



GOLDMAN SACHS BANK USA RESOLUTION PLAN

Public Section

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When we use the terms "GS Bank", "the Bank", "we", "us", and "our" in this document, we mean Goldman Sachs Bank USA ("Bank USA" or "GS Bank USA"), together with its consolidated subsidiaries. When we use the terms "Goldman Sachs" and "GS Group", we mean The Goldman Sachs Group, Inc. ("Group Inc.") and its consolidated subsidiaries. GS Bank is a wholly-owned subsidiary of Group Inc. Group Inc. is a bank holding company ("BHC") under the U.S. Bank Holding Company Act of 1956 ("BHC Act"), a financial holding company ("FHC") under amendments to the BHC Act effected by the U.S. Gramm-Leach-Bliley Act of 1999, and is subject to supervision and examination by the Board of Governors of the Federal Reserve System ("FRB"), as its primary regulator.

GS Bank was included as one of GS Group's material operating entities ("MOEs") within the required resolution plan for Group Inc. that was filed on June 30, 2023 (the "GS Group Plan"). Goldman Sachs Bank Europe SE ("GSBE"), headquartered in Frankfurt, Germany, is a wholly-owned subsidiary of GS Bank USA and was also included as one of GS Group's MOEs in the GS Group Plan.

Unless otherwise specified, all financial information is as of, or for the year ended, December 31, 2022. All references to December 2022 refer to the Bank's year ended, or the date, as the context requires, December 31, 2022.

Cautionary Note on Forward-Looking Statements

The Bank's 2023 Resolution Plan (the "Bank Plan") is based on a series of hypothetical scenarios and assumptions about future events and circumstances. Accordingly, many of the statements and assessments in the Bank Plan constitute 'forward-looking statements' within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. These statements include statements, other than historical information or statements of current conditions, that relate to, among other things, our future plans, objectives and resolution strategies (including our expectations and projections regarding the implementation of those strategies), to the objectives and effectiveness of our risk management policies and practices, and to our resolution capabilities (including those regarding capital, liquidity, operational matters, separability, our governance mechanisms, derivatives and trading activities and Management Information Systems ("MIS")). The Bank Plan is based on many significant assumptions, including assumptions about the actions of regulators, creditors, depositors, counterparties and the state of the economy. None of these assumptions may prove to be correct in an actual resolution situation. The Bank Plan is not binding on the Federal Deposit Insurance Corporation ("FDIC") or any other resolution authority, and the scenarios that we describe and the assumptions that we make in the Bank Plan are hypothetical and do not necessarily reflect events to which we are or may become subject. In the event of the resolution of GS Bank, the strategies implemented by GS Bank, the FDIC or any other resolution authority could differ, possibly materially, from the strategies we have described. As a result, our actual resolution strategies, or the outcomes of our resolution strategies, could differ, possibly materially, from those we have described.

We have also included information about the status or efficacy of projects we have undertaken in connection with resolution planning. The statements with respect to the completion, impact and effectiveness of these projects are also forward-looking statements, and these projects may not be completed, effective or have the impact we anticipate.

1. Summary of Resolution Plan

Introduction

The Bank Plan provides material information that would help enable the FDIC to efficiently resolve GS Bank in the event of our failure. Throughout the resolution planning process, we have continued to make progress in identifying and remediating obstacles to our resolution. Our Board of Directors ("Bank Board") and senior management are committed to considering our resolvability and have taken an active role in resolution planning.

We do not underestimate the complexity of resolving a large financial institution such as GS Bank. We have considered a wide variety of factors and interdependencies, including many complex financial, legal, regulatory, organizational, governance and operational matters. GS Group, including the Bank, has devoted resources to its resolution planning, which has been the catalyst for important changes, including a reduction in the complexity of its organizational structure and numerous enhancements to governance and booking practices. These changes address both

regulatory feedback and enhancements that we identified through the course of resolution planning and business-as-usual ("BAU") processes.

The Bank invests in uplifting its capabilities on an ongoing basis to ensure that the Plan remains executable, as the Bank's business model continues to evolve.

The Bank Plan has been prepared in accordance with the applicable rules and guidance, including:

- the FDIC's final rule, 12 CFR Part 360.10 (the "IDI Rule"); and
- the FDIC's 'Statement on Resolution Plans for Insured Depository Institutions' ("IDI Statement") issued on June 25, 2021.

Group Inc. is also required to submit periodic resolution plans, and filed its most recent GS Group Plan on June 30, 2023 as required under the applicable rules¹. Although the filing dates of each plan did not coincide, the preparation of the GS Group Plan and the Bank Plan has been coordinated. However, because of the different rules and regulatory guidance applicable to the GS Group Plan and the Bank Plan, they differ in some important aspects, including the strategies they describe and the underlying assumptions on which they are based.

The Bank Plan is prepared in order to demonstrate how the FDIC could resolve GS Bank, via powers provided to it under the Federal Deposit Insurance Act ("FDIA"), should the Bank enter FDIC receivership, as opposed to being wound down in an orderly fashion outside of resolution proceedings as outlined in the GS Group Plan.

We recognize that resolution planning encompasses more than the mere creation of a formal resolution plan. It is also about ensuring a strong planning process that is flexible as conditions change, and taking measures so that the plan is fully operational at all times. We have devoted significant resources to our resolution planning process, and we have found it to be a useful exercise, not only to ensure the resilience and resolvability of GS Bank, but also to improve our operational capabilities and reduce our reliance on affiliates.

About GS Bank

GS Bank USA, together with its consolidated subsidiaries, is a New York State-chartered bank and a member of the Federal Reserve System. The Bank is supervised and regulated by the FRB, the New York State Department of Financial Services ("NYDFS") and the Consumer Financial Protection Bureau ("CFPB"). As a member of the FDIC, GS Bank USA's deposits are insured by the FDIC up to the maximum amount provided by law. GS Bank USA is registered as a swap dealer with the U.S. Commodity Futures Trading Commission ("CFTC") and as a security-based swap dealer with the Securities and Exchange Commission ("SEC"). GS Bank USA is also a government securities dealer subject to the rules and regulations of the U.S. Department of the Treasury.

