointed under the Programme will be required to represent and agree, that it has not made and will not make a public offer of CDs to private clients in Switzerland. The Issuer has not authorised and does not authorise any offer of CDs which would require the Issuer to publish a prospectus pursuant to article 35 of the Swiss Federal Financial Services Act ("FinSA") in respect of such offer. For the purposes of this provision, the expression "public offer" refers to the respective definitions in article 3 lit. g and h FinSA and as further detailed in the implementing Financial Services Ordinance ("FinSO").

GENERAL INFORMATION

Corporate Authorisation The establishment of the Programme and the issue of the CDs has been authorised pursuant to a resolution of the executive board of the Issuer dated 9 June 2022.

Clearing Systems

The CDs have been accepted for clearance through Euroclear and Clearstream, Luxembourg. The common code and the ISIN for each Series of CDs will be specified in the Final Terms relating thereto. The address of Euroclear is Euroclear Bank S.A./N.V., 1 Boulevard Du Roi Albert II, 1210 Brussels, Belgium and the address of Clearstream, Luxembourg is Clearstream Banking, S.A. 42 Avenue J. F. Kennedy, L-1855, Luxembourg.

Listing and Admission to Trading

If indicated in the applicable Final Terms, application has been made for the CDs issued under this Base Prospectus (i) to be listed on the official list of the Luxembourg Stock Exchange and to be admitted to trading on the Euro MTF or the professional segment of the Euro MTF of the Luxembourg Stock Exchange which is a multilateral trading facility for the purposes of MiFID II, (ii) to be listed on the official list of the Luxembourg Stock Exchange and to be admitted to trading on the regulated market or the professional segment of the regulated market of the Luxembourg Stock Exchange, which is a regulated market for the purposes of MiFID II; (iii) to be listed and admitted to trading on the unofficial market (*Freiverkehr*) of the Frankfurt Stock Exchange; which is a multilateral trading facility for the purposes of MiFID II, and (iv) to be listed on the official list of the Frankfurt Stock Exchange and admitted to trading on the regulated market of the official list of the Frankfurt Stock Exchange, which is a regulated market for the purposes of MiFID II.

If the Issuer exercises its Issuer Extension Option, the relevant Extendible A CDs or Extendible B CDs will be non-transferable in the period between the relevant Exercise Deadline and the relevant Extension Date. Extendible A CDs will be unlisted.

As long as any CDs are listed on the official list of the Luxembourg Stock Exchange and admitted to trading on the Euro MTF or the professional segment of the Euro MTF of the Luxembourg Stock Exchange and/or admitted to trading on the regulated market or the professional segment of the regulated market of the Luxembourg Stock Exchange and/or are listed and admitted to trading on the *Freiverkehr* of the Frankfurt Stock Exchange and/or are listed on the official list of the Frankfurt Stock Exchange and admitted to trading on the regulated market of the Frankfurt Stock Exchange, the Issuer will maintain a listing agent in Luxembourg. The listing agent in Luxembourg is Banque Internationale à Luxembourg, *société anonyme*.

In relation to the CDs which are admitted to listing and trading on the Euro MTF of the Luxembourg Stock Exchange and/or which are admitted to listing on the official list and to trading on the regulated market of the Luxembourg Stock Exchange as the rules of that stock exchange so require, notices to the holders of the CDs shall be validly given if published in the *Luxemburger Wort*, being a leading newspaper having general circulation in Luxembourg, or through publication on the website of the Luxembourg Stock Exchange (www.bourse.lu).

Secondary Market

The Issuer and its affiliates will not make a market in the A CDs after the initial offering. Neither the Issuer nor any other affiliate of the Issuer will have any obligation to make a market in the A CDs after the initial offering and purchase and sell the A CDs as principal and any such market-making, if commenced, may be discontinued at any time without notice. There can be no assurance that the A CDs offered hereby will not be sold or that there will be a secondary market for the A CDs. Even if a secondary market develops, the secondary market price received in exchange for the A CDs may be less than the Issue Price for such A CDs. Any purchases or sales of A CDs by the issuer will be as principal.

Goldman Sachs International or any other affiliate of the Issuer may use this Base Prospectus to resell B CDs in market-making transactions from time to time but neither the Issuer nor Goldman Sachs International nor any other affiliate of the Issuer will have any obligation to make a market in the B CDs after the initial offering and purchase and any such market-making, if commenced, may be discontinued at any time without notice.

Yield

In relation to any series of fixed rate CDs, an indication of yield in respect of such CDs will be specified in the applicable Final Terms. The yield is calculated as the issue date of the CDs on the basis of the relevant Issue Price. The yield indicated will be calculated as the yield to maturity as at the issue date of the CDs and will not be an indication of future yield.

REGISTERED OFFICE OF THE ISSUER

Goldman Sachs Bank Europe SE

Marienturm Taunusanlage 9-10 60329 Frankfurt am Main Germany

ISSUING AND PAYING AGENT

Deutsche Bank AG

Taunusanlage 12 60325 Frankfurt am Main Germany

LEGAL ADVISER TO THE ISSUER

Ashurst LLP

OpernTurm Bockenheimer Lanstr. 2-4 60306 Frankfurt am Main Germany

AUDITORS

Independent Auditors of the Issuer

Mazars GmbH & Co. KG

Wirtschaftsprüfungsgesellschaft Steuerberatungsgesellschaft Theodor-Stern-Kai 1 60596 Frankfurt am Main Germany