THE GOLDMAN SACHS GROUP, INC.
2025 RESOLUTION PLAN

Public Section

June 30, 2025

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When we use the terms ‘’Goldman Sachs,’’ ‘’GS Group,’’ ‘’the firm,’’ ‘’we,’’ ‘’us’’ and ‘’our’’ in this document, we mean The Goldman Sachs Group, Inc. ("Group Inc." or "parent company") and its consolidated subsidiaries. When we use the term “the Agencies,” we mean the Board of Governors of the Federal Reserve System ("FRB") and the Federal Deposit Insurance Corporation ("FDIC"). Please see Appendix I for a list of definitions of key terms and Appendix II for list of acronyms used in this document.

Unless otherwise specified, all financial information is as of, or for the year ended, December 31, 2024.

Taxonomy of Goldman Sachs in our Resolution Plan

Material Entities		Participating Material Entity[1]	Acronym or Abbreviation	Country or State of Incorporation
Covered Company	The Goldman Sachs Group, Inc.	No	Group Inc.	Delaware
Material Operating Entities	Goldman Sachs & Co. LLC	Yes	GSCO	New York
	Goldman Sachs International	Yes	GSI	England
	Goldman Sachs Bank USA	Yes	GS Bank USA	New York
	J. Aron & Company LLC	No	JANY	New York
	Goldman Sachs Japan Co., Ltd	Yes	GSJCL	Japan
	Goldman Sachs International Bank	Yes	GSIB	England
	Goldman Sachs Bank Europe SE	Yes	GSBE	Germany
	Goldman Sachs Asset Management, L.P.	Yes	GSAM	Delaware
	Goldman Sachs Asset Management International	Yes	GSAMI	England
Material Service Entities	Goldman Sachs Funding LLC	No	Funding IHC	Delaware
	Goldman Sachs Services Private Limited	Yes	GSSE	India
	Goldman Sachs Services LLC	Yes	GSPW	Delaware
	Goldman Sachs Property Management	Yes	GSPM	England
	Goldman Sachs Property Management USA LLC	Yes	GPMU	Delaware
	Goldman Sachs Services (Asia) Limited	Yes	GHKL	Hong Kong
	Goldman Sachs Services (Singapore) Pte. Ltd.	Yes	GPMS	Singapore
	Goldman Sachs (UK) Svc. Limited	Yes	GSUL	England
	Goldman Sachs Japan Services Co., Ltd	Yes	GSJS	Japan

Core and Non-Core Business Lines	
Core Business Lines	*Non-Core Business Lines*
- Global Banking & Markets	- Platform Solutions
- Asset & Wealth Management	

[1] See Appendix I for a definition of Participating Material Entity.

Goldman Sachs

Cautionary Note on Forward-Looking Statements

The Resolution 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 Resolution 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, legal entity rationalization and separability, and our governance mechanisms, derivatives and trading activities and Management Information Systems ("MIS")). The Resolution Plan is based on many significant assumptions, including assumptions about the actions of regulators, creditors, depositors and counterparties, the ability of Group Inc. and Funding IHC to perform their obligations under the Capital and Liquidity Support Agreement in connection with the provision of liquidity to and the recapitalization of the participating material entities, the state of the capital markets and the economy and the impact of a significant loss event on Goldman Sachs. None of these assumptions may prove to be correct in an actual resolution situation. The Resolution Plan is not binding on a bankruptcy court, the Agencies or any other resolution authority, and the scenarios that we describe and the assumptions that we make in the Resolution Plan are hypothetical and do not necessarily reflect events to which we are or may become subject. In the event of the resolution of Goldman Sachs, the strategies implemented by Goldman Sachs, the Agencies 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 the feedback provided by the Agencies in the 2024 Feedback Letter (defined on page 5). The statements with respect to the completion, impact and effectiveness of these projects are also forward-looking statements, and these projects may not be completely effective or have the impact we anticipate.

1. Introduction

As required under §165(d) of the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd Frank Act"), we have prepared our 2025 Targeted Resolution Plan ("2025 Plan" and together with our 2023 Resolution Plan, "the Plan"). We believe that the Plan meets the goal of ensuring that our firm could be wound down without serious adverse effects on financial stability and without extraordinary support by the United States or any other government. The Plan is a living document which we ensure remains aligned with the firm's strategic evolution[2] and ongoing assessments of our recovery and resolution capabilities. In addition, our 2025 Plan addresses the feedback provided by the Agencies in their 2024 Feedback Letter[3] (see Section 4 for further information).

Our preferred resolution strategy remains consistent with a “single point of entry” strategy, under which our parent company enters bankruptcy proceedings, and most of our material entities survive because they have, or have access to, sufficient capital and liquidity to remain solvent and wind down their activities in an orderly manner over an extended period. At the conclusion of this process, a small number of discrete businesses would have been sold to third parties, and substantially all of our other assets would have been sold or wound down. Our group structure lends itself to this strategy because our parent company issues the vast majority of our external debt, and because our core business lines are highly concentrated in a small number of material entities that already hold substantial financial resources in their own right.

Ensuring that the Plan is executable is a high-priority area of focus for us. We have an established assurance framework which is designed to test and evidence our recovery and resolution capabilities by conducting dry run / table top exercises of our capabilities and simulation exercises with our boards of directors and senior management.

Having built, enhanced, and tested our Plan and capabilities for well over a decade, we are confident that our resolution strategy could be executed successfully and our firm could be wound down in an orderly manner without jeopardizing global financial markets, requiring taxpayer support, or causing losses to the FDIC’s Deposit Insurance Fund.

[2] For further information about the firm's strategic evolution, please refer to https://www.goldmansachs.com/investor-relations/investor-day-2023.html and https://www.goldmansachs.com/pressroom/press-releases/current/pdfs/2024-q4-earnings-results-presentation.pdf
[3] By "2024 Feedback Letter", we refer to the letter to The Goldman Sachs Group, Inc. dated June 20, 2024, in which the Agencies set out their findings regarding our 2023 Resolution Plan.

2. Overview of Goldman Sachs

Goldman Sachs is a leading global financial institution that delivers a broad range of financial services to a large and diversified client base that includes corporations, financial institutions, governments and individuals. As of December 2024, we had headcount of 46,500, offices in over 40 countries, and 50% of our headcount was based in the Americas, 20% in Europe, Middle East and Africa ("EMEA") and 30% in Asia. During 2024, we generated 36% of our net revenues outside the Americas.

Our parent company, Group Inc., is a bank holding company ("BHC") and a financial holding company ("FHC") regulated by the FRB. Our U.S. depository institution subsidiary, Goldman Sachs Bank USA ("GS Bank USA"), is a New York State-chartered bank.

The firm manages and reports its activities in the following three business segments:

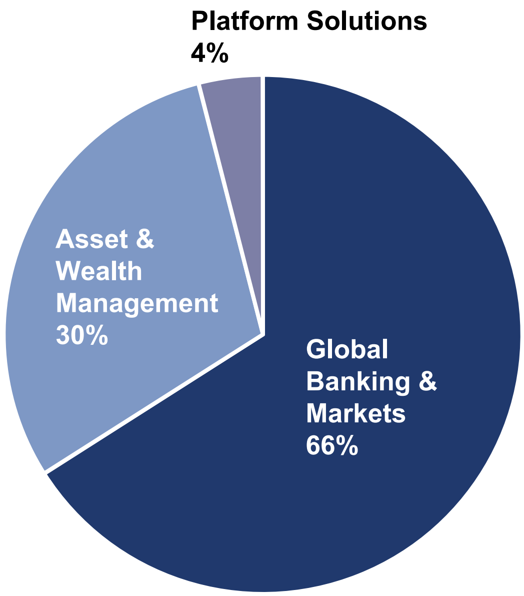
Global Banking & Markets: The firm provides a broad range of services to a diverse group of corporations, financial institutions, investment funds and governments. Services include strategic advisory assignments with respect to mergers and acquisitions, divestitures, corporate defense activities, restructurings and spin-offs, and equity and debt underwriting of public offerings and private placements. The firm facilitates client transactions and makes markets in fixed income, equity, currency and commodity products. In addition, the firm makes markets in and clears institutional client transactions on major stock, options and futures exchanges worldwide and provides prime financing (including securities lending, margin lending and swaps), portfolio financing and other types of equity financing (including securities-based loans to individuals). The firm also provides lending to corporate clients, including through relationship lending and acquisition financing, and secured lending, through structured credit and asset-backed lending. In addition, the firm provides commodity financing to clients through structured transactions and also provides financing through securities purchased under agreements to resell ("resale agreements"). The firm also makes equity and debt investments related to Global Banking & Markets activities.

Asset & Wealth Management: The firm manages assets and offers investment products across all major asset classes to a diverse set of clients, both institutional and individuals, including through a network of third-party distributors around the world. The firm also provides investing and wealth advisory solutions, including financial planning and counseling, and executing brokerage transactions for wealth management clients. The firm issues loans to wealth management clients and raises deposits through its consumer banking digital platform, *Marcus by Goldman Sachs* ("Marcus"), and through its private bank. The firm makes equity investments, which include investing activities related to public and private equity investments in corporate, real estate and infrastructure assets, as well as investments through consolidated investment entities ("CIEs"), substantially all of which are engaged in real estate investment activities. The firm also makes debt investments, including investing in corporate debt, lending to middle-market clients, and providing financing for real estate and other assets.

<u>Platform Solutions:</u> The firm issues credit cards through partnership arrangements, raises deposits from Apple Card customers and provides transaction banking and other services, such as deposit-taking, payment solutions and other cash management services, for corporate and institutional clients.

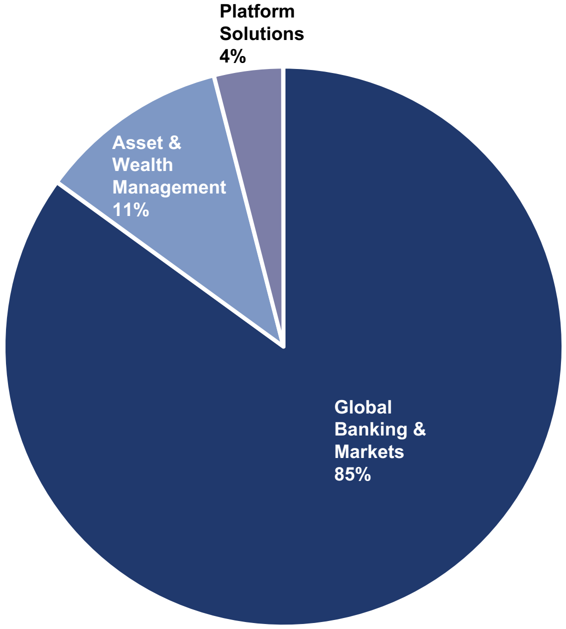
Financial Profile

The chart below presents the split by segment of our average Net Revenues for the years 2022, 2023 and 2024:

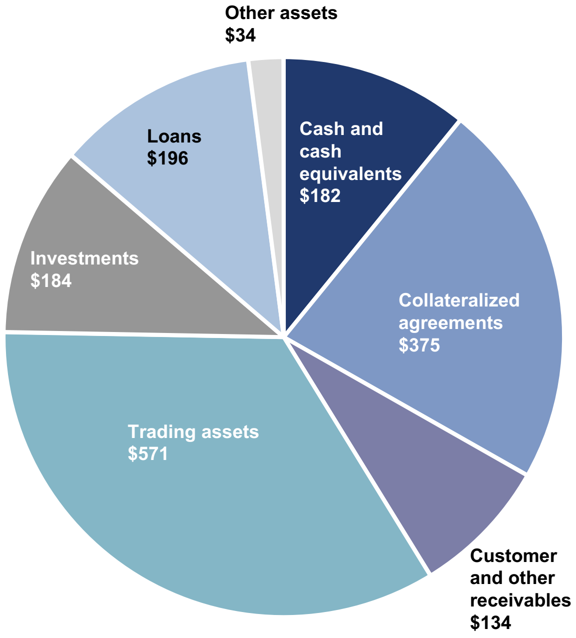


The charts below present our balance sheet by segment and by line item as of December 31, 2024:

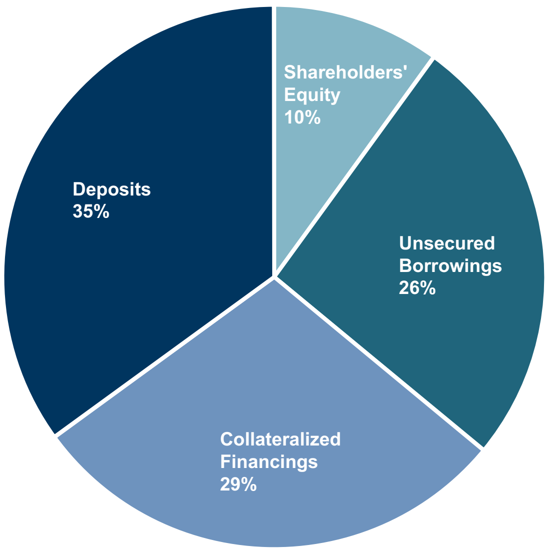
Balance Sheet by Segment



Balance Sheet Mix ($ in billions)



The chart below shows that we also maintain diversification of our funding sources as of December 31, 2024:



- **Shareholders' Equity:** Stable and perpetual source of funding
- **Secured Funding:** Diversified across counterparties, tenor and geography
- **Unsecured Long-Term Debt:** Well diversified across tenor, currency, investors and geography; Weighted Average Maturity ("WAM") of ~7 years as of December 31, 2024
- **Unsecured Short-Term Debt:** Includes $39bn of the current portion of long-term debt as of December 31, 2024
- **Deposits:** Have become a larger source of funding given our focus on growing across strategic channels; Time deposit WAM of ~0.6 years as of December 31, 2024:
  - 69% of our total U.S. deposits are FDIC insured and 28% of non-U.S. deposits are insured by non-U.S. programs as of December 31, 2024

Core Business Lines

Consistent with prior resolution plans, we performed an analysis to identify the businesses that should be considered “core business lines," which are defined as those businesses (including their associated operations, services and support functions) that would result in a material loss to the firm of revenue, profit or franchise value in the event of their failure.

Our analysis considered each of our business segments' average contribution over the last three years to our net revenues and pre-tax earnings. This quantitative analysis was augmented by additional procedures, including an assessment of the franchise and synergy value of each business, and the ease of separability.

As a result of this analysis, we concluded that our core business lines are Global Banking & Markets and Asset & Wealth Management, consistent with our 2023 Resolution Plan. These core business lines correspond to two of the three business segments under which we report our activities.

Our Platform Solutions business segment is not of sufficient size to be considered a core business line. In addition, during 2023 and 2024, we narrowed our focus with respect to consumer-related activities. See our Annual Report on Form 10-K for the year ended December 31, 2024 for further details.

Material Entities

After we had identified our core business lines, we performed an analysis to identify the operating and service entities that are significant to the maintenance of such activities and should therefore be designated as either material operating entities or material service entities.