¹ For further information on the GS Group Plan, please refer to <https://www.goldmansachs.com/investor-relations/creditor-information/2023-global-resolution-plan.pdf>

The Bank is a financial services provider that engages in banking activities. The Bank is GS Group's primary lending entity, originating loans to corporate and wealth management clients, as well as issuing credit cards and providing point-of-sale financing through GreenSky, Inc. ("GreenSky") to consumers. In October 2023, GS Group announced an agreement to sell GreenSky, which is expected to close in the first quarter of 2024. The Bank is GS Group's primary deposit-taking entity. The Bank's depositors include private bank clients, U.S. consumers, clients of third-party broker-dealers, institutions, corporations and its affiliates. The Bank conducts consumer deposit-taking activities through *Marcus by Goldman Sachs* ("Marcus") and also accepts deposits from Apple Card customers. The Bank also provides transaction banking services to institutions, corporations and its affiliates. In addition, the Bank enters into interest rate, currency, credit and other derivatives, and transacts in certain related cash products, for the purpose of market making and risk management. The Bank's activities in the E.U. include underwriting and market making in debt and equity securities; advisory services; and asset and wealth management services.

Summary of GS Bank's Resolution Planning Requirement

As an FDIC-insured depository institution with \$50 billion or more in total assets, GS Bank must submit a resolution plan to the FDIC that is designed to help enable the FDIC, as receiver, to resolve GS Bank in a manner that ensures that depositors receive access to their insured deposits within one business day of the institution's failure (two business days if the failure occurs on a day other than Friday), maximizes the net present value return from the sale or disposition of its assets and minimizes the amount of any loss realized by creditors in resolution.

The IDI Rule requires that the plan address the resolution of GS Bank in the event of its insolvency. As a result, the resolution strategy for the Bank in FDIC receivership in this Bank Plan differs from the Bank's wind-down strategy outside of resolution proceedings as outlined in the GS Group Plan. We expect that the FDIC would adopt a bridge bank strategy for GS Bank's resolution.

Attributes of our Structure that Contribute to our Resiliency and Resolvability

GS Bank, independently and together with GS Group as a whole, has taken and continues to undertake initiatives that support resolvability:

- Operational Continuity of Critical Services²:
 - The Bank used a comprehensive process to identify Critical Services and mapped each Critical Service to the provider of the Critical Service and to the Core Business Lines³ that it supports. The Bank has a robust resolution strategy and is well-positioned to support operational continuity in receivership, including in the event of the failure of Group Inc. and its MOEs.
 - The Bank's Critical Services are performed by three groups: (1) Bank Legal Entity Employees, (2) Bank affiliates providing services under Service Level Agreements ("SLAs") and (3) third-party vendors.
 - The scope of Key Personnel required to be retained if the Bank enters receivership consists of three components: (1) management of the Bank and its branches, (2) senior employees within the Bank's Core Business Lines and (3) Service Relationship Managers. These individuals provide a unique function for the Bank or are subject matter experts and therefore have been identified as Key Personnel.
 - To ensure that these Key Personnel are retained in a resolution scenario, the Bank has adopted a retention strategy that would be used to encourage the Key Personnel to remain with GS Bank (or a successor entity) for as long as needed to maintain Critical Services. The strategy includes retention payment options and pre-drafted retention agreements, releases and related documentation.
 - Where the Bank's Critical Services are performed by employees of affiliates, the Bank makes use of resolution-resilient Material Service Entities⁴ ("MSEs"). Technology assets, including but not limited to hardware used by the Bank, are also housed in MSEs.
 - For Critical Services performed by third-party vendors, the underlying vendor contracts have been assessed for resiliency and updated where needed.
- Access to Financial Market Utilities ("FMUs"):
 - Uninterrupted access to critical FMUs is vital during financial stress and in resolution. GS Group has conducted an analysis of the viability of contingency arrangements that can be pursued to maintain continued access to payment, clearing and settlement activities in the rare event that an FMU terminates GS Group's direct access. As a result, we have

² Critical services refers to services and operations of the insured depository institution ("IDI"), such as servicing, information technology support and operations, human resources and personnel that are necessary to continue the day-to-day operation of the IDI.

³ Core Business Lines refers to those business lines of the IDI, including associated operations, functions, services and support, that upon failure, in the IDI's view, would result in a material loss of revenue, profit, or franchise value.

⁴ Material Service Entities refers to entities of GS Group that provide services to other material entities of GS Group.

identified options for maintaining access to FMUs following either a failure of GS Bank or a failure of Group Inc. and other affiliates, including relying on an alternate FMU through which the Bank has direct access and obtaining indirect access through a third party.

- Our parent company, Group Inc., is well positioned to act as a source of strength⁵ to GS Bank:
 - Group Inc. has substantial levels of Total Loss Absorbing Capacity⁶ ("TLAC"), and it has financing that is long-dated and diversified. Its loss-absorbing instruments are in the form of common and preferred equity, as well as subordinated and senior unsecured debt. This large amount of TLAC is available to absorb losses, thereby insulating taxpayers from risk of loss and providing the ultimate resources necessary for re-capitalizing its MOEs.
 - GS Group established Goldman Sachs Funding LLC ("Funding IHC"), a direct subsidiary of Group Inc. and an MSE of GS Group. This entity holds most of GS Group's excess liquidity that is not already pre-positioned at the MOEs. GS Group has also put in place the Capital and Liquidity Support Agreement ("CLSA"), a secured, contractually binding mechanism pursuant to which participating material entities, including GS Bank and GSBE, can obtain capital and liquidity, as needed, from Funding IHC in the event of a Group Inc. insolvency.
- Mitigation of Certain Cross-Default Provisions:
 - Because GS Bank and all of our affiliates that engage in external derivatives activity under ISDA Master Agreements have signed the 2015 and 2018 ISDA⁷ Resolution Stay Protocols ("Stay Protocols"), their derivatives with adhering counterparties (including all intercompany derivatives) are subject to a stay on certain cross-default and early termination rights in standard ISDA derivative, repo and securities lending contracts in the event of resolution. The Stay Protocols greatly reduce our vulnerability to the destabilizing effect of certain cross-default provisions in derivatives contracts.
 - For intercompany trades, the Bank and its subsidiaries collect and post variation margin from all affiliates as required under the FRB's swap margin rules. Initial margin is calculated daily and, as per the "Margin and Capital Requirements for Covered Swap Entities" rule, from August 31, 2020 the initial margin will only be exchanged between the Bank and its affiliates when a breach of 15% of Tier 1 capital vs. initial margin requirement occurs.

⁵ The requirement that a BHC serves as a source of financial and managerial strength to its subsidiary banks is a long-standing doctrine established by the Federal Reserve.

⁶ External TLAC takes the form of common equity, preferred equity, subordinated debt and senior unsecured debt that complies with the requirements of the Federal Reserve's TLAC rule that became effective in January 2019.

⁷ International Swaps and Derivatives Association ("ISDA").

- Ongoing Management of Intercompany Transactions:
 - We have focused on, and resourced, projects to clear certain intercompany transactions through Central Counterparties ("CCPs") and to enter into trade "compressions" (whereby offsetting and near-offsetting cleared or over-the-counter ("OTC") derivative transactions are matched and bilaterally terminated at mutually agreed prices) between the Bank and its affiliates.
 - In addition, GS Bank manages risk to affiliates by establishing intercompany limits and monitors compliance with these limits as part of its ongoing monitoring processes.
- Collateral Management Systems and Processes:
 - We have the capability to identify and value the specific securities that the Bank has pledged and received as collateral, and to identify for each such security:
 - the counterparty (including affiliated entities and CCPs);
 - the institution that holds the collateral;
 - the jurisdiction in which the collateral is located; and
 - the jurisdiction in which the security interest in the collateral is enforceable.
 - Based on this information, our systems are able to assess the enforceability, segregation and rehypothecation status of each piece of pledged and received collateral. They are able to do so on a real-time basis, even against the backdrop of significant spikes in volume during a period of stress.
- Franchise Components and Virtual Data Rooms:
 - We have identified Franchise Components, comprising major asset categories, business lines or other key components of the Bank's value, in order to support the resolution process.
 - We have determined information that would be needed by prospective buyers in connection with the disposition of these Franchise Components, and designed virtual data rooms that can be swiftly populated to facilitate due diligence.

Several attributes of GS Bank's structure are important to its resiliency and contribute to its resolvability. These include the fact that it has a relatively simple legal entity structure, with GS Bank USA having one material subsidiary (GSBE), and that the significant majority of its activities are concentrated in GS Bank USA itself, rather than its subsidiaries.

Other relevant attributes include the following:

- We maintain strong liquidity risk management:
 - In order to pre-fund our estimated potential cash needs during a liquidity crisis, we maintain a significant balance of unencumbered, highly liquid securities and cash. Our goal is to ensure that we maintain sufficient liquidity to fund our assets and meet our contractual and contingent obligations in normal times, as well as during periods of market stress. We maintain a contingency funding plan to provide a framework for analyzing and responding to a liquidity crisis situation or periods of market stress.
- The Bank's risk management practices provide transparency into its exposures:
 - A critical element of GS Group's and GS Bank's risk management practices is our adherence to fair value principles. Although GS Bank accounts for a significant population of its loans under the Held for Investment ("HFI") convention, whereby they are recorded at amortized cost net of an allowance for loan losses, for risk-management purposes we track the fair value of HFI loans.
 - The discipline of marking exposures to market (and the supporting discipline of a rigorous price verification process) gives us ongoing transparency into our economic exposures and greatly reduces the likelihood that unrecognized losses would come to light during a resolution process.
- Access to Federal Home Loan Bank ("FHLB") and Federal Reserve discount window:
 - As a member of the FHLB of New York, the Bank can draw under a funding arrangement secured by eligible collateral.
 - Additionally, we have access to funding through the Federal Reserve discount window. However, we do not rely on this funding in our liquidity planning and stress testing.

Conclusion

We believe that the Bank Plan demonstrates our focus on resolvability and resiliency. In conjunction with GS Group, we have taken numerous steps to identify and mitigate potential obstacles to this resolution plan and enhance its operationalization.

We do not underestimate the complexity of resolving a financial institution such as ours. We recognize that resolution planning is about more than simply creating a formal resolution plan. It is also about designing a process that can be flexible as conditions change, taking steps to make the Bank resolvable and embedding resolution considerations in our day-to-day business decisions. As such, since our last submission, we have invested significant time and resources to update the Bank Plan.

2. Names of Material Entities

"Material Entity" is a term defined in the IDI Rule as a company that is significant to the activities of a Core Business Line or Critical Service. Based on this definition, the following operating entities within the consolidated Bank have been identified as Material Entities in the Bank Plan:

- GS Bank USA (FDIC-insured New York State-chartered bank)
- GSBE, headquartered in Frankfurt, Germany, is a wholly-owned subsidiary of GS Bank USA

Most of the Bank's Core Business Line activities take place within GS Bank USA.

Critical Services are provided by either Bank Material Entities, certain GS Group affiliates or third parties. The following MSEs within GS Group have been identified as providing Critical Services to GS Bank:

- Goldman Sachs Services Private Limited (incorporated in India)
- Goldman Sachs Services LLC (incorporated in Delaware)
- Goldman Sachs Property Management (incorporated in England)
- Goldman Sachs Property Management USA LLC (incorporated in Delaware)
- Goldman Sachs Services (Asia) Limited (incorporated in Hong Kong)
- Goldman Sachs Services (Singapore) Pte. Ltd. (incorporated in Singapore)
- Goldman Sachs (UK) Svc. Limited (incorporated in England)
- Goldman Sachs Japan Services Co., Ltd (incorporated in Japan)

3. Description of Core Business Lines

Introduction

The Bank has a number of business lines that form the core of its franchise, allow it to serve its clients, and achieve its strategic objectives. A "Core Business Line" is defined in the IDI Rule as those business lines of the IDI, including associated operations, services, functions and support that upon failure, in the IDI's view, would result in a material loss of revenue, profit or franchise value. Based on this definition, the Bank has identified Lending, Deposit Taking and Market Making as Core Business Lines for purposes of the Bank Plan. The Bank also engages in Underwriting, Advisory Services, Asset and Wealth Management Services and Other Activities that do not meet the definition of a Core Business Line.