As a result of our analysis, we concluded that we have nine material operating entities and nine material service entities; in addition, our “covered company” is the parent company of the firm, Group Inc.

Our list of material entities is unchanged from that included in our 2023 Resolution Plan. For a full list of our material entities, please see the taxonomy at the front of this document.

3. Preferred Resolution Strategy

Our preferred resolution strategy is consistent with a "single point of entry" strategy:

- We assume that the firm suffers an extremely large financial loss, followed by ten business days of significant outflows of liquidity.
- This causes our parent company and one smaller material operating entity, JANY, to enter bankruptcy proceedings.
- The remaining material operating entities and all material service entities are expected to survive for long enough to be wound down in an orderly manner over an extended period, or be sold. This is because they have significant pre-positioned capital and liquidity at their disposal, and because they are parties to the Capital and Liquidity Support Agreement ("CLSA")[4] and, as such, are contractually entitled to receive financial resources, as needed, from Goldman Sachs Funding LLC ("Funding IHC"), and because they have continued access to operational capabilities.
- Our material service entities continue to provide operational services to the participating material operating entities because they are contractually obligated to do so, have six months of pre-funding, and would continue to be paid for providing those services.
- By keeping the participating material operating and service entities out of proceedings, we can facilitate the gradual and orderly wind-down of our balance sheet, and thereby avoid the disruption that could be caused by a sudden cessation of activities. This strategy avoids the fire-sale of assets, minimizes unnecessary losses and permits the orderly transfer of client accounts to alternative service providers.

[4] The CLSA is a binding agreement between Funding IHC, Group Inc. and participating material entities, that contractually obliges Funding IHC to provide capital and liquidity support, as needed, to the participating material entities in a resolution scenario.

The tables below summarize the anticipated resolution approach for Group Inc. and each of our material operating entities, and for each business segment:

Resolution Approach By Entity

	Sale	Orderly Wind-down Outside of Bankruptcy Proceedings	Supervised Orderly Wind-down in Bankruptcy Proceedings
Covered Company			
The Goldman Sachs Group, Inc.	✗	✗	✓
Material Operating Entities			
Goldman Sachs & Co. LLC	✗	✓	✗
Goldman Sachs International	✗	✓	✗
Goldman Sachs Bank USA	✗	✓	✗
J. Aron & Company LLC	✗	✗	✓
Goldman Sachs Japan Co., Ltd	✗	✓	✗
Goldman Sachs International Bank	✗	✓	✗
Goldman Sachs Bank Europe SE	✗	✓	✗
Goldman Sachs Asset Management, L.P.	✓	✗	✗
Goldman Sachs Asset Management Int'l	✓	✗	✗

Resolution Approach For Business Segments

Business Segment	Core Business Line	Orderly Wind Down Outside of Bankruptcy Proceedings	Business Line Sale	Asset Sale
Global Banking & Markets[1]	✓	✓	✗	✗
Asset & Wealth Management[2]	✓	✓	✓	✓
Platform Solutions[2]	✗	✓	✓	✗

Notes:

1. Global Banking & Markets businesses conducted from JANY will cease when JANY enters bankruptcy proceedings.
2. Certain businesses within Asset & Wealth Management and Platform Solutions will be sold (either through a business line sale or asset sale); our preferred strategy for the remainder is a wind-down, but we maintain playbooks for the sale of certain of these businesses as an alternative to our preferred strategy.

We have prepared detailed projections of our capital and liquidity positions over an 18-month wind-down period under our preferred resolution strategy. Our forecasts show that, with their pre-positioned capital and liquidity resources, together with any further infusions of capital or liquidity from Funding IHC, our participating material operating entities have sufficient resources to repay all their creditors and wind down in an orderly manner over the forecast period. After wind-down, all residual value is returned to Group Inc. and is distributed to Group Inc.'s stakeholders. At the conclusion of the resolution process, most of our assets would have been sold or wound down, and remaining assets would primarily be comprised of cash or cash equivalents.

We recognize that actual events rarely unfold exactly as expected. Throughout the preparation of our Resolution Plan, we have emphasized the need for flexibility to deal with a wide variety of real-world situations, and have focused as much on the planning process as on the creation of a plan to address a specific situation. Since it is likely that the distribution of capital and liquidity needed to support a wind-down would be different from that envisioned in our preferred resolution strategy, our financial models are designed to be sufficiently flexible to adapt to actual stressed conditions, so as to enable filing decisions at the appropriate time and allow us to be resolved in an orderly manner under those circumstances.

4. Addressing Feedback and Targeted Information Requests From the Agencies

Addressing Feedback From the Agencies

The 2024 Feedback Letter from the Agencies highlighted one shortcoming related to our derivatives wind-down modeling and provided additional feedback on derivatives portfolio segmentation (addressed together below). It also provided feedback to peer banks and us on assurance activities related to resolution planning. We have addressed this feedback as follows:

- *Shortcoming on Derivatives Wind-Down Modeling & Feedback on Derivatives Portfolio Segmentation*

  The Agencies found the firm to have a shortcoming related to its ability to segment its derivatives portfolio in a manner that accounts for trade-level characteristics, including the complexity and the granularity necessary to accurately measure exit timing, exit costs, and the difficulty of unwinding the portfolio in a resolution scenario.

  The *Agencies also requested that in the 2025 Plan, the firm should demonstrate the ability to view derivatives positions at a counterparty level within both the portfolio unwind and segmentation capabilities.*

  To address this shortcoming and additional feedback, we have significantly enhanced our derivatives wind-down modeling capabilities, focusing on:

  - Increasing the granularity at which we assess the impact of our derivatives wind-down strategy, including to allow for counterparty-specific exit strategies.
  - Gathering variable exit timings from Global Banking & Markets personnel, which is subject to review and challenge, to inform the exit timings of our derivatives portfolios.
  - Quantifying exit costs, including the difficulty of winding down our derivatives, at an increased level of granularity.

  Our resolution modeling uses these more differentiated data inputs to produce a more granular unwind profile for our derivatives portfolios across the wind-down period, including with respect to the associated liquidity impacts and exit costs.

  As a part of our Recovery and Resolution Assurance Program, we have also tested our capability to produce our resolution metrics based on this enhanced modeling. This included being able to prepare resolution metrics in a short timeframe and being able to flexibly adjust inputs to produce alternative derivatives wind-down strategies to reflect in alternative capital and liquidity projections.

- *Feedback on Assurance Activities Related to Resolution Planning*

  The Agencies expect firms to develop an appropriate assurance framework. Components of an effective resolution assurance framework could include: identifying key resolution capabilities; analyzing the effectiveness of the firm's current ability to execute those capabilities (including limitations); confirming the reliability of essential data, systems and calculations used for decision-making; fostering independent review and challenge; aggregating, remediating and escalating any matters identified that lead to the conclusion that the firm's capabilities may be ineffective or may have impediments to timely execution.

  To address this feedback, we have significantly enhanced both resolution and recovery aspects of our Assurance Program, focusing on:

  - Developing a new comprehensive capabilities inventory, which identifies a population of sub-capabilities that we aim to test at least once every 2 years.
  - Establishing a testing framework for the assessment of these sub-capabilities.
  - Seeking to ensure that essential data, systems and calculations used for decision-making are also tested as a part of our Assurance Program.
  - Enhancing and formalizing governance, including establishment of a dedicated assurance working group and formalizing the role of the second and third lines of defense.
  - Defining how gaps or limitations are identified and tracked.

  We commenced testing under this new program from the start of 2025, and have since completed testing of a number of recovery and resolution capabilities.

- *UCC-1 Securities Interest Perfection*

  The Agencies noted that certain legal matters and components of the Plan related to the execution of the Plan were outdated or incomplete. Specifically, the Agencies highlighted that a UCC-1 filing (which provides public notice that a creditor holds a security interest in a debtor) had lapsed without extension.

  The firm completed the UCC-1 filings in October 2023 and has put in place controls to ensure that these filings are extended in a timely manner in the future.

Addressing Targeted Information Requests From the Agencies

The 2024 Feedback Letter included two targeted information requests from the Agencies related to: (i) contingency actions the firm could take to support critical operations; and (ii) actions in key foreign jurisdictions that may be necessary for the firm to carry out its preferred resolution strategy. We have addressed these targeted information request as follows:

- *Item 1: Additional Financial Resources to Support Material Entities*

  The Agencies requested information that describes how the firm could support and preserve critical operations through a range of alternative resolution scenarios when financial resources (capital and liquidity) are significantly lower than the execution needs after Group Inc. has filed for bankruptcy.

  We have prepared options and strategies that the firm could deploy to address unanticipated capital and/or liquidity shortfalls and divert resources to continue critical operations. These include adjusting the timing of the wind-down of non-critical firm activities to support critical operations and negotiation with counterparties, among others. We quantified a selection of these options and strategies by running an alternative scenario to our baseline scenario leveraging our enhanced resolution modeling capabilities. In addition, we have set out changes from daily business-as-usual processes for heightened governance, communication and reporting in resolution.

- *Item 2: Actions of Foreign Authorities*

  The Agencies requested certain information about approvals, actions, forbearance, and recognition (each a Necessary Action) that may be necessary for the firm to carry out its preferred resolution strategy.

  For all non-U.S. jurisdictions in which the firm has a material entity, we have set out the specific Necessary Actions that would be required to support our resolution strategy and the process to obtain each Necessary Action, including when those processes should be initiated and any obstacles to obtaining such Necessary Actions.

5. Resolution - Critical Capabilities

Introduction To Our Resolution Capabilities

We have built all of the underlying capabilities that we believe are required to support the successful execution of our preferred resolution strategy, and to support flexibility in that strategy, in line with the prevailing guidance. These capabilities are now well embedded in our business-as-usual practices, including our governance practices and our operational policies and procedures. Since the submission of our 2023 Resolution Plan, we have continued to test, develop and refine our capabilities.

In this section we provide an overview of the following capabilities:

A. Resolution Mechanics
B. Capital
C. Liquidity
D. Governance Mechanisms
E. Operational
    - Payment, Clearing, and Settlement Activities
    - Managing, Identifying, and Valuing Collateral
    - Management Information Systems
    - Shared and Outsourced Services
    - Legal Obstacles Associated With Emergency Motions
    - Communication Strategy
F. Legal Entity Rationalization and Separability
G. Derivatives and Trading Activities

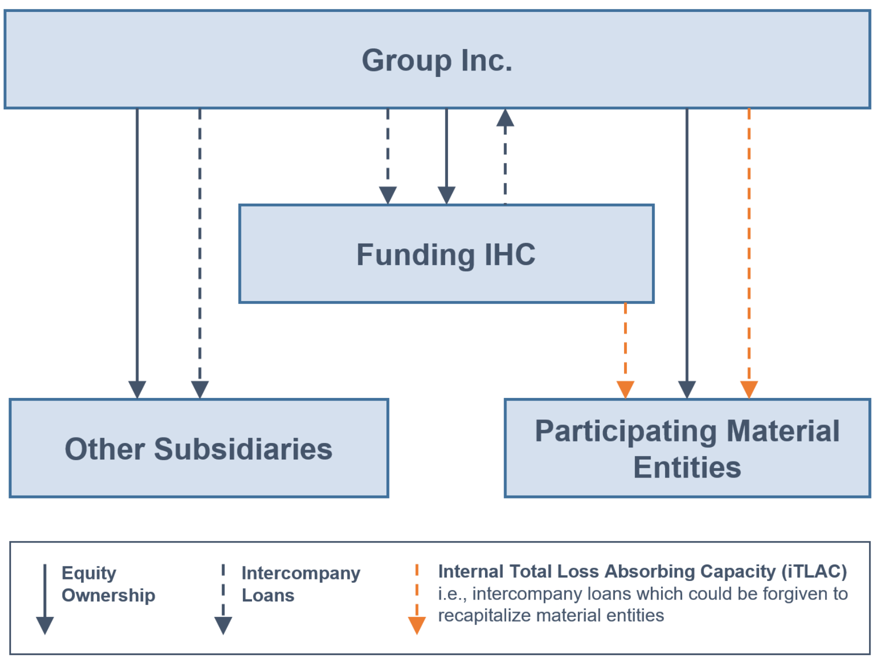
A. Resolution Mechanics

In this section we describe our Funding IHC structure and our CLSA, which together are designed to ensure that our participating material entities are provided with sufficient capital and liquidity in a resolution scenario to execute an orderly wind-down in accordance with our preferred resolution strategy. These mechanisms also act as mitigants to a potential creditor challenge in bankruptcy, because they were established and have functioned in business-as-usual conditions when Group Inc. was solvent and had not entered the preference period that precedes a bankruptcy filing.

Our Funding IHC

Our Funding IHC is a wholly-owned, direct subsidiary of Group Inc. This entity is fundamental to our pre-positioning strategy, and has been designated as a material service entity. In business-as-usual conditions, it provides most of the overnight and term loans required by our participating material entities and our parent company, and holds most of our excess liquidity that is not already pre-positioned at participating material entities.

The chart below illustrates the role of Funding IHC:



Capital and Liquidity Support Agreement

The CLSA is a contractually binding mechanism to which Group Inc., Funding IHC, our participating material operating entities and our material service entities are parties. If certain pre-determined capital or liquidity triggers are breached, the CLSA requires Group Inc. to transfer additional resources to Funding IHC, and also requires Funding IHC to provide financial support, as needed, to participating material entities. This support would begin during the "runway" (i.e., the period during which Group Inc. prepares for a possible bankruptcy filing), and would continue for an indefinite time after Group Inc.'s bankruptcy filing, until the resolution liquidity and capital needs of the participating material entities are satisfied. Group Inc. and Funding IHC have granted a security interest in substantially all of their assets (other than Group Inc.'s equity interests in subsidiaries) to secure their obligations under the CLSA.

The CLSA and Funding IHC bring two main benefits to our resolution strategy. First, they provide greater assurance that capital and liquidity will be dispensed as needed to the participating material entities. Second, they introduce a higher degree of flexibility because Funding IHC does not enter resolution proceedings in our preferred resolution strategy, and the exact amount and location of capital and liquidity therefore does not need to be pre-determined.

The CLSA operates as follows:

- During the runway, the CLSA requires Funding IHC to provide liquidity and recapitalize participating material entities as and when needed, including by forgiving or converting intercompany debt or injecting capital, so that they meet their applicable regulatory capital requirements plus an operating buffer;
- If the resolution trigger under the CLSA is breached, it requires Group Inc. to make a final contribution to Funding IHC of almost all remaining Global Core Liquid Assets ("GCLA") held by Group Inc.[5], as well as intercompany receivables held by Group Inc.;
- Following Group Inc.'s bankruptcy filing, the CLSA requires Funding IHC to continue providing liquidity and recapitalizing participating material entities as before.

[5] Under the terms of the CLSA, the final contribution of remaining GCLA excludes an amount held back to fund the projected administrative expenses of Group Inc.'s bankruptcy proceeding and the projected amount of Group Inc.'s cash disbursements through the next business day.

B. Capital

Capital Management

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

We determine the appropriate amount and composition of our capital by considering multiple factors, including our current and future regulatory capital requirements, the results of our capital planning and stress testing process, the results of resolution capital models and other factors, such as rating agency guidelines, subsidiary capital requirements, the business environment and conditions in the financial markets.

We manage our capital requirements and the levels of our capital usage principally by setting targets on our balance sheet and risk-weighted assets ("RWAs"), in each case at both the firmwide and business levels.

We principally manage the level and composition of our capital through issuances and repurchases of our common stock.

We may issue, redeem or repurchase our preferred stock and subordinated debt or other forms of capital as business conditions warrant. Prior to such redemptions or repurchases, we must receive approval from the FRB.

Consolidated Regulatory Capital

We are subject to consolidated regulatory capital requirements which are calculated in accordance with the regulations of the FRB ("Capital Framework"). Under the Capital Framework, we are an “Advanced approaches” banking organization and have been designated as a global systemically important bank ("G-SIB"). In managing our capital, we consider a number of different capital requirements, the most binding of which can vary over time.

The capital requirements calculated under the Capital Framework include the capital conservation buffer requirements, which are comprised of a 2.5% buffer (under the Advanced Capital Rules), the stress capital buffer ("SCB") (under the Standardized Capital Rules), a countercyclical capital buffer (under both Capital Rules) and the G-SIB surcharge (under both Capital Rules). Our G-SIB surcharge is 3.0% for 2025 and will be 3.5% beginning in 2026. The G-SIB surcharge and countercyclical capital buffer in the future may differ due to additional guidance from our regulators and/or positional changes, and our SCB can change significantly from year to year based on the results of the annual supervisory stress tests. Our target is to maintain capital ratios equal to the regulatory requirements plus a buffer of 50 to 100 basis points.

Subsidiary Capital Requirements

Many of our subsidiaries, including our bank and broker-dealer subsidiaries, are subject to separate regulation and capital requirements of the jurisdictions in which they operate.

Capital Planning and Stress Testing Process

As part of capital planning, we project sources and uses of capital given a range of business environments, including stressed conditions. Our stress testing process is designed to identify and measure material risks associated with our business activities, including market risk, credit risk, operational risk and liquidity risk, as well as our ability to generate revenues.

Our capital planning process incorporates an internal capital adequacy assessment with the objective of ensuring that we are appropriately capitalized relative to the risks in our businesses. We incorporate stress scenarios into our capital planning process with a goal of holding sufficient capital to ensure we remain adequately capitalized after experiencing a severe stress event. Our assessment of capital adequacy is viewed in tandem with our assessment of liquidity adequacy and is integrated into our overall risk management structure, governance and policy framework.

Our stress tests incorporate our internally designed stress scenarios, including our internally developed severely adverse scenario, and those required by the FRB, and are designed to capture our specific vulnerabilities and risks.

Contingency Capital Plan

As part of our comprehensive capital management policy, we maintain a contingency capital plan. Our contingency capital plan provides a framework for analyzing and responding to a perceived or actual capital deficiency, including, but not limited to, identification of drivers of a capital deficiency, as well as mitigants and potential actions. It outlines the appropriate communication procedures to follow during a crisis period, including internal dissemination of information, as well as timely communication with external stakeholders.

Resolution Capital Models

In connection with our resolution planning efforts, we have established a Resolution Capital Adequacy and Positioning ("RCAP") framework, which is designed to ensure that each of our participating material operating entities has access to sufficient loss-absorbing capacity (in the form of equity, subordinated debt and unsecured senior debt) so that they are able to wind down following a Group Inc. bankruptcy filing in accordance with our preferred resolution strategy.

Our RCAP framework is specifically designed to ensure that:

- Group Inc. maintains enough external Total Loss-Absorbing Capacity ("TLAC") to allow Funding IHC to recapitalize participating material entities so that they continue to meet their regulatory and operational needs while they wind down outside of proceedings over an extended period.

- Internal TLAC is positioned in a manner that appropriately balances the certainty associated with pre-positioning directly at participating material entities with the flexibility of holding recapitalization resources centrally to meet unanticipated losses wherever they may occur.

We calculate and monitor the Resolution Capital Execution Need ("RCEN") on a regular basis for each of our participating material operating entities. An entity's RCEN is the cumulative amount of capital it would need in order to wind itself down in an orderly manner over time, following our parent company's bankruptcy.

In order to calculate a material entity's RCEN, it is first necessary to project its capital requirements over the wind-down period, taking into account its projected expenses and the orderly wind-down of its balance sheet. At each projection point, we measure a capital "excess" or "shortfall" (i.e., the difference between the projected regulatory capital levels and the amount required to meet the entity's applicable regulatory requirements).

For each participating material entity, RCEN is:

- the amount of capital it held at the start of the projection period

- plus the largest projected shortfall (or less the smallest projected excess)

Our calculations are based on a series of financial models that have been fully documented in accordance with our internal model governance framework and validated by our Model Risk Management group. These models assume a highly stressed environment for the projected liquidation of inventory.

We have a quarterly Alternative RCEN calculation process in place whereby we vary certain inputs into the RCEN calculation and analyze the resulting impact on the RCEN metrics. The information gathered through these exercises informs our decision-making as to the optimal calibration of the input parameters and gives us assurance over our ability to calibrate our RCEN calculations to particular stress scenarios as they arise.

TLAC

In order to execute our preferred resolution strategy, our parent company must have enough loss-absorbing capacity (i.e., external TLAC) to recapitalize our participating material entities so they could continue to operate while the parent company is in bankruptcy. In deciding how to allocate loss-absorbing capacity among participating material entities (i.e., internal TLAC), it is also important to balance the certainty associated with pre-positioning against the flexibility of holding recapitalization resources centrally, either at the parent company or at our Funding IHC, to meet losses or liquidity outflows wherever they are incurred.

GS Group is subject to the FRB's TLAC rules. The table below demonstrates that our TLAC ratios are well in excess of these requirements:

External TLAC Ratios as of December 31, 2024[6]

	Actual ($ in billions)	Requirement	Excess ($ in billions)
Components:			
TLAC	**275.9**		
External Long-Term Debt	**150.7**		
Risk-Weighted Assets ("RWAs")	**688.5**		
Leverage Exposure	**2,120.8**		
Ratios:			
TLAC to RWAs	**40.1 %**	22.0 %	124.4
TLAC to Leverage Exposure	**13.0 %**	9.5 %	74.4
External Long-Term Debt to RWAs	**21.9 %**	9.0 %	88.7
External Long-Term Debt to Leverage Exposure	**7.1 %**	4.5 %	55.2

Group Inc. is also in compliance with the "clean HoldCo" elements of the FRB's TLAC rules, which prohibit it from engaging in certain practices, including:

- Guaranteeing subsidiaries' liabilities that are subject to early termination provisions if Group Inc. enters into an insolvency or receivership proceeding, subject to an exception for guarantees permitted by rules of the U.S. federal bank regulatory agencies imposing restrictions on "qualified financial contracts" ("QFCs")[7];
- Incurring liabilities guaranteed by subsidiaries;
- Issuing short-term debt to third parties;
- Entering into derivatives and certain other financial contracts with external counterparties; and
- Incurring unsecured non-contingent third-party liabilities that are not eligible long-term that

[6] Beginning in January 2023, our TLAC to RWAs requirement increased from 21.5% to 22.0% and our external long-term debt to RWAs requirement increased from 8.5% to 9.0%.
[7] As defined in 12 U.S.C. 5390(c)(8)(D).

could rank equally with or junior to eligible long-term debt in excess of 5% of the value of Group Inc.'s eligible TLAC.

Internal TLAC

Internal TLAC is subject to local requirements in certain jurisdictions:

- The Bank of England's internal MREL[8] requirements, which apply to GSI (our U.K. broker-dealer) and to the holding company of the U.K. regulated group, have been in effect since January 2022.

- The Japan Financial Services Agency's ("JFSA") internal TLAC requirements, which apply to GSJCL (our Japan broker-dealer), have been in effect since March 2020.

- Within the European Union, GSBE (our German bank) became subject to a minimum MREL requirement in 2022 and the Single Resolution Board's additional MREL requirement has applied to GSBE since January 2024.

The amount of internal TLAC that is pre-positioned at each material entity is the higher of the local jurisdictional requirement and our internal pre-positioning target, based on a proportion of each entity's RCEN.

Progress since our 2023 Plan Submission

We continuously refine our capital stress testing models to take into account changes in the firm's business mix, market events, regulatory changes and changes in the broader industry.

Since the 2023 Plan submission, we have made a number of enhancements to our capital stress testing models, including our RCEN models. These enhancements include changes to use the more granular derivatives wind-down inputs set out in Section 4 above, improvements in the methodology or calibration of existing assumptions, enhancements to address regulatory feedback, updates to data sourcing, and other changes to capture of new business activities and products.

We also continue to test our resolution capabilities on an ongoing basis, to ensure we can operationalize them when needed in an actual stress event.

[8] MREL stands for minimum requirements for own funds and eligible liabilities.

C. Liquidity

Overview of Liquidity Risk Management

Liquidity risk is the risk that we will be unable to fund ourselves or meet our liquidity needs in the event of firm-specific, broader industry or market liquidity stress events. We have in place a comprehensive and conservative set of liquidity and funding policies. Our principal objective is to be able to fund ourselves and to enable our core businesses to continue to serve clients and generate revenues, even under adverse circumstances.

Liquidity Risk Management Principles

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

- GCLA: GCLA is liquidity that we maintain to meet a broad range of potential cash outflows and collateral needs in a stressed environment. A primary liquidity principle is to pre-fund our estimated potential cash and collateral needs during a liquidity crisis and hold this liquidity in the form of unencumbered, highly liquid securities and cash. We believe that the securities held in our GCLA would be readily convertible to cash in a matter of days, through liquidation, by entering into repurchase agreements or from maturities of resale agreements, and that this cash would allow us to meet immediate obligations without needing to sell other assets or depend on additional funding from credit-sensitive markets.

- Asset-Liability Management: Our liquidity risk management policies are designed to ensure we have a sufficient amount of financing, even when funding markets experience persistent stress. We manage the maturities and diversity of our funding across markets, products and counterparties, and seek to maintain a diversified funding profile with an appropriate tenor, taking into consideration the characteristics and liquidity profile of our assets.

- Contingency Funding Plan: We maintain a contingency funding plan to provide a framework for analyzing and responding to a liquidity crisis situation or periods of market stress. Our contingency funding plan outlines a list of potential risk factors, key reports and metrics that are reviewed on an ongoing basis to assist in assessing the severity of, and managing through, a liquidity crisis and/or market dislocation. The contingency funding plan also describes in detail our potential responses if our assessments indicate that we have entered a liquidity crisis, which include pre-funding for what we estimate will be our potential cash and collateral needs, as well as utilizing secondary sources of liquidity. Mitigants and action items to address specific risks which may arise are also described and assigned to individuals responsible for execution.

Liquidity Regulatory Framework

We are subject to a minimum Liquidity Coverage Ratio ("LCR") under the LCR rule approved by the U.S. federal bank regulatory agencies. The LCR rule requires organizations to maintain an adequate ratio of eligible High-Quality Liquid Assets ("HQLA") to expected net cash outflows under an acute, short-term liquidity stress scenario. We are also subject to a minimum Net Stable Funding Ratio ("NSFR") under the NSFR rule approved by the U.S. federal bank regulatory agencies. The NSFR rule requires large U.S. banking organizations to maintain Available Stable Funding ("ASF") above their Required Stable Funding ("RSF") over a one-year time horizon.

Subsidiary Liquidity Requirements

Many of our subsidiaries, including our bank and broker-dealer subsidiaries, are subject to separate regulation and liquidity requirements of the jurisdictions in which they operate.

Stress Tests

Our liquidity risk management framework is designed to ensure that we maintain sufficient liquidity to fund our business activity and meet our contractual and contingent obligations in both normal times and during periods of stress. We manage our liquidity levels to several internal stress testing requirements in addition to the regulatory requirements mentioned above, including:

- Modeled Liquidity Outflow and Intraday ("MLOi"): Quantifies contractual and contingent outflows over a severely adverse 30-day scenario with challenged market conditions and/or a firm-specific crisis, including potential intraday timing mismatches in payments and receipts.
- Long-Term Stress Test ("LTST"): Represents a forward view on liquidity through a prolonged stress period, in which the firm experiences a severe liquidity stress and attempts to recover in an environment that continues to be challenging.

Resolution Liquidity Models

These liquidity risk management capabilities are supplemented by our Resolution Liquidity Adequacy and Positioning ("RLAP") and Resolution Liquidity Execution Need ("RLEN") frameworks (described below), which we developed as part of our resolution planning efforts. Our RLAP and RLEN frameworks leverage subject matter experts who cover their risk area across all liquidity risk metrics.

RLAP Framework

Our RLAP framework is designed to ensure that we hold sufficient liquidity at the parent company and Funding IHC to cover projected liquidity deficits at material entities over a 30-day stress period.

RLAP estimates the projected stand-alone liquidity position of each of our material operating entities over such a stress period. This estimate is built on the same platform and is largely based on the same assumptions as our MLOi liquidity stress test, but treats intercompany exposures in the same manner as third-party exposures. It takes into account factors such as mismatches between contractual inflows and outflows, intraday liquidity needs, intercompany frictions, and the effect of actions that might be taken by clients, counterparties, Financial Market Utilities ("FMUs") or regulatory authorities.

In order to balance the flexibility of holding resources at the parent company or Funding IHC against the certainty of pre-positioning, our participating material operating entities hold GCLA, at a minimum, in an amount equal to a portion of their RLAP requirements, and the remainder is held by Group Inc. and Funding IHC. The amount held by each entity varies according to its size and complexity.

In determining whether we have sufficient liquidity at the parent company or Funding IHC, we make the assumption that a projected liquidity surplus at one material operating entity cannot be used to meet a liquidity deficit at another material operating entity, or to augment the resources of either our parent company or Funding IHC. We hold a buffer above the minimum requirements that can be deployed to meet unanticipated events. RLAP is incorporated into our triggers and alerts framework as a signal of stress or entry into the recovery period.

We calculate, monitor and manage RLAP on a daily basis in parallel with our MLOi liquidity stress test.

RLEN Framework

RLEN is an estimate of the liquidity that each participating material operating entity requires in order to stabilize itself and operate post the Group Inc. filing in support of our preferred resolution strategy. It is comprised of:

- Minimum operating liquidity, a measure of the liquidity needed at each entity to continue operating post-filing, taking account of intraday requirements, operating expenses and working capital needs, and
- Peak funding need, the peak level of cumulative net outflows during the stabilization period, based on daily cash flow forecasts by entity, taking into account the effect of intercompany transactions. These outflows include contractual outflows, contingent outflows from adverse client and counterparty actions, and the impact of unwinding our businesses.

We have the capability to produce RLEN on a daily, monthly and quarterly basis. We maintain a robust data review and validation process, in order to produce RLEN in a timely manner.

We have also developed capabilities to run RLEN under different scenarios. These capabilities allow us to dynamically update our pre-defined assumptions within our RLEN model to reflect actual stress conditions as they occur. We periodically test these capabilities under our Assurance Program.