Detailed below is additional information regarding the Bank's three Core Business Lines:

- **Lending.** The Bank's lending activities include providing corporate, residential and commercial real estate, securities-based and other collateralized loans. In addition, the Bank extends financing to consumers through its consumer platforms. The Bank underwrites, structures and negotiates pricing for these loans based on its underwriting criteria. However, in some cases, the Bank relies on services provided by affiliates to assist in this process.

The Bank also provides lending commitments. Commercial lending commitments are primarily agreements to lend with fixed termination dates. The Bank also issues credit cards that provide consumers with revolving lines of credit, which can be cancelled by the Bank and provides lending commitments for unsecured consumer loans.

- **Deposit Taking.** The Bank accepts deposits from private bank clients, U.S. consumers, clients of third-party broker-dealers, institutions, corporations and its affiliates. Deposits are the Bank's primary source of funding for its assets. The Bank accepts deposits through Marcus, its sweep programs with affiliates and third-party broker-dealers and its transaction banking activities. The Bank also issues brokered certificates of deposit, distributed through third-party broker-dealers and Goldman Sachs & Co. LLC. Additionally, the Bank accepts consumer time deposits through Marcus and also accepts institutional time deposits.
- **Market Making.** The Bank enters into interest rate, currency, credit, equity and commodity derivatives, and transacts in certain related cash products, for the purpose of market making and also uses derivatives to manage its own risk exposure as part of its risk management processes. Derivatives are instruments that derive their value from underlying asset prices, indices, reference rates and other inputs, or a combination of these factors. Derivative transactions provide liquidity to clients and facilitate the active management of risk exposures, including market, credit and other risks.

The Bank enters into various types of derivatives, including (i) swaps (which are agreements to exchange cash flows, such as currency or interest payment streams), (ii) options (contracts which provide the right but not the obligation to buy or sell a certain financial instrument or currency on a specified date in the future at a certain price) and (iii) futures and forwards (which are contracts to purchase or sell a financial instrument, currency or commodity in the future).

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

The Bank has entered into derivative transactions with both affiliates and unaffiliated third parties. Affiliate trades are part of GS Group's centralized hedging and risk management processes and practices.

4. Summary of Financial Information Regarding Assets, Liabilities, Capital and Major Funding Sources

Set out on the following pages is financial information extracted from the Bank's Consolidated Financial Statements as of, and for the year ended, December 31, 2022 ("Bank's Financial Statements"). The financial statements are prepared in accordance with generally accepted accounting principles in the United States ("U.S. GAAP").

Set forth below are the consolidated statements of earnings from the Bank's Financial Statements⁸:

<i>\$ in millions</i>	Year Ended December	
	2022	2021
Revenues		
Interest income	\$ 13,997	\$ 5,302
Interest expense	7,313	1,425
Net interest income	6,684	3,877
Gains and losses from financial assets and liabilities	4,665	4,675
Other revenues	1,116	926
Total non-interest revenues	5,781	5,601
Total net revenues	12,465	9,478
Provision for credit losses	2,298	457
Operating expenses		
Compensation and benefits	1,537	1,526
Service charges	787	812
Professional fees	509	336
Transaction based	596	514
Market development	273	179
Communications and technology	389	287
Regulatory and agency fees	316	169
Depreciation and amortization	268	111
Other expenses	977	629
Total operating expenses	5,652	4,563
Pre-tax earnings	4,515	4,458
Provision for taxes	1,237	1,106
Net earnings	\$ 3,278	\$ 3,352

The notes accompanying our consolidated statements of earnings in the Bank's Financial Statements are an integral part of our consolidated financial statements.

⁸ The Bank's Financial Statements are available on our website at <https://www.goldmansachs.com/investor-relations/financials/subsidiary-financial-info/gsbank-usa/index.html>.

Goldman Sachs Bank USA Resolution Plan

Set forth below are the consolidated balance sheets from the Bank's Financial Statements⁹:

<i>\$ in millions, except par value</i>	As of December	
	2022	2021
Assets		
Cash	\$ 184,947	\$ 148,211
Collateralized agreements:		
Securities purchased under agreements to resell (at fair value)	33,713	36,888
Securities borrowed (includes \$23 and \$6,911 at fair value)	2,676	8,289
Customer and other receivables	27,034	28,420
Trading assets (at fair value and includes \$10,853 and \$5,628 pledged as collateral)	47,246	55,791
Investments (includes \$23,879 and \$24,599 at fair value and \$54 and \$56 pledged as collateral)	29,789	25,148
Loans (net of allowance of \$4,252 and \$2,481, and includes \$6,251 and \$7,990 at fair value)	151,114	127,646
Other assets (includes \$71 and \$0 at fair value)	9,034	3,577
Total assets	\$ 485,553	\$ 433,970
Liabilities and shareholder's equity		
Deposits (includes \$5,374 and \$5,356 at fair value)	\$ 362,855	\$ 322,012
Collateralized financings:		
Securities sold under agreements to repurchase (at fair value)	5,566	6,006
Securities loaned (includes \$23 and \$6,911 at fair value)	2,847	8,289
Other secured financings (includes \$3,630 and \$1,362 at fair value)	4,030	1,791
Customer and other payables	21,370	19,738
Trading liabilities (at fair value)	29,185	23,852
Unsecured borrowings (includes \$448 and \$322 at fair value)	6,431	6,065
Other liabilities (includes \$71 and \$0 at fair value)	4,967	4,342
Total liabilities	437,251	392,095
Commitments, contingencies and guarantees		
Shareholder's equity		
Shareholder's equity (includes common stock, \$100 par value; 80,000,000 shares authorized, issued and outstanding)	48,302	41,875
Total liabilities and shareholder's equity	\$ 485,553	\$ 433,970

The notes accompanying our consolidated balance sheets in the Bank's Financial Statements are an integral part of our consolidated financial statements.

Capital

As of December 31, 2022, the Bank's total shareholder's equity was \$48.3 billion.

Regulatory Capital

The Bank is regulated and subject to consolidated regulatory capital requirements which are calculated in accordance with the regulations of the FRB ("Capital Framework").

The capital requirements are expressed as risk-based capital and leverage ratios that compare measures of regulatory capital to risk-weighted assets ("RWAs"), average assets and off-balance

⁹ The Bank's Financial Statements are available on our website at <https://www.goldmansachs.com/investor-relations/financials/subsidiary-financial-info/gsbank-usa/index.html>.

sheet exposures. Failure to comply with these capital requirements would result in restrictions being imposed by the Bank's regulators and could limit the Bank's ability to pay dividends and make certain discretionary compensation payments. The Bank's capital levels are also subject to qualitative judgments by the regulators about components of capital, risk weightings and other factors. Furthermore, certain of the Bank's subsidiaries are subject to separate regulations and capital requirements.

Capital Framework

The regulations under the Capital Framework are largely based on the Basel Committee on Banking Supervision's capital framework for strengthening international capital standards and also implement certain provisions of the U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act. Under the Capital Framework, the Bank is an "Advanced approaches" banking organization.

The Capital Framework includes the minimum risk-based capital and the capital conservation buffer requirements (consisting of a 2.5% buffer and the countercyclical capital buffer). The buffer must consist entirely of capital that qualifies as Common Equity Tier 1 ("CET1") capital. In addition, the Capital Framework includes the leverage ratio requirements.

The Bank calculates its CET1 capital, Tier 1 capital and Total capital ratios in accordance with both the Standardized and Advanced Capital Rules. The lower of each risk-based capital ratio calculated under the Standardized and Advanced Capital Rules is the ratio against which the Bank's compliance with its risk-based capital requirements is assessed.

Under the Capital Framework, the Bank is also subject to leverage requirements which consist of a minimum Tier 1 leverage ratio and a minimum supplementary leverage ratio ("SLR").

Consolidated Regulatory Capital Requirements

The U.S. Federal Deposit Insurance Corporation Improvement Act of 1991 ("FDICIA"), among other things, requires the federal bank regulatory agencies to take "prompt corrective action" in respect of depository institutions that do not meet specified capital requirements. FDICIA establishes five capital categories for FDIC-insured banks: well-capitalized, adequately capitalized, undercapitalized, significantly undercapitalized and critically undercapitalized.

In addition, under the regulatory framework for prompt corrective action applicable to the Bank, in order to meet the quantitative requirements for being a "well-capitalized" depository institution, the Bank must also meet "well-capitalized" requirements in the table below.

The Bank's capital levels and prompt corrective action classification are also subject to qualitative judgments by the regulators about components of capital, risk weightings and other factors. Failure to comply with the capital requirements, including a breach of the buffers described below, would result in restrictions being imposed by the regulators.

Risk-Based Capital and Leverage Ratios

The table below presents the risk-based capital, leverage and "well-capitalized" requirements for the Bank.

	Requirements	"Well-capitalized" Requirements
Risk-based capital requirements		
CET1 capital ratio	7.0%	6.5%
Tier 1 capital ratio	8.5%	8.0%
Total capital ratio	10.5%	10.0%
Leverage requirements		
Tier 1 leverage ratio	4.0%	5.0%
SLR	3.0%	6.0%

In the table above:

- The CET1 capital ratio requirement includes a minimum of 4.5%, the Tier 1 capital ratio requirement includes a minimum of 6.0% and the Total capital ratio requirement includes a minimum of 8.0%. These requirements also include the capital conservation buffer requirements, consisting of a 2.5% buffer and the countercyclical capital buffer, which the FRB has set to zero percent.
- The "well-capitalized" requirements are the binding requirements for leverage ratios.

The table below presents information about risk-based capital ratios.

<i>\$ in millions</i>	Standardized		Advanced	
As of December 2022				
CET1 capital	\$	46,845	\$	46,845
Tier 1 capital	\$	46,845	\$	46,845
Tier 2 capital	\$	8,042	\$	5,382
Total capital	\$	54,887	\$	52,227
RWAs	\$	357,112	\$	275,451
<hr/>				
CET1 capital ratio		13.1%		17.0%
Tier 1 capital ratio		13.1%		17.0%
Total capital ratio		15.4%		19.0%
<hr/>				
<i>As of December 2021</i>				
CET1 capital	\$	42,535	\$	42,535
Tier 1 capital	\$	42,535	\$	42,535
Tier 2 capital	\$	6,430	\$	4,646
Total capital	\$	48,965	\$	47,181
RWAs	\$	312,601	\$	222,607
<hr/>				
CET1 capital ratio		13.6%		19.1%
Tier 1 capital ratio		13.6%		19.1%
Total capital ratio		15.7%		21.2%

In the table above:

- The lower of the Standardized or Advanced ratio is the ratio against which the Bank's compliance with the capital requirements is assessed under the risk-based Capital Rules, and therefore, the Standardized ratios applied to the Bank as of both December 2022 and December 2021.
- Beginning in the fourth quarter of 2022, the Bank updated the probability of default models used in the calculation of Advanced RWAs. The impact of this change was a decrease in the Bank's Advanced CET1 capital ratio of approximately 1 percentage point.

The table below presents information about leverage ratios.

<i>\$ in millions</i>	For the Three Months Ended or as of	
	December	
	2022	2021
Tier 1 capital	\$ 46,845	\$ 42,535
Average total assets	\$ 500,963	\$ 409,792
Deductions from Tier 1 capital	(1,855)	(53)
Average adjusted total assets	499,108	409,739
Off-balance sheet and other	172,107	218,060
Total leverage exposure	\$ 671,215	\$ 627,799
Tier 1 leverage ratio	9.4%	10.4%
SLR	7.0%	6.8%

In the table above:

- Average total assets represents the average daily assets for the quarter adjusted for the impact of Current Expected Credit Losses ("CECL") transition.
- Off-balance sheet and other exposures primarily includes the monthly average of off-balance sheet exposures, consisting of derivatives, securities financing transactions, commitments and guarantees.
- Tier 1 leverage ratio is calculated as Tier 1 capital divided by average adjusted total assets.
- SLR is calculated as Tier 1 capital divided by total leverage exposure.

Risk-Based Capital

The table below presents information about risk-based capital.