Limits

We use liquidity risk limits at various levels and across liquidity risk types, including resolution to manage the size of our liquidity exposures. Limits are measured relative to acceptable levels of risk given our liquidity risk tolerance.

Progress since our 2023 Plan Submission

We continuously refine our liquidity stress testing models to take into account changes in the firm's business mix, market events, and changes in the broader industry.

Since the 2023 Plan submission, we have made a number of enhancements to our liquidity stress testing models, including our RLAP and RLEN models. These enhancements include changes to use the more granular derivatives wind-down inputs set out in Section 4 above, improvements in the methodology or calibration of existing assumptions, enhancements to address regulatory feedback, updates to data sourcing, and other changes to capture new business activities and products.

We also continue to test our resolution capabilities on a periodic basis, and our tests are designed to ensure we can operationalize them when needed in an actual stress event.

D. Governance Mechanisms

Board and Management Playbooks

Advance preparation is necessary to ensure that our processes and people are able to respond quickly and appropriately to a deteriorating financial situation. To that end, we have prepared a series of playbooks to enable our Board, the boards of our other material entities, and senior management to make well-considered decisions and take appropriate actions across functional departments and legal entities, especially during the runway period.

We have an employee retention plan to enable us to move swiftly to retain those employees who are critical to our resolution strategy. In addition, we have a communication strategy to facilitate the timely provision of information to regulators, staff, clients and other stakeholders in a resolution scenario; and we have playbooks that outline how cross-jurisdictional intercompany shared services could be maintained in a resolution scenario.

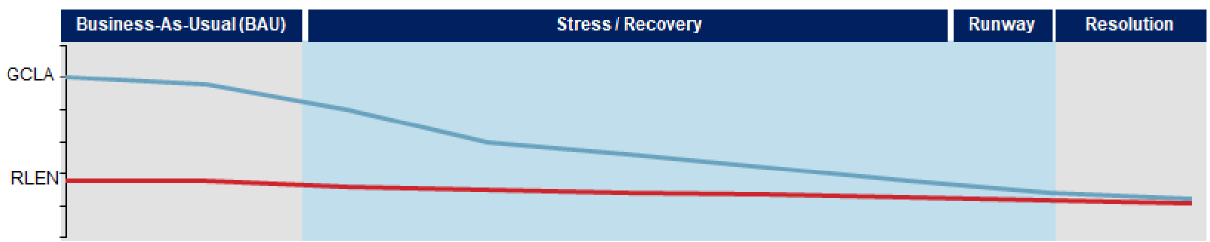
Where appropriate, our playbooks incorporate recovery and resolution triggers (discussed below), based on capital and liquidity metrics, that are linked to specific actions as we transition from business-as-usual conditions to a stress or recovery period, then to a runway period, and finally to a resolution period.

Triggers and Alerts Framework

We have established a series of quantitative “triggers and alerts” that are based on our most important capital and liquidity metrics, most of which we calculate on a daily basis. These triggers and alerts serve as indicators of our financial health. Alerts are less severe than triggers and are intended to signal that we may need to take action to avoid further financial stress that would breach a trigger. Triggers, on the other hand, may cause us to take recovery actions or, in the extreme case, enter the runway and begin preparations for a bankruptcy filing.

RLAP, RLEN and RCEN are incorporated into our triggers and alerts framework. Our triggers are calibrated at levels designed to ensure that the board considers filing for bankruptcy at a time when we still have sufficient liquidity to conduct an orderly wind-down.

The chart below uses liquidity metrics to illustrate how, based on these triggers, decreasing levels of GCLA would cause us to enter a recovery period, then the runway, and finally resolution:



E. Operational

Payment, Clearing, and Settlement ("PCS") Activities

In order to avoid jeopardizing the stability of the financial markets during a resolution event, it is essential for our clients and material operating entities to have ongoing access to critical PCS activities. Accordingly, subject matter experts within our firm performed a quantitative and qualitative evaluation to identify which FMUs (i.e., clearing counterparties, central securities depositories, agent banks, and payment messaging systems) are critical to the successful execution of our preferred resolution strategy. As a result of this process, we identified 28 critical FMUs, which are listed in Supporting Information Section 5.

Since the submission of our 2023 Resolution Plan, two new critical FMUs have been identified (Euronext Clearing and Royal Bank of Canada). FMU playbooks have been developed for each.

We have an established methodology for identifying key clients using criteria such as the value and volume of transactions, and the size of lines of credit, as well as other qualitative criteria. Our methodology and mapping to FMUs and core business lines have been documented and presented in our “Key Client Playbook,” which also documents the range of contingency arrangements that we would consider, including the viability of transferring client transactions and assets to third parties or of making alternative arrangements to allow key clients continued access to critical PCS services.

We understand the importance of communicating with clients, and we have developed, documented and implemented a communication strategy for notifying clients about relevant aspects of our resolution planning efforts.

Managing, Identifying, and Valuing Collateral

Our systems and processes for managing securities collateral are fully compliant with the supervisory expectations in the applicable regulatory guidance. Each of our material entities has the capability to identify and value the specific securities that it has pledged and received as collateral, and to identify for each such security:

- the counterparty (including affiliated entities and central counterparties);
- the institution that holds the collateral;
- the jurisdiction in which 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 in a timely manner (generally on the day after trade-date), even against the backdrop of significant spikes in volume during a period of stress.

We have a comprehensive collateral management policy that outlines our approach to collateral management and serves as a source for governance. We have also invested in a technology platform that contains all of our QFCs and required metadata, for all of our legal entities, in a searchable format and on a single platform. This platform gives us the ability to query and produce aggregate statistics on collateral-related contract terms, such as cross-default clauses and downgrade triggers, for all QFCs across contract types, business lines, legal entities and jurisdictions.

Management Information Systems

Our firm has a long history of investing significantly in technology, and our management information systems ("MIS") are designed to provide complete, timely and accurate information across our firm. Our commitment to technology platforms has enabled an agile and innovative approach to our recovery and resolution planning initiatives.

We have carefully analyzed the data, information, systems and reporting required to support the Plan and are confident we have the capability to produce the material information required to support the operational execution of our preferred resolution strategy across material entities and core business lines. This includes both management reporting and recovery and resolution capabilities:

- **Management Reporting:** To assess the financial health of GS Group and its material operating entities, the firm performs a significant amount of intra-month reporting related to P&L, balance sheet, capital and liquidity, among other areas.

  The preparation of our management reporting is facilitated by the use of a single platform (SecDB) for financial risk management across the majority of our assets, which can compute risks driven by changes in market factors, counterparty risk and liquidity risk.

  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 business-as-usual, but also during a stress scenario.

  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 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 Capabilities:** To support the firm's recovery and resolution capabilities, we have developed:

  - Classification management tools that allow owners to indicate which systems are critical, as they support core business lines and essential functions, and perform periodic reassessments.

  - A data visualization platform (Recovery and Resolution Visualizer) which allows users to analyze key interdependencies and relationships between legal entities, ownership structures, and operational continuity.

  - A workflow tool for managing inter-affiliate service level agreements, that helps the firm monitor inter-entity support.

  - A central repository for vendor data enabling a role-based vendor management workflow with integrated risk assessments that allows us to understand where vendors are used within the firm.

  - A catalog of reports necessary for recovery or resolution scenarios, including those required for bankruptcy filings.

- Document storage capabilities that fulfill regulatory recordkeeping requirements (QFC and EBA) by sourcing and linking position, collateral, and legal agreement data.

In recent years, the firm has continued to invest in and improve its MIS capabilities, including by extending data capture and testing the preparation of resolution metrics, critical reports and bankruptcy filing requirements.

Shared and Outsourced Services

Our shared services strategy plays a key role in the orderly execution of our recovery and resolution plans. The strategy provides a uniform, globally consistent approach across all regions and was the result of a multi-year implementation effort involving substantial firm resources which we continue to build upon and enhance. Identification, mapping, and management of critical services are core components of our overall shared services strategy.

Our strategy leverages a detailed service catalog that identifies and maps the critical shared services (including critical services and staff) to our material entities, core business lines and critical operations.

We have established a governance framework and a Shared Services Working Group comprised of senior leaders, who are responsible for overseeing the shared services capability. We have also categorized shared services into the following four areas, each documented in a dedicated playbook:

- Personnel
- Technology Assets and Intellectual Property
- Third Party Vendors (excluding FMUs)
- Facilities

Operational continuity of our shared and outsourced services is supported by six key pillars across all capabilities:

- Legal Agreements: Shared and outsourced services agreements include, where necessary, resolution resilient terms preventing termination of the agreement in the event of a resolution or bankruptcy scenario.
- Identification and Mapping of Resolution Critical Services: We have the capability to identify the providers and consumers of shared and outsourced services by our core business lines, critical operations and our material and object-of-sale entities, as evidenced by:
    - Identification of recovery- and resolution-critical employees that support our core business lines, critical operations, and objects of sale.

- Identification and mapping of third-party and intercompany services that support core business lines and critical operations.

- Playbooks: Each shared services capability has a playbook to support operational continuity in recovery and resolution.

- Criteria: We maintain a set of criteria around the four types of shared and outsourced services and such criteria enhance the operational continuity of these services.

- Service Entities: We utilize service entities to (i) employ shared staff that provide shared and outsourced services, (ii) own the data servers on which our joint IP is stored, and (iii) provide equal access to material operating and object of sale entities. The service entities are designed to provide a flexible operational continuity capability, and are established with short, clean, entity ownership lines. They are operationally and financially resilient because they have their own operational and governance infrastructure, and they maintain six months' worth of working capital on hand as a buffer in case payments for services are not timely received.

- MIS and Document Repositories: We have technologies which store and provide ready access to our legal agreements related to critical shared and outsourced services. Critical intercompany services are recorded in a data repository and workflow management application. We also leverage a central repository for vendor-related data. In addition, we also have a technology tool, the Recovery and Resolution Visualizer, which provides the ability to visually analyze these critical services and other dimensions of shared services.

Legal Obstacles Associated with Financial Support and Emergency Motions

Creditor Challenge: The provision of financial support to participating material operating entities is a critical component of our preferred resolution strategy because it allows these entities to avoid potential bankruptcy, insolvency or similar proceedings themselves. However, we recognize the risk that a legal challenge by the creditors of Group Inc. could potentially hinder the provision of such financial support, and we have taken a number of steps to reduce the likelihood that such a challenge would be successful:

- With the help of external counsel, we have prepared an analysis that identifies potential obstacles under state and bankruptcy law to the provision of financial support. This analysis includes a consideration of potential creditor challenges based on claims of fraudulent transfer, preference, breach of fiduciary duty, breach of indenture covenants and equitable claims to enjoin the provision of financial support. The analysis considers potential obstacles to each element of the planned financial support, the timing considerations implicated by potential claims, and the extent to which any adjudication could affect the execution of our preferred resolution strategy.

- We established a Funding IHC as a direct subsidiary of Group Inc. In business-as-usual conditions, it provides most of the overnight and term loans required by our participating material entities and the parent company, and holds much of our excess liquidity that is not pre-positioned at participating material entities. Importantly, Funding IHC has no external creditors and it does not enter proceedings under our preferred resolution strategy. Funding IHC reduces the need for Group Inc. to contribute significant assets to material entities during the preference period that would precede its bankruptcy filing.

- We have put in place a CLSA to which Group Inc., Funding IHC, participating material operating entities, all of our material service entities and certain intermediate holding companies are parties. If certain pre-determined capital or liquidity triggers are breached, the CLSA requires Group Inc. to transfer additional resources to Funding IHC, and Funding IHC to provide financial support, as needed, to participating material entities. Group Inc. and Funding IHC have granted a security interest in substantially all of their assets (except Group Inc.'s equity interests in subsidiaries) to secure their obligations under the CLSA.

The CLSA provides additional protection against creditor challenge because the decisions to contribute Group Inc. assets, tie Funding IHC's support of participating material entities to specific metrics, and secure those obligations of Group Inc. and Funding IHC with collateral, were each taken when Group Inc. was solvent and had not entered the preference period that precedes a bankruptcy filing.

<u>First-Day Issues:</u> We have prepared an analysis of issues that are likely to be raised at the hearing on the first-day emergency relief motion[9] and the best arguments in support of the motion. Issues that we have considered include, among others, possible assertions by creditors that they had insufficient opportunity to respond to the emergency motion, given that a creditors' committee is unlikely to have been appointed by this time. Because our preferred resolution strategy assumes that the parent company would seek to remain obligated on its guarantees, our analysis considers the legal basis upon which it would do so, the ability of the bankruptcy court to prevent third parties from interfering with the parent company or its subsidiaries in bankruptcy, and the interplay of public policy concerns (such as the need to preserve financial stability) with the bankruptcy court's decisions. Our analysis also considers the alternative request to transfer assets and certain credit enhancements to a trust-owned, newly-formed entity.

<u>Regulatory Implications:</u> We have discussed our preferred resolution strategy with key regulatory authorities globally, and have worked with outside counsel to consider the steps we could take to provide key domestic and foreign authorities with the necessary assurances to avoid objection to the emergency motion.

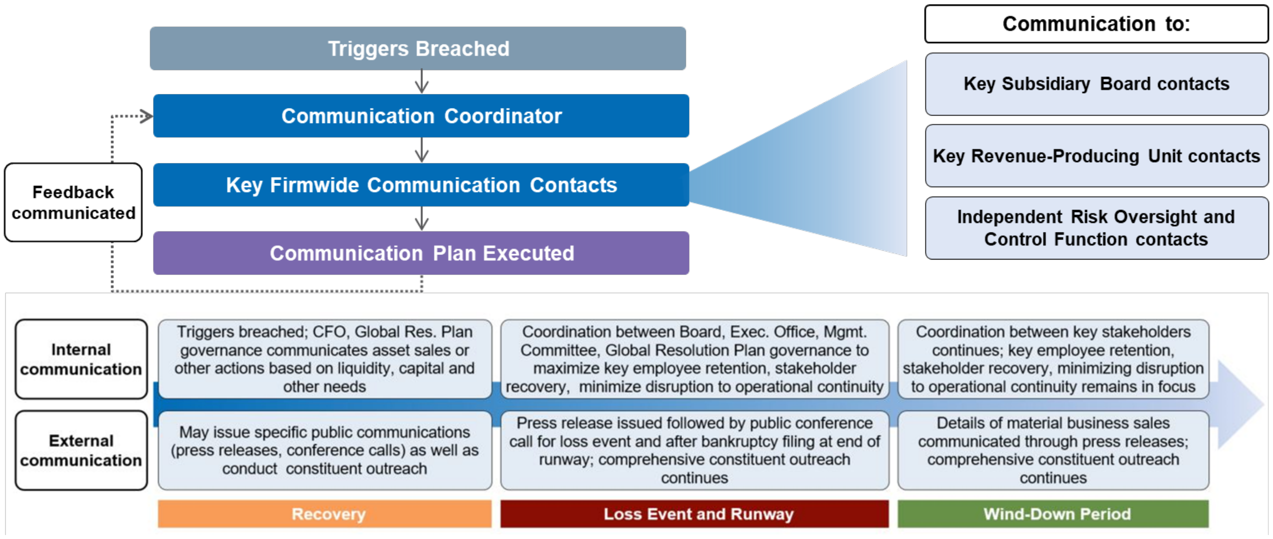
<u>Format:</u> Our "Bankruptcy Playbook" that we have prepared includes a sample emergency motion and first day motions substantially in the form they would be presented to the bankruptcy court.