<i>\$ in millions</i>	As of December	
	2022	2021
Shareholder's equity	\$ 48,302	\$ 41,875
Impact of CECL transition	588	783
Deduction for goodwill	(1,085)	(53)
Deduction for identifiable intangible assets	(747)	—
Other adjustments	(213)	(70)
CET1 capital	46,845	42,535
Tier 1 capital	\$ 46,845	\$ 42,535
Standardized Tier 2 and Total capital		
Tier 1 capital	\$ 46,845	\$ 42,535
Qualifying subordinated debt	4,271	4,273
Allowance for credit losses	3,771	2,157
Standardized Tier 2 capital	8,042	6,430
Standardized Total capital	\$ 54,887	\$ 48,965
Advanced Tier 2 and Total capital		
Tier 1 capital	\$ 46,845	\$ 42,535
Standardized Tier 2 capital	8,042	6,430
Allowance for credit losses	(3,771)	(2,157)
Other adjustments	1,111	373
Advanced Tier 2 capital	5,382	4,646
Advanced Total capital	\$ 52,227	\$ 47,181

In the table above:

- Beginning in January 2022, the Bank started to phase in the estimated reduction to regulatory capital as a result of adopting the CECL model. Impact of CECL transition in the table above reflects the total amount of reduction of \$783 million as of December 2021 to be phased in through January 2025 (at 25% per year), of which \$195 million was phased in on January 1, 2022. The total amount to be phased in includes the impact of adopting CECL as of January 1, 2020, as well as 25% of the increase in the allowance for credit losses from January 1, 2020 through December 31, 2021.
- Other adjustments within CET1 capital primarily include credit valuation adjustments on derivative liabilities, disallowed deferred tax assets and debt valuation adjustments. Other adjustments within Advanced Tier 2 capital include eligible credit reserves.
- Qualifying subordinated debt is subordinated debt issued by the Bank with an original maturity of five years or greater. The outstanding amount of subordinated debt qualifying for Tier 2 capital is reduced upon reaching a remaining maturity of five years.

RWAs

RWAs are calculated in accordance with both the Standardized and Advanced Capital Rules.

The table below presents information about RWAs.

<i>\$ in millions</i>	Standardized	Advanced
As of December 2022		
Credit RWAs		
Derivatives	\$ 53,801	\$ 31,745
Commitments, guarantees and loans	216,261	147,933
Securities financing transactions	8,713	1,649
Equity investments	1,195	1,263
Other	22,317	19,198
Total Credit RWAs	302,287	201,788
Market RWAs		
Regulatory VaR	15,848	15,848
Stressed VaR	34,293	34,293
Incremental risk	1,755	1,755
Comprehensive risk	2,881	2,881
Specific risk	48	48
Total Market RWAs	54,825	54,825
Total Operational RWAs	—	18,838
Total RWAs	\$ 357,112	\$ 275,451
As of December 2021		
Credit RWAs		
Derivatives	\$ 54,379	\$ 28,392
Commitments, guarantees and loans	197,002	125,798
Securities financing transactions	9,647	1,751
Equity investments	738	782
Other	12,935	11,546
Total Credit RWAs	274,701	168,269
Market RWAs		
Regulatory VaR	7,395	7,395
Stressed VaR	26,795	26,795
Incremental risk	2,135	2,135
Comprehensive risk	1,512	1,512
Specific risk	63	63
Total Market RWAs	37,900	37,900
Total Operational RWAs	—	16,438
Total RWAs	\$ 312,601	\$ 222,607

In the table above:

- Securities financing transactions represents securities purchased under agreements to resell and securities sold under agreements to repurchase ("repurchase agreements") and securities borrowed and loaned transactions.
- Other includes receivables, certain debt securities, cash and other assets.

Funding Sources

The Bank's primary sources of funding are deposits, collateralized financings, unsecured borrowings and shareholder's equity. The Bank seeks to maintain broad and diversified funding sources across products, programs, tenors and creditors to avoid funding concentrations.

Deposits

- The Bank's deposits provide it with a diversified source of funding and reduce its reliance on wholesale funding. The Bank accepts deposits, including savings, demand and time deposits, from private bank clients, U.S. consumers, clients of third-party broker-dealers, institutions, corporations and affiliates.
- The Bank also accepts deposits from Funding IHC and Group Inc.

The table below presents the types and sources of the Bank's deposits.

<i>\$ in millions</i>	Savings and Demand		Time	Total
As of December 2022				
Private bank and consumer	\$ 149,135	\$ 24,655	\$ 173,790	
Brokered certificates of deposit	—	32,036	32,036	
Deposit sweep programs	44,819	—	44,819	
Transaction banking	92,903	5,068	97,971	
Other	6,624	7,615	14,239	
Total	\$ 293,481	\$ 69,374	\$ 362,855	
As of December 2021				
Private bank and consumer	\$ 131,425	\$ 28,373	\$ 159,798	
Brokered certificates of deposit	—	30,054	30,054	
Deposit sweep programs	37,965	—	37,965	
Transaction banking	74,340	5,689	80,029	
Other	3,938	10,228	14,166	
Total	\$ 247,668	\$ 74,344	\$ 322,012	

Note: Substantially all of the Bank's deposits are interest-bearing and substantially all are held in the U.S.

Collateralized Financings

- The Bank funds certain assets and a portion of investments on a secured basis by entering into collateralized financing agreements, such as repurchase agreements. The Bank is also a member of the FHLB. The Bank had no outstanding borrowings from the FHLB as of December 2022.
- Additionally, the Bank has access to funding through the Federal Reserve discount window. However, the Bank does not rely on this funding in its liquidity planning and stress testing.

Unsecured Borrowings

- The Bank may raise funding through unsecured borrowings, primarily from Funding IHC and Group Inc. Group Inc. raises non-deposit unsecured funding and lends to Funding IHC and other affiliates, including consolidated subsidiaries, such as the Bank, to meet those entities' funding needs. This approach enhances the flexibility with which Funding IHC and Group Inc. can meet the Bank's and other GS Group subsidiaries' funding requirements. The Bank may also raise funding through issuing senior unsecured debt.

Shareholder's Equity

- Shareholder's equity is a stable and perpetual source of funding.

5. Description of Derivatives and Hedging Activities

Derivatives are instruments that derive their value from underlying asset prices, indices, reference rates and other inputs, or a combination of these factors. Derivatives may be exchange traded or they may be privately negotiated contracts, which are usually referred to as OTC derivatives. Certain of the Bank's OTC derivatives are OTC-cleared, while others are bilateral OTC.