[9] This is the hearing at which an entity in Chapter 11 proceedings seeks court approval of an order to stay all contracts under the ISDA Resolution Stay Protocols or a bilateral agreement, subject to the condition either that the claims are elevated to administrative priority status or that the contracts are transferred to a bankruptcy bridge company.

Communication Strategy

Timely communication, both internally and externally, is vital to day-to-day operations both in business-as-usual and in times of stress and in order to successfully execute our preferred resolution strategy. To facilitate timely communication, we have a comprehensive triggers and alerts framework, intra-month management reporting processes and a carefully crafted communication strategy in place. Our communication strategy sets out the roles of specific areas of the firm in communicating with regulators, auditors, employees, FMUs, investors and revenue-producing units, among others.

In addition to the communication flows and channels set out in the diagram below, our first and second line of defense teams would continue to produce key management reporting metrics which would be provided to senior management for onward dissemination to regulators, the board of directors and to other internal stakeholders in support of our communication plan.



F. Legal Entity Rationalization

Under the oversight of the Legal Entity Structure and Booking Model Working Group ("LEWG"), our corporate structure has been fundamentally transformed over the last decade as we brought it into line with our Legal Entity Rationalization ("LER") criteria for a more rational, less complex organization. This resulted in a simple ownership structure for all of our material operating and service entities, and logical groupings of other entities under holding companies that enhance our ability to sell discrete businesses, such as our AWM businesses.

Our legal entity rationalization criteria are now fully embedded in our business-as-usual processes and all new legal entities, significant entity restructurings, and booking model changes must be approved by LEWG. Proposals that are inconsistent with our criteria are identified at an early point in the process and, if significant to our resolution strategy, are rectified before implementation; if they are not deemed significant to our resolution strategy, they are nevertheless documented, approved and tracked by the LEWG so they can be managed appropriately.

LEWG also performs periodic reviews, such as a benchmark review of operating entities to the LER criteria for a more rational, less complex organization, or a review of "In-the-Box" structures, with the goal of ensuring that consistency with the criteria is maintained. The governance framework is supported by the firmwide Legal Entity & Booking Model Policy, which covers all aspects of an entity's lifecycle and incorporates requirements in respect of transaction booking models.

On an ongoing basis we:

- Continue to review our LER criteria to ensure that they remain fit for purpose.
- Continue to maintain and optimize our legal entity structure to ensure ongoing compliance with the LER criteria.

Separability

On an annual basis, we complete a full and detailed analysis of all of our businesses with the aim of identifying divestiture options capable of being executed as part of or as an alternative to our preferred wind-down strategy. This provides optionality for us in resolution and potentially enables capital or liquidity benefits to be realized.

We recognize the importance of identifying and preparing for potential exercise of these separability options ("Objects of Sale"):

- We employ a repeatable process for the identification and selection of divestiture options.
- We closely analyze the separability attributes of each divestiture option to identify: potential buyers, strategies to effect transfer, potential impediments to those strategies and effective mitigating capabilities or actions.
- We value each divestiture option under assumed stress conditions to determine the range of potential capital and/or liquidity benefits that can be expected from execution of the option.
- We determine information that would be needed by prospective buyers in connection with the disposition and have designed virtual data rooms that can be swiftly populated to facilitate due diligence.

Our separability analysis and divestiture planning results are documented in individual Object of Sale Playbooks for each option which is selected for potential sale.

In 2024, we re-evaluated the entirety of the firm for potential asset, portfolio, line of business, and legal entity divestitures. We considered each potential Object of Sale distinctly, with due recognition that the scope, format and execution timeline for a given divestiture option to be effective in resolution could differ from what would correspondingly apply in recovery. As a result of this analysis, we have selected six divestiture options. We have in place Object of Sale playbooks for each of our divestiture options.

Our valuation procedures for Objects of Sale ensure there is a robust review and challenge to the assumptions and execution of the valuation methodology across our objects of sale.

G. Derivatives and Trading Activities

Introduction

As a leading global financial institution, Goldman Sachs has a large portfolio of derivatives. Our ability to wind down the derivatives portfolio in a resolution scenario is greatly aided by the fact that most of our derivatives positions are held in just four subsidiaries, all of which are material operating entities. In a resolution scenario, these entities would receive financial support from Funding IHC, if needed, and would therefore be wound down in an orderly manner over an extended period of time.

To address the shortcoming related to our derivatives wind-down modeling and additional feedback on derivatives portfolio segmentation in the 2024 Feedback Letter, we have significantly enhanced our derivative wind-down modeling capabilities, focusing on:

- Increasing the granularity at which we assess the impact of our derivatives wind-down strategy, including to allow for counterparty-specific exit strategies.
- Gathering variable exit timings from Global Banking & Markets personnel, which is subject to review and challenge, to inform the exit timings of our derivatives portfolios.
- Quantifying exit costs, including the difficulty of winding down our derivatives, at an increased level of granularity.

Our resolution modeling uses these more differentiated data inputs to produce a more granular unwind profile for our derivatives portfolios across the wind-down period, including with respect to the associated liquidity impacts and exit costs.

As a part of our Assurance Program, we have also tested our capability to produce our resolution metrics based on this enhanced modeling. This included being able to prepare resolution metrics in a short timeframe and being able to flexibly adjust inputs to produce alternative derivatives wind-down strategies to reflect in alternative capital and liquidity projections.

Booking Practices

Derivatives Booking Framework

We have a derivatives booking framework comprised of the policies, principles, rationale and approach to implementing our derivative booking practices. The purpose of the framework is to ensure that transactions are booked in a manner that facilitates business-as-usual practices without impairing our resolvability. Our framework is underpinned by methodical booking practices that are consistently applied to external and intercompany transactions across legal entities, trading desks and products.

Derivatives Analysis and Reporting

We have the ability to provide highly granular reporting for each of our entities with derivatives portfolios. This allows us to evaluate the significance of each material operating entity with respect to our current activity and preferred wind-down strategy.

A significant portion of intercompany transactions arise because of our business-as-usual practice of centralizing market risk by product or inventory category in a small number of material operating entities: when the client-facing entity is not also the market risk-managing entity, each transaction with a client generates an additional intercompany transaction to transfer the risk to the risk management entity. This practice has numerous benefits from a business-as-usual risk management perspective; in particular, it maximizes the internal netting of market risk exposures, which results in fewer external hedging transactions with the market.

We have taken several steps to mitigate the increased interconnectivity resulting from intercompany derivative transactions:

- Because all affiliates that engage in external derivatives activity under International Swaps and Derivatives Association ("ISDA") Master Agreements have signed the 2015 and 2018 ISDA Resolution Stay Protocols ("ISDA Resolution 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 derivatives, repo and securities lending contracts in the event of resolution.
- We have taken steps to move counterparties to face the risk management entity, where possible.
- By establishing central clearing arrangements between material operating entities, a large percentage of our intercompany derivatives transactions are now centrally cleared and no longer present “interconnectedness risk.”
- Where possible, we continue to compress derivatives contracts, including intercompany contracts, for example through mutually agreed multilateral compressions, coupon blending and solo risk free netting. We have built compression capability with an external vendor to specifically target and reduce intercompany notional and trades.

Inter-affiliate Risk Monitoring and Controls

Our systems for the monitoring and control of inter-affiliate risk have been designed and built to offer all of the measurement, monitoring, analysis, and reporting capabilities available for the management of counterparty risk. We recognize that inter-affiliate risk differs from counterparty risk in that the financial distress of an affiliate, particularly of a material entity, poses distinct risk management challenges because it is likely to be accompanied by financial and operational challenges for us as a whole. We supplement our usual counterparty risk management practices by monitoring and reporting metrics, such as the cost and effectiveness of our re-hedging strategy for material entities, that are of specific importance to inter-affiliate risk management.

Derivative Stabilization and De-Risking Strategy

The ability to wind down our derivatives inventory in an orderly manner is a critical component of our efforts to ensure that we can be resolved without significant risk to the financial system. The preferred resolution strategy for our derivatives inventory is an orderly and active wind-down of all positions over an 18-month period. This strategy is consistent with the actions of market participants who have exited derivatives businesses in the past.

Our analysis is based on the segmentation of our derivatives inventory that represents groupings of transactions with broadly homogenous risk and asset types. This segmentation is used extensively for reporting financial metrics of the firm's revenue producing divisions.

Our analysis assumes the following constraints specified by the Agencies for our preferred strategy:

- Our derivatives entities would be sub-investment grade and would not re-establish investment grade status at any point in the wind-down. As a result, we would have no access to the bilateral over-the-counter ("OTC") market and we would therefore use exchange-traded and cleared instruments for hedging purposes.
- To the extent it would be economically justified, counterparties (external or affiliates) would exercise their contractual termination rights consistent with any rights stayed by the ISDA Resolution Stay Protocols or other applicable protocols.

During the 18-month wind-down period, intercompany derivatives trades would continue to be supported and our practice of centralizing market risk management would continue as before. As portfolios of third-party derivatives are sold, the corresponding intercompany transactions would be terminated at arm’s-length, mid-market prices. Consequently, all participating material operating entities would be able to exit their intercompany derivatives transactions at the same time as the corresponding portfolios are sold.

We deployed substantial resources across the firm to ensure that our analyses are sufficiently granular and reflect all the important characteristics of our derivatives inventory. We developed our analyses using historical data, market information and expert management judgment.

We use the same technology platform to model the wind-down of our derivative inventory as to generate our liquidity (RLEN) and capital (RCEN) metrics. Consequently, any action that is modeled in the derivatives wind-down strategy is simultaneously reflected in the RLEN and RCEN estimates. Furthermore, our business-as-usual IT systems have the functionality required to produce data at a sufficiently granular level of detail to facilitate timely decision-making.

In the event that our derivative inventory needs to be wound down in practice, we believe that we have the resources and the technical know-how to do so. We used business-as-usual systems to perform our analyses, and these would continue to function in a resolution scenario. In addition, we expect that our employee retention plan would ensure that the technical know-how would remain at the firm, and that our governance framework would continue to support and guide the risk management and wind down decisions.

Portfolio Segmentation and Forecasting

We have the capability to produce a spectrum of derivatives portfolio analyses across a wide range of dimensions, such as by legal entity, trading desk, product, cleared vs. clearable vs. non-clearable trades, counterparty type, currency, maturity, level of collateralization, and netting set. We also have the capability to segment and analyze the full contractual maturity (run-off) profile of our external and intercompany derivatives portfolios.

Ease of Exit Position Analysis

We describe the categorization of our derivatives positions within each business area and at an overall firm level, highlighting those that we consider more difficult to exit. This segmentation reflects the characteristics that we believe could affect the cost and operational effort required to exit our derivatives portfolios, and the results have been factored into our cost analysis.

Application of Exit Cost Methodology

Our exit cost methodology, which is applied primarily at a portfolio level, forecasts the range of costs and liquidity required to exit our derivatives positions. The main drivers of these costs are:

- Risk management costs: We enter into hedges to replace derivatives that terminate, contractually mature, or are bilaterally terminated, or novated.
- Portfolio exit costs: We use a methodology based on the return on equity capital to estimate portfolio exit costs.
- Basis risk: Basis risk arises because material entities would not be able to access the bilateral OTC market after Group Inc. has entered bankruptcy proceedings, and would therefore only be able to hedge using listed or cleared instruments. We assess and quantify this risk.
- Operating expenses: We have calculated the operating expenses required to support our preferred wind-down strategy.

Analysis of Operational Capacity

We performed an assessment of the operational resources required to execute our preferred resolution strategy; this includes an analysis of our ability to segment and package portfolios, and the operational support required to novate those derivatives portfolios. We concluded that we have the operational capacity to support our preferred strategy for the wind-down of our derivatives portfolios.

Capabilities - Prime Brokerage Customer Account Transfers

We have taken steps to help ensure that the clients of our prime brokerage business are ready and able to transfer their business to alternative service providers in a manner that neither disrupts their business nor exacerbates our liquidity position. Specifically:

- Most clients maintain multiple prime brokerage relationships;
- We have built automated tools to enable streamlined transfers of assets across legal entities and custody platforms; and
- We have developed plans to help ensure that all prime brokerage clients’ cash can be transferred to third parties during the wind-down phase.

6. Resolution Plan Governance and Challenge

Introduction

Our resolution planning process is extensive and complex, involving hundreds of members of staff across numerous different disciplines and geographic locations, to best leverage the required expertise. For such a process to be successful, a robust governance structure is essential. This helps ensure that the Group Inc. Board and GS Group senior management are in a position to exert oversight, challenge assumptions and give direction; it also helps ensure that the various strands of work are appropriately connected and organized so that the final plan does not contain gaps or inconsistencies.

Both the Group Inc. Board and the firm's Firmwide Enterprise Risk Committee ("ERC") approve the Plan. Given the broad remit of the ERC, it is well-positioned to consider the subject. We also continue to consult the Firmwide Asset Liability Committee ("FALCO") on the Plan, given its responsibility for the firm's Contingency Funding Plan and Capital Management Plan.

Oversight Bodies

The following groups oversee our resolution planning process:

- <u>Board of Directors:</u> As the body responsible for overseeing the firm's strategic direction and the performance of its business and management, our Board monitors the development of the Plan and ensures that adequate resources are provided to maintain the Plan and the necessary capabilities. The Group Inc. Board approves the Plan prior to submission to the Agencies.

- <u>Recovery and Resolution Senior Stakeholder Group:</u> Consisting of senior executives from GS Group, this group meets periodically to discuss and provide challenge and oversight over key resolution topics.

- <u>ERC:</u> This committee is responsible for overseeing all of our financial and nonfinancial risks. As part of such oversight, the committee is responsible for the ongoing review, approval and monitoring of our enterprise risk management framework, as well as our risk limits and thresholds policy, through delegated authority to the Firmwide Risk Appetite Committee. It reviews and approves the Plan before it is submitted to our Board.

- <u>FALCO:</u> This committee is responsible for the strategic direction of our financial resources, including capital, liquidity, funding and balance sheet. This committee approves our Recovery and Resolution Policy and is consulted on the Plan before it is submitted to the Group Inc. Board.

- <u>Recovery and Resolution Steering Group ("Steering Group"):</u> The Steering Group develops and maintains the resolution plan and reviews the Plan before it is presented to the ERC. The Steering Group is responsible for ensuring the plan contains information required by the relevant rules, provides direction and strategy, challenges assumptions, makes policy decisions, approves scope changes, and sets deliverables. The Steering Group is chaired by the firm's International Controller, who also acts as sponsor for the firm's RRP process and members include representatives from a wide range of departments.

- Recovery and Resolution Capability Leads: The Capability Leads are subject matter experts who have ownership of individual capabilities in the resolution plan. They are responsible for setting goals and objectives, keeping abreast of plan activities, and ensuring completion of major deliverables.

- Internal Audit: As the third line of defense, Internal Audit ("IA") independently assesses the firm's overall control environment, including the firm's governance processes and controls, risk management and capital, and anti-financial crime frameworks and provides independent, objective and timely assurance to the Audit Committee and Board of Directors. IA provides independent assurance over the related procedures and controls with respect to the Resolution Plan through its risk-based audit plan.

- Other governance bodies: Other committees and working groups complement our governance mechanisms through their work on specific aspects of resolution planning. They include the Firmwide Model Risk Control Committee, Liquidity Risk Management and the Legal Entity Structure and Booking Model Working Group.

Assurance

To address the feedback provided in the 2024 Feedback Letter, we have significantly enhanced both resolution and recovery aspects of our Assurance Program, focusing on:

- Developing a new comprehensive capabilities inventory, which identifies a population of sub-capabilities that we aim to test at least once every 2 years.

- Establishing a testing framework for the assessment of these sub-capabilities.

- Seeking to ensure that essential data, systems and calculations used for decision-making are also tested as a part of our Assurance Program.

- Enhancing and formalizing governance, including establishment of a dedicated assurance working group and formalizing the role of the second and third lines of defense.

- Defining how gaps or limitations are identified and tracked.

We commenced testing under this new program from the start of 2025, and have since undertaken testing of a number of recovery and resolution capabilities, including: Capital; Liquidity; Derivatives & Trading Activities; Collateral Management; Payment, Clearing, and Settlement Activities; and MIS.

Testing undertaken in 2025 under this new program included but was not limited to:

- A test of our ability to prepare our key resolution capital and liquidity projections in a resolution scenario, incorporating adjustments to our derivatives wind-down strategy.
- A tabletop exercise to assess our ability to maintain operational continuity of access to a critical FMU, if it were to impose additional requirements on the firm (e.g., higher margin requirements).
- A test of our ability to identify, value and manage collateral we receive and post to external parties.
- A tabletop exercise to assess our ability to novate our derivatives portfolios.

As a part of our Assurance Program, we also conduct training and simulation exercises with senior management and/or the board of directors of material entities to assess and challenge key elements of our contingency funding plan, contingency capital plan, recovery plan, and resolution plan. These training and simulation exercises are performed on a rotational basis across our senior management and boards of directors of our material entities.

Since our 2023 Resolution Plan submission, we conducted training and simulation exercises with GS Group senior management, the GSI Board of Directors, the GSIB Board of Directors, the GSBE Executive Board of Directors and the GSAMI Board of Directors.

The primary objectives of the simulation exercises were to:

- Identify the types of metrics and financial projections that the boards would need to aid decision-making.
- Test operationalization of the CLSA throughout the stress continuum.
- Assess potential conflicts of interest of board members throughout the stress continuum.
- Ensure effective internal communication throughout the stress continuum.

These exercises took the form of an educational session covering key concepts such as the role of the Funding IHC structure and mechanisms of the CLSA, followed by discussion of a series of simulated scenarios across the stress continuum.

Supporting Information

The following pages contain background information about Goldman Sachs as support and context for our resolution strategy.

SI.1. Description of Core Business Lines

Introduction

Goldman Sachs is a leading global financial institution that delivers a broad range of financial services to a large and diversified client base that includes corporations, financial institutions, governments and individuals.

Details about our businesses are included in our Annual Report on Form 10-K for the year ended December 31, 2024 (our "2024 Form 10-K")[10]. All references to 2024, 2023 and 2022 refer to our years ended, or the dates, as the context requires, December 31, 2024, December 31, 2023 and December 31, 2022, respectively.

Group Inc. is a BHC and an FHC regulated by the FRB. Our U.S. depository institution subsidiary, GS Bank USA, is a New York State-chartered bank.

Resolution planning requires a definition of "core business lines" because certain businesses may need to be singled out for specific actions as part of a resolution exercise (i.e., those business lines and associated support operations, services and functions that, upon failure, would result in a material loss of revenue, profit or franchise value). We have identified these business lines and they are: Global Banking & Markets and Asset & Wealth Management.

The remainder of this section describes our core business lines.

Global Banking & Markets

Global Banking & Markets serves public and private sector clients and we seek to develop and maintain long-term relationships with a diverse global group of institutional clients, including corporations, governments, states and municipalities. Our goal is to deliver to our institutional clients all of our resources in a seamless fashion, with our advisory and underwriting activities serving as the main initial point of contact. We make markets and facilitate client transactions in fixed income, currency, commodity and equity products and offer market expertise on a global basis. In addition, we make markets in, and clear client transactions on, major stock, options and futures exchanges worldwide. Our clients include companies that raise capital and funding to grow and strengthen their businesses, and engage in mergers and acquisitions, divestitures, corporate defense, restructurings and spin-offs, as well as companies that are professional market participants, who buy and sell financial products and manage risk, and investment entities whose ultimate clients include individual investors investing for their retirement, buying insurance or saving surplus cash.

[10] https://www.goldmansachs.com/investor-relations/financials/10k/2024/2024-10-k.pdf

As a market maker, we provide prices to clients globally across thousands of products in all major asset classes and markets. At times, we take the other side of transactions ourselves if a buyer or seller is not readily available, and at other times we connect our clients to other parties who want to transact. Our willingness to make markets, commit capital and take risk in a broad range of products is crucial to our client relationships. Market makers provide liquidity and play a critical role in price discovery, which contributes to the overall efficiency of the capital markets. In connection with our market-making activities, we maintain (i) market-making positions, typically for a short period of time, in response to, or in anticipation of, client demand, and (ii) positions to actively manage our risk exposures that arise from these market-making activities (collectively, inventory).

We execute a high volume of transactions for our clients in large, highly liquid markets (such as markets for U.S. Treasury securities, stocks and certain agency mortgage pass-through securities). We also execute transactions for our clients in less liquid markets (such as mid-cap corporate bonds, emerging market currencies and certain non-agency mortgage-backed securities) for spreads and fees that are generally somewhat larger than those charged in more liquid markets. Additionally, we structure and execute transactions involving customized or tailor-made products that address our clients' risk exposures, investment objectives or other complex needs, as well as derivative transactions related to client advisory and underwriting activities.

Through our global sales force, we maintain relationships with our clients, receiving orders and distributing investment research, trading ideas, market information and analysis. Much of this connectivity between us and our clients is maintained on technology platforms, including *Marquee*, and operates globally where markets are open for trading. *Marquee* provides institutional investors with market intelligence, risk analytics, proprietary datasets and trade execution across multiple asset classes.

Our businesses are supported by our Global Investment Research business, which, as of December 2024, provided fundamental research on approximately 3,000 companies worldwide and on approximately 50 national economies, as well as on industries, currencies and commodities.

Our activities are organized by asset class and include both "cash" and "derivative" instruments. "Cash" refers to trading the underlying instrument (such as a stock, bond or barrel of oil). "Derivative" refers to instruments that derive their value from underlying asset prices, indices, reference rates and other inputs, or a combination of these factors (such as an option, which is the right or obligation to buy or sell a certain bond, stock or other asset on a specified date in the future at a certain price, or an interest rate swap, which is the agreement to convert a fixed rate of interest into a floating rate or vice versa).

Global Banking & Markets generates revenues from the following:

Investment banking fees. We provide advisory and underwriting services and help companies raise capital to strengthen and grow their businesses.

Investment banking fees includes the following:

- **Advisory.** We have been a leader for many years in providing advisory services, including strategic advisory assignments with respect to mergers and acquisitions, divestitures, corporate defense activities, restructurings and spin-offs. In particular, we help clients execute large, complex transactions for which we provide multiple services, including cross-border structuring expertise. We also assist our clients in managing their asset and liability exposures and their capital.

- **Underwriting.** We help companies raise capital to fund their businesses. As a financial intermediary, our job is to match the capital of our investing clients, who aim to grow the savings of millions of people, with the needs of our public and private sector clients, who need financing to generate growth, create jobs and deliver products and services. Our underwriting activities include public offerings and private placements in both local and cross-border transactions of a wide range of securities and other financial instruments, including acquisition financing. Underwriting consists of the following:

  Equity underwriting. We underwrite common stock, preferred stock, convertible securities and exchangeable securities. We regularly receive mandates for large, complex transactions and have held a leading position in worldwide public common stock offerings and worldwide initial public offerings for many years.

  Debt underwriting. We originate and underwrite various types of debt instruments, including investment-grade and high-yield debt, bank and bridge loans, including in connection with acquisition financing, and emerging- and growth-market debt, which may be issued by, among others, corporate, sovereign, municipal and agency issuers. In addition, we underwrite and originate structured securities, which include mortgage-related securities and other asset-backed securities.

Fixed Income, Currency and Commodities ("FICC"). FICC generates revenues from intermediation and financing activities.

- **FICC intermediation.** Includes client execution activities related to making markets in both cash and derivative instruments, as detailed below.

  Interest Rate Products. Government bonds (including inflation-linked securities) across maturities, other government-backed securities, and interest rate swaps, options and other derivatives.

Credit Products. Investment-grade and high-yield corporate securities, credit derivatives, exchange-traded funds ("ETFs"), bank and bridge loans, municipal securities, distressed debt and trade claims.

Mortgages. Commercial mortgage-related securities, loans and derivatives, residential mortgage-related securities, loans and derivatives (including U.S. government agency-issued collateralized mortgage obligations and other securities and loans), and other asset-backed securities, loans and derivatives.

Currencies. Currency options, spot/forwards and other derivatives on G-10 currencies and emerging-market products.

Commodities. Commodity derivatives and, to a lesser extent, physical commodities, involving crude oil and petroleum products, natural gas, agricultural, base, precious and other metals, electricity, including renewable power, environmental products and other commodity products.

- **FICC financing.** Includes (i) secured lending to our clients through structured credit and asset-backed lending, including warehouse loans backed by mortgages (including residential and commercial mortgage loans), corporate loans and consumer loans (including auto loans and private student loans), (ii) financing through securities purchased under agreements to resell (resale agreements) and (iii) commodity financing to clients through structured transactions.

Equities. Equities generates revenues from intermediation and financing activities.

- **Equities intermediation.** We make markets in equity securities and equity-related products, including exchange-traded funds ("ETFs"), convertible securities, options, futures and over-the-counter ("OTC") derivative instruments. As a principal, we facilitate client transactions by providing liquidity to our clients, including by transacting in large blocks of stocks or derivatives, requiring the commitment of our capital.

  We also structure and make markets in derivatives on indices, industry sectors, financial measures and individual company stocks. We develop strategies and provide information about portfolio hedging and restructuring and asset allocation transactions for our clients. We also work with our clients to create specially tailored instruments to enable sophisticated investors to establish or liquidate investment positions or undertake hedging strategies. We are one of the leading participants in the trading and development of equity derivative instruments.

  Our exchange-based market-making activities include making markets in stocks and ETFs, futures and options on major exchanges worldwide.

  In addition, we generate commissions and fees from executing and clearing institutional client transactions on major stock, options and futures exchanges worldwide, as well as OTC transactions. We provide our clients with access to a broad spectrum of equity execution services, including electronic “low-touch” access and more complex “high-touch” execution through both traditional and electronic platforms.

- **Equities financing.** Includes prime financing, which provides financing to our clients for their securities trading activities through margin loans that are generally collateralized by securities or cash. Prime financing also includes services which involve lending securities to cover institutional clients’ short sales and borrowing securities to cover our short sales and to make deliveries into the market. We are also an active participant in broker-to-broker securities lending and third-party agency lending activities. In addition, we execute swap transactions to provide our clients with exposure to securities and indices. Financing activities also include portfolio financing, which clients can utilize to manage their investment portfolios, and other equity financing activities, including securities-based loans to individuals.

Other. We lend to corporate clients, including through relationship lending and acquisition financing. The hedges related to this lending and financing activity are also reported as part of Other. Other also includes equity and debt investing activities related to our Global Banking & Markets activities.

Asset & Wealth Management

Asset & Wealth Management provides investment services to help clients preserve and grow their financial assets and achieve their financial goals. We provide these services to our clients, both institutional and individuals, including investors who primarily access our products through a network of third-party distributors around the world.

We manage client assets across a broad range of investment strategies and asset classes, including equity, fixed income and alternative investments. Alternative investments primarily includes hedge funds, credit funds, private equity, real estate, currencies, commodities and asset allocation strategies. Our investment offerings include those managed on a fiduciary basis by our portfolio managers, as well as those managed by third-party managers. We offer our investment solutions in a variety of structures, including separately managed accounts, mutual funds, private partnerships and other commingled vehicles.

We also provide customized investment advisory solutions designed to address our clients’ investment needs. These solutions begin with identifying clients’ objectives and continue through portfolio construction, ongoing asset allocation and risk management and investment realization. We draw from a variety of third-party managers, as well as our proprietary offerings, to implement solutions for clients.

We also provide tailored wealth advisory services, primarily to ultra-high-net worth clients. We operate globally, serving individuals, families, family offices, and foundations and endowments. Our relationships are established directly or introduced through companies that sponsor financial wellness or financial planning programs for their employees, as well as through corporate referrals.

We offer personalized financial planning to individuals and also provide customized investment advisory solutions, and offer structuring and execution capabilities in securities and derivative products across all major global markets. In addition, we offer clients a full range of private banking services, including a variety of deposit alternatives and loans that our clients use to finance investments in both financial and nonfinancial assets, bridge cash flow timing gaps or provide liquidity and flexibility for other needs. We also raise deposits from consumers through *Marcus by Goldman Sachs* (Marcus).

We invest alongside our clients that invest in investment funds that we raise or manage. We also have investments in alternative assets across a range of asset classes. Our investing activities, which are typically longer-term, include investments in corporate equity, credit, real estate and infrastructure assets.

Asset & Wealth Management generates revenues from the following:

- **Management and other fees.** We receive fees related to managing assets for institutional and individual clients, providing investing and wealth advisory solutions, providing financial planning and counseling services, and executing brokerage transactions for wealth management clients. The vast majority of revenues in management and other fees consists of asset-based fees on client assets that we manage. The fees that we charge vary by asset class, client channel and the types of services provided, and are affected by investment performance, as well as asset inflows and redemptions.

- **Incentive fees.** In certain circumstances, we also receive incentive fees based on a percentage of a fund's or a separately managed account's return, or when the return exceeds a specified benchmark or other performance targets. Such fees include overrides, which consist of the increased share of the income and gains derived primarily from our private equity and credit funds when the return on a fund's investments over the life of the fund exceeds certain threshold returns.

- **Private banking and lending.** Our private banking and lending activities include issuing loans to our wealth management clients. Such loans are generally secured by commercial and residential real estate, securities or other assets. We also raise deposits from wealth management clients, including through Marcus. Private banking and lending revenues include net interest income allocated to deposits and net interest income earned on loans to individual clients.