- **Market Making.** As a market maker, the Bank enters into derivative transactions to provide liquidity to clients and to facilitate the transfer and hedging of their risks. In this role, the Bank typically acts as principal and is required to commit capital to provide execution, and maintains market-making positions in response to, or in anticipation of, client demand.
- **Risk Management.** The Bank also enters into derivatives to actively manage risk exposures that arise from its market-making and financing activities. The Bank's holdings and exposures are hedged, in many cases, on either a portfolio or risk-specific basis, as opposed to an instrument-by-instrument basis. In addition, the Bank may enter into derivatives designated as hedges under U.S. GAAP. These derivatives are used to manage interest rate exposure of certain deposits, certain U.S. government securities classified as available-for-sale, and the net investment in certain non-U.S. operations, and the price risk of certain commodities.

The Bank enters into various types of derivatives, including:

- **Futures and Forwards.** Contracts that commit counterparties to purchase or sell financial instruments or currencies in the future.
- **Swaps.** Contracts that require counterparties to exchange cash flows, such as currency or interest payment streams. The amounts exchanged are based on the specific terms of the contract with reference to specified rates, financial instruments, currencies or indices.
- **Options.** Contracts in which the option purchaser has the right, but not the obligation, to purchase from or sell to the option writer financial instruments or currencies within a defined time period for a specified price.

Derivatives are reported on a net-by-counterparty basis (i.e., the net payable or receivable for derivative assets and liabilities for a given counterparty) when a legal right of setoff exists under an enforceable netting agreement. Derivatives are accounted for at fair value, net of cash collateral received or posted under enforceable credit support agreements.

6. Description of Foreign Operations

GSBE is headquartered in Frankfurt, Germany and is a wholly-owned subsidiary of GS Bank USA.

- GSBE is GS Group's main operating subsidiary in the E.U. and delivers a broad range of financial services to a diversified client base that includes corporations, financial institutions, and individuals.
- GSBE is a significant contributor to the Bank's Market Making Core Business Line. GSBE is a derivatives market maker and enters into derivatives transactions with counterparties located primarily in the E.U. and also enters into derivatives to actively manage risk exposures that arise from the market-making activities of certain non-E.U. affiliates. GSBE also accepts deposits.
- GSBE has branches in Amsterdam, Athens, Copenhagen, Dublin, London, Luxembourg, Madrid, Milan, Paris, Stockholm and Warsaw.

GS Bank USA also operates two foreign branches, which are located in London, United Kingdom and Tokyo, Japan.

- The London Branch is regulated by the Prudential Regulation Authority ("PRA") and Financial Conduct Authority ("FCA"), and appears on the Financial Services Register. It resumed regulated activities in February 2019.
- The Tokyo Branch became operational in September 2021 and is regulated by the Japan Financial Services Agency ("FSA").

7. Memberships in Material Payment, Clearing and Settlement Systems

Set forth below is a list of our memberships and contractual relationships with the payment, clearing and settlement systems that are most material to our activities:

Associated Market	Exchange / System	Description of Services
United Kingdom	CHAPS	CHAPS is the Real Time Gross Settlement ("RTGS") system in the United Kingdom operated by the Bank of England to settle pounds sterling payments electronically between their Direct Participants. Goldman Sachs Bank USA, London Branch joined CHAPS in April 2021 as a Direct Participant.
United States, United Kingdom, Japan	Chicago Mercantile Exchange ("CME"), Inc.	Service provider for clearing and settlement of futures, options and OTC derivatives
Global	CLS	Multi-currency cash settlement system
United States, United Kingdom, Japan	Eurex Clearing AG	Central counterparty for derivatives, equities, bonds and other instruments
Europe	Euroclear	Central securities depository and provider of settlement and custody services
United States	Fedwire	Real-time gross settlement funds transfer system operated by the United States Federal Reserve Banks
United States	Fixed Income Clearing Corporation	Central counterparty for clearing and settlement of U.S. government and mortgage-backed securities
United States	ICE Clear Credit	Clearing house for North American credit default swaps
United States	ICE Clear U.S.	Clearing house for futures, options and OTC derivatives
United States, United Kingdom	LCH Clearnet Ltd.	Clearing house for instruments including equities, bonds, futures, options and credit default swaps
Global	SWIFT	Secure messaging platform for the exchange of instructions and messages about financial transactions
United States	The Depository Trust Company	Central depository providing depository and book-entry services for eligible securities

8. Material Supervisory Authorities

Regulation Within the United States

GS Bank is supervised and regulated primarily by the FRB, the NYDFS, the CFPB and the FDIC. GS Bank USA is also a government securities dealer subject to the rules and regulations of the U.S. Department of the Treasury. GS Bank USA, and two subsidiaries, GSBE and Goldman Sachs Mitsui Marine Derivative Products, L.P. ("GSMMDP"), are registered swap dealers with the CFTC and GS Bank USA and GSBE are registered security-based swap dealers with the SEC.

Regulation Outside the United States

The London Branch is regulated by the FCA and the PRA and the Tokyo branch is regulated by the Japan FSA.

GSBE is directly supervised by the European Central Bank ("ECB") and additionally by the Federal Financial Supervisory Authority ("BaFin") and Deutsche Bundesbank in the context of the E.U. Single Supervisory Mechanism ("SSM"). GSBE's branches are also regulated by the relevant authorities in each jurisdiction in certain areas, including with respect to anti-money laundering. GSBE was authorized by the FCA to provide services from its London branch and on a cross-border basis into the U.K. in April 2023.

9. Principal Officers

The following table lists personnel responsible for managing the Bank:

Principal Officers
Philip Berlinski, Chief Executive Officer ("CEO")
John Manzi, Chief Financial Officer ("CFO")
Thomas S. Riggs, General Counsel ("GC") ¹⁰
Monique Rollins, Chief Operating Officer ("COO")
John Cassidy, Chief Compliance Officer ("CCO")
Alan Rapfogel, Chief Risk Officer ("CRO")
Terence Donnelly, Controller
Nat Wells, Treasurer

10. Resolution Planning Corporate Governance Structure and Processes Related to Resolution Planning

Corporate Governance

GS Bank's resolution planning process involves staff members across numerous different disciplines. For such a process to be successful, a robust governance structure is essential: this helps ensure that the Bank Board and senior management are in a position to exert oversight, challenge assumptions and give direction.