- **Equity investments.** Includes investing activities related to our asset management activities primarily related to public and private equity investments in corporate, real estate and infrastructure assets. We also make investments through consolidated investment entities, substantially all of which are engaged in real estate investment activities. In addition, we make investments in connection with our activities to satisfy requirements under the Community Reinvestment Act ("CRA"), primarily through our Urban Investment Group.

- **Debt investments.** Includes lending activities related to our asset management activities, including investing in corporate debt, lending to middle-market clients, and providing financing for real estate and other assets. These activities include investments in mezzanine debt, senior debt and distressed debt securities.

Goldman Sachs

SI.2. Material Entities and their Operational and Financial Interconnectedness

We have designated those subsidiaries of the firm that are significant to the activities of a critical operation or core business line as "material entities." We distinguish between material operating entities (those that are engaged in an operating business) and material service entities (those that provide services to other material entities).

The following list summarizes the principal activities of our material entities:

Material Entities		Principal Activities	Country or State of Incorporation
Covered Company	The Goldman Sachs Group, Inc.	Parent Holding Company	Delaware
Material Operating Entities	Goldman Sachs & Co. LLC	Broker-Dealer	New York
	Goldman Sachs International	Broker-Dealer	England
	Goldman Sachs Bank USA	Insured Depository Institution	New York
	J. Aron & Company LLC	Commodity Market Maker	New York
	Goldman Sachs Japan Co., Ltd	Broker-Dealer	Japan
	Goldman Sachs International Bank	Bank	England
	Goldman Sachs Bank Europe SE	Bank	Germany
	Goldman Sachs Asset Management, L.P.	Investment Advisor	Delaware
	Goldman Sachs Asset Management International	Investment Advisor	England
Material Service Entities	Goldman Sachs Funding LLC	Funding IHC	Delaware
	Goldman Sachs Services Private Limited	Staffing Service Entity	India
	Goldman Sachs Services LLC	Staffing Service Entity	Delaware
	Goldman Sachs Property Management	Physical Asset Service Entity	England
	Goldman Sachs Property Management USA LLC	Physical Asset Service Entity	Delaware
	Goldman Sachs Services (Asia) Limited	Staffing/Physical Asset Service Entity	Hong Kong
	Goldman Sachs Services (Singapore) Pte. Ltd.	Staffing/Physical Asset Service Entity	Singapore
	Goldman Sachs (UK) Svc. Limited	Staffing Service Entity	England
	Goldman Sachs Japan Services Co., Ltd.	Staffing/Physical Asset Service Entity	Japan

Financial Information by Material Entity as of December 31, 2024

We consider that a subsidiary is significant to the activities of a critical operation or core business line if it accounts for more than 10% of a Core Business Line's revenues or Assets Under Management ("AUM"), houses a significant portion of a critical operation, or holds more than a "de minimis" percentage[11] of our support staff or technology assets.

The following is a summary of key balance sheet and earnings metrics for our material entities as of or for the year ended December 31, 2024:

$ in billions	Total Assets	Total Liabilities Excluding Unsecured Intercompany Debt	Capital and Unsecured Intercompany Debt[12]	Net Revenues[13]	Pre-Tax Earnings[13]
	$	$	$	$	$
The Goldman Sachs Group, Inc.	518.6	303.2	122.0	(4.2)	(5.6)
Goldman Sachs & Co. LLC	799.9	752.6	47.3	18.1	4.4
Goldman Sachs International	540.0	451.7	88.3	9.7	3.2
Goldman Sachs Bank USA	561.2	449.7	111.5	18.5	10.5
Goldman Sachs Bank Europe SE	87.5	53.1	34.4	2.8	1.1
J. Aron & Company LLC	26.6	20.0	6.6	1.2	0.7
Goldman Sachs Japan Co., Ltd.	97.2	86.0	11.3	0.8	0.3
Goldman Sachs International Bank	97.5	91.3	6.2	0.8	0.6
Goldman Sachs Asset Management L.P.	2.0	0.5	1.5	4.1	0.6
Goldman Sachs Asset Management Int'l	1.4	0.7	0.7	1.6	0.1
Goldman Sachs Funding LLC	181.8	—	181.8	(0.4)	(0.4)
Other material service entities	5.5	2.8	2.7	4.3	0.4

Information in the table above has been prepared in accordance with U.S. Generally Accepted Accounting Principles on a stand-alone entity basis with the exception of Goldman Sachs Bank USA which is shown on a consolidated basis.

Interconnectedness among Material Entities

Both the nature of our businesses and our corporate legal entity structure give rise to financial and operational interconnectedness among Group Inc. subsidiaries, and between Group Inc. and its subsidiaries. We have identified the following areas of interconnectedness:

Intercompany Derivative Transactions. Group Inc. and its subsidiaries enter into transactions with each other for risk management, client facilitation and other reasons. Such transactions are based on agreed terms in intercompany agreements, generally entered into on an arms' length basis and appropriately collateralized on a next day basis. In order to facilitate transactions with clients in other countries, our material operating entities offer introducing arrangements for other affiliates; this practice would likely cease in resolution when we expect to stop entering into new transactions with clients.

[11] For these purposes, we consider more than 3% of support staff, 5% of technology assets, or 2% of both in the same entity to be greater than "de minimis".
[12] The amount quoted for The Goldman Sachs Group, Inc. does not include unsecured intercompany debt; the amount quoted for Goldman Sachs Bank USA includes deposits from affiliates.
[13] The amount quoted for The Goldman Sachs Group, Inc. does not include dividends or equity in the earnings of subsidiaries.

The principal intercompany derivatives and hedging relationships between our material operating entities as at December 2024 are set out below:

Transactional or Hedging Relationships between Material Operating Entities

Entity	GSI	GS Bank USA	GSCO	GSJCL	JANY	Group Inc	GSBE	GSIB	GSAM	GSAMI
GSI										
GS Bank USA	x									
GSCO	x	x								
GSJCL	x	x								
JANY	x	x	x	x						
Group Inc	x	x	x		x					
GSBE	x	x	x		x					
GSIB	x	x	x							
GSAM										
GSAMI										

We have devoted substantial resources to reducing this aspect of interconnectedness, primarily through trade compressions (whereby offsetting and near-offsetting OTC derivative transactions are matched and bi-laterally terminated at mutually agreed prices), clearing of intercompany transactions, collateralization of exposures and better alignment of client transactions and risk-management entities. Other steps we have taken are discussed in more detail below (see "Actions we have taken to mitigate the effect of interconnectedness and ensure a more rational, less complex legal entity structure").

Subsidiary Capital and Funding Policies. Equity capital is raised by Group Inc., which downstreams capital to its subsidiaries to meet their capital needs. The majority of our unsecured funding is also raised by Group Inc., which lends a portion of it to Funding IHC pursuant to a subordinated funding note (Funding Note). Funding IHC lends some of these funds to certain material entities to meet their funding and liquidity needs, and extends loans to Group Inc. via a revolving loan facility (Revolver)[14] to meet the funding and liquidity requirements of Group Inc. and Group Inc.'s subsidiaries. The benefits of a centralized approach to subsidiary capitalization and funding include enhanced control and greater flexibility to meet our subsidiaries' changing requirements. Funding is also raised at the subsidiary level through a variety of products, including secured funding, unsecured borrowings and deposits.

[14] Both the Funding Note and the Revolver are part of the CLSA.

The table below reflects the material[15] unsecured funding relationships among Group Inc., Funding IHC and material operating entities.

Funding Relationships between Material Operating Entities			
Material Entity	Borrows from Parent or Funding IHC	Borrows from Material Operating Entities	Lends to Material Operating Entities
Group Inc.	✓	✓	✓
GSCO	✓	×	×
GSI	✓	✓	×
GS Bank USA	✓	×	✓
JANY	✓	×	×
GSJCL	✓	×	×
GSIB	✓	×	✓
GSBE	✓	✓	×
GSAM	✓	×	×
GSAMI	✓	×	×

To mitigate the risk of disruption to our inter-company funding, we have pre-positioned liquidity and intercompany debt at key material entities; we also hold substantial liquidity at our parent company and Funding IHC, which gives us the flexibility to place additional liquidity at affiliates in the event that it is required.

Secured Funding. Many of our material operating entities lend to and borrow from each other on a secured basis, generally as a mechanism for collateral realignment, cash reinvestment, or sourcing securities for an entity's GCLA. The majority of these transactions are collateralized by GCLA-eligible securities, which are highly liquid. A significant portion of the remainder relates to the covering of short positions, which allows the lending entity to manage risk, or is used for collateral and funding optimization.

Cross-default Provisions. Historically, documents that govern our OTC derivative transactions usually contained "cross-default" provisions; these give counterparties the right to terminate their transactions with one Goldman Sachs legal entity, even if it is solvent and performing its obligations under the transaction, because of certain credit-related events at certain other Goldman Sachs legal entities. However, we have mitigated the effect of cross-default provisions; all of our affiliates that engage in external derivatives activity under International Swaps and Derivatives Association ("ISDA") Master Agreements have signed the ISDA Resolution Stay Protocols. In the event of resolution, these impose a stay on certain cross-default and early termination rights in standard ISDA derivative, repo and securities lending contracts with other adhering counterparties. Consequently, our intercompany derivatives are afforded the protection of the ISDA Resolution Stay Protocols.

[15] Balances of more than $500 million as of December 2024 are considered material.

Guarantees of Subsidiaries. Group Inc. is the entity that fully and unconditionally guarantees the securities issued by GS Finance Corp., a wholly-owned finance subsidiary of the firm. Group Inc. has guaranteed the payment obligations of GSCO, GS Bank USA and Goldman Sachs Paris Inc. et Cie, subject to certain exceptions. Group Inc. also guarantees many of the obligations of its other consolidated subsidiaries on a transaction-by-transaction basis, as negotiated with counterparties. In addition, Group Inc. has provided guarantees to GSI and GSBE related to agreements that each entity has entered into with certain of its counterparties.

GS Group subsidiaries only provide guarantees to other subsidiary companies on a very limited basis. We do not have and do not permit upstream guarantees of the parent company by its subsidiaries. Group Inc. guarantees do not contain cross-default provisions, and do not on their own trigger early termination rights.

In order to mitigate this aspect of interconnectedness, we have obtained at least one stand-alone rating from a major credit rating agency for each of our six largest material operating entities (measured by total asset size). One resolution-related benefit of this is to reduce the number of transactional guarantees that Group Inc. is required to issue.

Access to Market Infrastructure. Certain GS Group subsidiaries provide other affiliates with access to various FMUs such as exchanges, clearing houses, custodians and agent banks. Such transactions are governed by intercompany agreements and charged at arms' length pricing.

Although our preferred strategy does not assume that the material operating entities which provide access to FMUs to affiliates will enter bankruptcy, insolvency or similar proceedings, we have nevertheless prepared contingency plans as a backup. Depending on the FMU, these plans include options for multiple entity access, alternative contingency arrangements, or the use of a third-party service provider.

For a full list of our critical FMUs, see Section SI.5. Memberships in Material Payment, Clearing and Settlement Systems below.

Operational Services. GS Group subsidiaries regularly provide services to each other based on intercompany agreements, for which arms' length fees are paid. Such services may relate to: employee services; technology or intellectual property; facilities and other fixed assets; and vendor services.

The table below illustrates the services provided and received by material entities:

Material Entity Shared Services Relationships

RECEIVES (columns) / PROVIDES (rows)

	All Entities	Group Inc	GSCO	GSI	GS Bank	JANY	GSJCL	GSIB	GSBE	GSAM	GSAMI	Funding IHC	GSSE	GSPW	GSPM	GPMU	GHKL	GPMS	GSUL	GSJS
Group Inc	IP, V		F		F	F				F				F		F				
GSCO	IP, V	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
GSI	IP, V	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
GS Bank	IP		P	P				P	P											
JANY	IP				P															
GSJCL	IP	P	P	P	P	P		P		P	P	P	P	P	P	P	P	P	P	P
GSIB	IP				P															
GSBE	IP				P															
GSAM	IP																			
GSAMI	IP			P	P				P											
Funding IHC																				
GSSE		P	P	P		P	P	P	P	P	P	P		P	P	P	P	P	P	P
GSPW		P	P	P		P	P	P	P	P	P	P	P		P	P	P	P	P	P
GSPM		T	T	T,F	T	T	T	T,F	T	T	T	T	T	T		T	T	T	T	T
GPMU		T	T	T	T	T	T	T	T	T	T	T	T	T	T		T	T	T	T
GHKL	T	P	P	P		P	P	P	P	P	P	P	P	P	P	P		P	P	P
GPMS	T	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P		P,F	P
GSUL		P	P	P, F		P	P	P, F	P	P	P, F	P	P	P	P, F	P	P	P,F		P
GSJS	V,T	P	P	P		P	P,F	P	P	P	P	P	P	P	P	P	P	P	P	

P = PERSONNEL, IP = INTELLECTUAL PROPERTY, T = TECHNOLOGY ASSETS, F = FACILITIES, V= VENDORS

We have reduced the risks relating to affiliates' dependency on other affiliates for the provision of shared services by documenting such services in legal agreements that provide for continuity of service, even if a contracting entity enters some form of bankruptcy proceeding.

Actions we have taken to mitigate the effect of interconnectedness and ensure a more rational, less complex legal entity structure:

We have established the following LER criteria to mitigate interconnectedness and ensure a more rational and less complex legal entity structure:

1. Separation of Core from Non-Core Businesses:

- Core business activities and critical operations should be conducted in a small number of large, well-capitalized and well-funded entities (i.e. material operating entities);
- Market risk of core business activities should be centrally managed within a limited number of material operating entities;
- Business activities that are likely to be spun off in a resolution scenario should be conducted in separate legal entity groups that facilitate separability in resolution;
- Entities with common roles should be grouped into separate ownership chains under common holding companies (e.g., operating entity groups, service entity groups and investing entity groups);
- The domicile of legal entities should be aligned with their principal place of business.

In resolution, the separation of core from non-core businesses allows us to concentrate financial resources where they would have the greatest impact (i.e. on the core business lines and critical operations), and simplifies the spin-off of non-core businesses because they do not need to be "unraveled" from the rest of the business.

2. As Few Entities as Possible:

- Our core businesses and critical operations should be conducted in the smallest number of operating entities that legal, regulatory, risk and resolvability considerations will allow;
- Unless specific circumstances warrant, there should not be more than one of the following category of operating entity in any jurisdiction:
    i. a bank;
    ii. a broker-dealer;
    iii. an asset manager.
- Our investing businesses should be conducted in as few legal entities as legal, regulatory, co-investing and other business efficiency considerations will allow;
- Redundant and dormant entities should be wound down.

A smaller number of legal entities reduces the complexity of resolution and decreases the likelihood of conflicting resolution regimes or of part of a business activity going into insolvency proceedings and part remaining out of proceedings.