The Bank Plan's governing and oversight bodies consist of the following groups and individuals:

- The Bank Board is responsible for establishing the strategic direction of the Bank and overseeing the performance of GS Bank's business and management. The Bank Board is responsible for providing general oversight of the Bank Plan. The Bank Board reviews and approves the Bank Plan prior to its submission. In addition, at its regularly held or special

¹⁰ Beverly L. O'Toole is expected to be appointed as the Bank's GC effective as of January 1, 2024.

meetings, the Bank Board will receive updates on significant developments that may occur, some of which may be impactful to the Bank Plan.

- The Bank Risk and Asset Liability Committee ("BRALCO") is responsible, directly or through its sub-committees, for the ongoing monitoring and management of our risks, including but not limited to, market risk, credit risk, liquidity and funding risk, foreign currency risk, legal risk, operational risk, settlement risk and investments risk. In addition, BRALCO is responsible, directly or through its sub-committees, for the ongoing monitoring and management of our (i) compliance with the minimum regulatory capital ratios required under FRB regulations applicable to banks, (ii) the Internal Capital Adequacy Assessment Process, (iii) liquidity and funding risk management, (iv) balance sheet planning and asset liability management, (v) interest rate risk monitoring and management and (vi) recovery and resolution planning, in each case subject to information barriers and related policies and procedures as applicable. BRALCO receives updates on and approves the Bank Plan prior to submission.
- The Bank Management Committee oversees our activities, including our risk control functions. It provides this oversight directly and through authority delegated to committees it has established. This committee consists of our most senior leaders, and is chaired by our CEO. The Bank Management Committee is accountable for business standards and practices, including reputational risk management. The Bank Management Committee receives updates on the Bank Plan prior to submission.
- The Bank's CFO is the senior management official of the Bank primarily responsible for overseeing the development, maintenance, implementation and filing of the Bank Plan and for the Bank's compliance with the IDI Rule.
- Officers of the Bank, including the Bank's Controller and Treasurer, are responsible for the day-to-day oversight of various workstreams that focus on specific components of the Bank Plan.
- GS Group's Recovery and Resolution Steering Group (the "Steering Group"), which is responsible for the GS Group Plan submission, includes the participation of the Bank Controller and Bank Treasurer. Through their participation in the Steering Group, the Bank ensures that the approach and assumptions in the Bank Plan are coordinated with those of the GS Group Plan, where applicable. In addition, the Steering Group provides direction and strategy for the Bank Plan and helps to resolve issues. The Steering Group meets regularly.
- The development of the Bank Plan and the review and approval of each of its components are coordinated by the Recovery & Resolution Planning ("RRP") Core Team.
- GS Group's Internal Audit function also performed a review of certain key controls supporting the governance and development of the Bank Plan.

Resolution Planning Process Steps

- The development of the various components of the Bank Plan were coordinated by the RRP Core Team, under the direction of the Bank's Controller and Treasurer, based on the underlying regulations and guidance, communications with our regulators, and information from, and communications with, various functions within GS Group and the Bank.
- The Bank's Controller, Treasurer and RRP Core Team obtained input on various topics, from both internal teams and external consultants. Based on this input and subsequent discussions, the RRP Core Team formulated a direction for the Bank Plan.
- The RRP Core Team conducted meetings with workstream leads to ensure timely progression, and to answer questions and provide feedback, soliciting the input of internal and external advisors as needed. Outside legal counsel was engaged to provide legal advice as needed.
- The Bank Plan was updated and presented broadly across key stakeholders in the Bank, including postings to BRALCO, the Bank Management Committee and the Bank Board. The Bank Plan was presented to BRALCO and the Bank Board for review and approval.

Assurance Framework

- Our resolution capabilities have been developed and enhanced over a period of many years, and to remain fully operationalized, an assurance program is essential to ensure capabilities remain fit for purpose.
- GS Bank is integrated into GS Group's structured assurance program, which includes capability testing, as well as training and simulation exercises to test and challenge key elements of our contingency funding plan, contingency capital plan, recovery plan and resolution planning.
- Our capability testing included an assessment of our readiness to prepare a Virtual Data Room for a Franchise Component, in addition to testing related to valuation, derivatives and operational continuity.

11. Description of Material Management Information Systems

GS Bank has been a beneficiary of GS Group's long-standing history of investing significantly in technology and our MIS are designed to provide complete, timely and accurate information across GS Group.

Our MIS are designed to support and enable our core functions across all service and business units. As an integral component of the Bank Plan, our systems serve to manage risk and provide complete, timely and accurate information.

Over recent years, we have invested in the broad adoption of technology platforms to support our enterprise architecture. In most cases, a single technology platform supports a given function across all geographies and entities. This results in a high degree of consistency in both functionality and reporting to enable key decision making at all levels.

We place a strong focus on developing software applications internally, although we also make use of third-party vendor software. Our system architecture supports data, modeling, user interface and workflow capabilities, which our MIS leverage to provide a rich feature set for our businesses. To ensure the rigor and effectiveness of our systems, we have focused on promoting standardization and reusability.

Our data aggregation capabilities and risk reporting practices are overseen by a governance framework which is supported by documented policies, standards and procedures. We recognize that, in a resolution scenario, the effectiveness of our systems is driven by adhering to an appropriate governance framework which is supported by the relevant controls. For example, our business resiliency program is intended to ensure that all critical applications, including our data aggregation capabilities and risk reports, are available not only in normal times, but also during times of stress or crisis scenarios.

Our MIS have extensive ad hoc reporting capabilities, and have been used extensively to prepare financial and other information used in the preparation of the Bank Plan. We have performed a detailed assessment of our ability to satisfy MIS reporting requirements in resolution, and we have determined that there are no material gaps or weaknesses in our ability to provide relevant data in a crisis scenario.

Recovery and Resolution Systems

As part of our resolution planning, we recognize the benefits of being able to identify, aggregate, visualize and easily navigate key interdependencies and relationships across our legal entities and critical services. We therefore developed and continue to invest in a platform that leverages existing, authoritative sources of data, and links them in a flexible and adaptable way to provide a holistic understanding and visualization of our legal entities, services, functions, systems, people, vendors and facilities. The tool is integrated with several of our other platforms, including the global framework for the documentation and management of the intercompany SLAs, our document lake which stores resolution-critical legal agreements and associated metadata, and our “data lake” which is a central data warehousing solution.