3. Short, Clean Entity Ownership Lines and Guarantee Flows:

- Operating entities should not have cross-holdings in each other;
- Material operating and material service entities outside the IDI ownership group should not be owned by another material operating or material service entity;
    - Material entities that are part of the IDI ownership group are subject to the provisions described in criterion 7.
- There should be as few intermediate holding companies as regulatory or other considerations permit;
- Fractional or split ownership of material entities should be avoided.

Short, simple lines of ownership not only reduce the complexity of resolution, but also reduce the likelihood that the provision of financial support to material entities will be impeded at an intermediate step in the ownership chain.

4. Clean Funding Pathways:

- External TLAC should only be issued by the parent company;
- Internal TLAC should be provided in a manner that preserves flexibility and efficiency of deployment;
- Mechanisms should be in place to make capital and liquidity available to surviving material entities in a resolution scenario:

    i. in sufficient quantity and in a sufficiently timely manner that these entities can be wound down in an orderly fashion;

    ii. in a manner that mitigates potential conflicts of interest arising as a result of the forgiveness or conversion of debt;

    iii. in a manner that mitigates uncertainty related to potential creditor challenge.

The resolution benefit of these criteria is that they reduce the likelihood that creditor challenge will impede the process of providing financial support to material entities and afford additional flexibility to provide additional resources during the wind-down period.

5. Intercompany Arrangements that Mitigate Interconnectedness:

- Intercompany guarantees should emanate only from the parent company and flow downstream to subsidiaries;
- Derivatives and secured funding contracts with external third parties should avoid cross-default provisions when practicable;
- The number of intercompany derivative transactions should be reduced to the extent practicable:

    i. Where possible, clients should transact with the legal entity that manages the related market risk;

    ii. Where such alignment of clients with risk-management entities is not possible, intercompany transactions should be minimized using intercompany clearing or internal compression techniques, where available;

    iii. Intercompany transactions should be booked and risk managed in a manner consistent with external derivatives transactions, they should be collateralized on a daily basis and, in the event of default by one affiliate party, they should close out at mid-market prices.

- Intercompany receivables of any nature should be settled regularly.

Intercompany arrangements that mitigate interconnectedness reduce the likelihood that the failure of one legal entity will bring about the failure of its affiliates.

6. Alignment of Resources with the Entities they Serve:

- Staff should normally be employed by the entity that benefits from their services or by an operationally and financially resilient service entity;
- If staff are not employed by (or formally seconded to) the entity to which they provide services (for example, because they are employed by a service entity, because they work for several legal entities, because they live in a different country, or because of local registration requirements), the service they provide should be documented in a service-level agreement that allows for the continued provision of services in a resolution scenario;
- Technology assets should normally be held on the balance sheet of a financially resilient service entity unless they benefit only one entity, in which case they should be held on its balance sheet;
- The use of technology assets or facilities by an entity that does not own them should be documented in an agreement that allows for the continued provision of services in a resolution scenario;
- Legal entities should have properly documented ownership interests in, or access rights to, the intellectual property from which they benefit;
- Entities that have a critical dependency on another GS group entity for access to an FMU should have contingency arrangements in place for alternative access;
- Resolution-critical third-party vendors should be readily identifiable, and legal agreements with them should contain resolution-resilient clauses that prevent termination due to a bankruptcy or insolvency filing by the service receiver, allow for assignability to other GS Group entities, and promote the provision of transition services in resolution.

These criteria are designed to ensure that our major operating entities are not forced into premature liquidation because of inadequate non-financial resources such as staff, technology, intellectual property, physical assets or access to critical FMUs.

7. Protection of the Insured Depository Institution ("IDI"):

- Our parent company, whether acting directly or through our Funding IHC, should act as a source of strength for our IDI and its branches and subsidiaries (IDI group);
- Our IDI group should hold sufficient capital and liquidity to meet its regulatory and internal requirements in a business-as-usual context;

- Our parent company and Funding IHC should provide the IDI group with additional capital or liquidity required to meet its RCEN and RLEN requirements;
- The parent company and Funding IHC should ensure that there is sufficient internal TLAC to meet the IDI group's RCAP requirements;
- The parent company and Funding IHC should ensure that there is sufficient excess liquidity to meet the IDI group's RLAP requirements;
- The provisions of Regulation W must be met in all respects, as determined by the IDI itself;
- The number of intercompany derivative transactions involving the IDI group should be reduced to the extent practicable:
  i. Where possible, clients should transact directly with the IDI when it manages the related market risk, thereby minimizing the volume of intercompany derivative transactions;
  ii. Where such alignment of clients with the IDI is not possible, intercompany transactions should be minimized or reduced using intercompany clearing or internal compression techniques, where available; and
  iii. Intercompany transactions should be booked and risk managed in a manner consistent with external derivative transactions.
- Shared services of which the IDI is a beneficiary should be documented in service level agreements.

These criteria are designed to help ensure that our insured depository institution would remain operational in the event that our parent company were to enter bankruptcy.

We acknowledge that there is inherent subjectivity in identifying whether or not an entity structure or transaction flow is complex, and recognize the need for senior and knowledgeable stakeholders to apply judgment in considering all factors that influence our corporate structure.

Resolution Strategy by Material Entity

The Goldman Sachs Group, Inc.

Description of Entity

As the parent company of the consolidated firm, Group Inc. is GS Group's "Covered Company[16]." It is a Delaware corporation, and it is a BHC and an FHC regulated by the Federal Reserve. Its common stock is traded on the New York Stock Exchange under the symbol "GS".

Our equity capital is raised by Group Inc., which sends capital downstream to our subsidiaries to support their business activities and meet their regulatory requirements, where applicable. The majority of our unsecured funding is also raised by Group Inc., which primarily lends it to Funding IHC pursuant to the Funding Note. Funding IHC lends funds to Group Inc. via the revolving facility under the CLSA to meet the funding and liquidity requirements of Group Inc.

As a holding company, Group Inc. depends on dividends, distributions and other payments (e.g., payments on intercompany loans) from its subsidiaries to fund dividend payments and payments on its obligations, including debt obligations. Group Inc. has entered into derivative contracts, all of which are with affiliates, to hedge interest rate, currency, and other market risks related to its third-party borrowings and its equity investments in foreign subsidiaries. It does not enter into third-party OTC derivative transactions. Group Inc. operates in the United States with its principal office in New York, at our global headquarters, which is located at 200 West Street, New York, NY.

Summary of Group Inc.'s Resolution Strategy

We believe that the most effective resolution strategy is one that meets the combined goals of facilitating an orderly wind-down of our material operating entities while being minimally disruptive to financial markets. Our strategy is a variant on the "single point of entry" strategy, under which the parent company of a failing institution is resolved in proceedings, while leaving other key entities of the institution to continue their activities outside of bankruptcy proceedings. The CLSA requires Funding IHC, both before and after a Group Inc. bankruptcy filing, to provide the participating material operating and service entities with the capital and liquidity they need to support their ongoing operations and facilitate their orderly wind-down outside of proceedings. We believe this strategy would ensure the continuity of critical operations at our subsidiaries, and would result in losses being incurred by our equity holders and creditors, not by taxpayers.

[16] As defined under Section 165 of the Dodd-Frank Act.

Goldman Sachs & Co. LLC

Regulatory Status	• Registered broker-dealer and futures commission merchant • Swap dealer and security-based swap dealer
Incorporation	• Limited liability company organized in New York
Primary Regulators	• Securities and Exchange Commission ("SEC") • Financial Industry Regulatory Authority, Inc. ("FINRA") • Commodity Futures Trading Commission ("CFTC")
Ownership	• Direct, wholly-owned subsidiary of Group Inc.[17]
Office Location	• New York, NY
Activities	• Investment banking • Securities market making • Investment management
Funding Sources	• Unsecured funding from Group Inc. or Funding IHC • No material unsecured borrowing from other material entities • Secured borrowings from third parties and affiliates (mainly GSI)
Other Matters	• Client assets are protected under the rules of the SEC and CFTC

Summary of GSCO's Resolution Strategy

The CLSA requires Funding IHC, both before and after a Group Inc. bankruptcy filing, to provide GSCO with sufficient capital to meet its applicable capital requirements plus an operating buffer, and sufficient liquidity to meet its intraday liquidity requirements and prevent a payment default. This would allow GSCO, under our preferred resolution strategy, to remain out of proceedings while it winds itself down in an orderly manner over time. After Group Inc. enters bankruptcy proceedings, GSCO would cease to solicit new business, but would retain the operational functionality needed to dispose of its assets and hedge its remaining risk positions. It would continue to have access to shared services and FMUs throughout the resolution process; this would prevent significant disruptions to clients holding cash or securities at GSCO, and would give GSCO the flexibility to execute asset sales and derivative unwinds at a pace that would avoid fire-sales or recourse to emergency government facilities.

We expect prime brokerage and other clients of GSCO to transfer their positions to other third-party providers. All securities inventory would be sold, and derivatives unwound through early terminations, contractual maturities, portfolio sales, novations or bilateral terminations. Once this process is complete, GSCO's residual balance sheet would largely be cash, financed by a combination of debt and equity. Our strategy is designed with the goal of having sufficient liquidity and capital to pay GSCO's third-party creditors in full, with any remaining amounts ultimately returned to the bankruptcy estate of the parent company.

[17] Except for de minimis non-voting, non-participating interests.

Goldman Sachs International

Regulatory Status	• Designated Investment Firm • Swap dealer and security-based swap dealer
Incorporation	• Unlimited company incorporated in England and Wales
Primary Regulators	• Prudential Regulation Authority ("PRA") • Financial Conduct Authority ("FCA")
Ownership	• Indirect, wholly-owned subsidiary of Group Inc.
Office Location	• London, England
Activities	• Investment banking • Securities trading and market making • Investment management
Funding Sources	• Unsecured funding from affiliates, primarily its parent, Goldman Sachs Group UK Limited, and Funding IHC • Unsecured funding from third parties • Secured funding from affiliates, primarily other material entities • Secured funding from third parties
Other Matters	• Client assets are protected under Financial Conduct Authority rules

Summary of GSI's Resolution Strategy

The CLSA requires Funding IHC, both before and after a Group Inc. bankruptcy filing, to provide GSI with sufficient capital to meet its applicable capital requirements plus an operating buffer, and sufficient liquidity to meet its intraday liquidity requirements and prevent a payment default. This would allow GSI, under our preferred resolution strategy, to remain out of proceedings while it winds itself down in an orderly manner over time. After Group Inc. enters bankruptcy proceedings, GSI would cease to solicit new business, but would retain the operational functionality needed to dispose of its assets and hedge its remaining risk positions. Because of the steps we have taken, it would continue to have access to both shared services and FMUs throughout the resolution process. This strategy would prevent significant disruptions to clients holding cash or securities in accounts at GSI, and would give it the flexibility to execute asset sales and derivative unwinds at a pace that would avoid fire-sales or recourse to emergency government facilities.

We expect that prime brokerage and other clients of GSI would transfer their positions to alternate third-party providers. All securities inventory would be sold, and derivatives would be unwound either through early terminations, contractual maturities, portfolio sales, novations or bilateral terminations.

After the market-making and client positions have been wound down, GSI's residual balance sheet would largely be cash, financed by a combination of debt and equity. Our strategy is designed with the goal of having sufficient liquidity and capital to pay GSI's third-party creditors in full, with any remaining amounts ultimately returned to the bankruptcy estate of the parent company.

Goldman Sachs Bank USA

Regulatory Status	• Insured Depository Institution • New York State-chartered bank • Member of Federal Reserve System • Swap dealer and security-based swap dealer
Incorporation	• GS Bank USA is chartered in New York
Primary Regulators	• Board of Governors of the Federal Reserve System ("FRB") • Federal Deposit Insurance Corporation ("FDIC") • New York State Department of Financial Services ("NYDFS") • Consumer Financial Protection Bureau ("CFPB")
Ownership	• Direct, wholly-owned subsidiary of Group Inc.
Office Location	• New York, branches in Utah and London
Activities	• Deposit taking • Private bank, corporate lending and other lending • Transaction banking services • Market-making in derivatives products and other related products • Credit card loans
Funding Sources	• Deposits from third parties • Deposits from affiliates (primarily Group Inc. and Funding IHC) • Collateralized financings from affiliates (primarily GSCO) • Secured borrowing from FHLB • Unsecured funding from Group Inc. and Funding IHC • Unsecured third-party debt

Summary of GS Bank USA's Resolution Strategy

The CLSA requires Funding IHC, both before and after a Group Inc. bankruptcy filing, to provide GS Bank USA with sufficient capital to meet its applicable capital requirements plus an operating buffer, and sufficient liquidity to meet its intraday liquidity requirements and prevent a payment default. This would allow GS Bank USA, under our preferred resolution strategy, to remain out of proceedings while it winds itself down in an orderly manner over time. After Group Inc. enters bankruptcy proceedings, GS Bank USA would cease to solicit new business, but would retain the operational functionality needed to dispose of its assets and hedge its remaining risk positions, and it would continue to have access to both shared services and FMUs throughout the resolution process. This strategy would give it the flexibility to execute asset sales and derivative unwinds at a pace that would avoid fire-sales or the use of emergency government facilities.

Our projections indicate that, given the support provided by Funding IHC pursuant to the CLSA, GS Bank USA will have sufficient liquidity to give depositors access to their deposits. Certain deposits are assumed to be repaid at contractual maturity dates. Loan inventory would be sold and all uninsured deposits are assumed to be withdrawn. Derivatives would be unwound either through early terminations, contractual maturities, portfolio sales, novations or bilateral terminations. Our strategy is designed with the goal of having sufficient capital and liquidity to pay GS Bank USA's depositors and other third-party creditors in full, with any remaining amounts ultimately returned to the bankruptcy estate of the parent company. Accordingly, our strategy is designed with the goal of having no impact to the FDIC's Deposit Insurance Fund.

J. Aron & Company LLC

Regulatory Status	• Swap dealer
Incorporation	• Limited liability company organized in New York
Primary Regulators	• Commodity Futures Trading Commission ("CFTC") • Federal Energy Regulatory Commission
Ownership	• Direct, wholly-owned subsidiary of Group Inc.
Office Location	• New York, NY
Activities	• Currencies and commodities trading and market-making
Funding Sources	• Unsecured funding from Group Inc. • Secured borrowings from affiliates (primarily GSI)

Summary of JANY's Resolution Strategy

We have considered a range of options for the orderly resolution of JANY and have assessed the implications of an orderly wind-down of this entity both in and out of proceedings.

Under our preferred resolution strategy, we assume that JANY enters bankruptcy proceedings along with Group Inc. In this scenario, we assume that JANY's derivatives close out immediately following the commencement of proceedings, and that losses are incurred upon the unwind of these derivatives. At this time, JANY would also enter the orderly wind-down phase in which the entity would begin selling assets. If losses incurred on the unwinding of derivatives and disposition of assets are greater than the capital held in the entity, third-party creditors would either be made whole, or they would likely have a claim against Group Inc. pursuant to parent company transactional guarantees. We believe JANY entering proceedings would not have a systemic impact on the marketplace. Alternative options could be pursued, including a wind-down outside of proceedings.

Goldman Sachs

Goldman Sachs Japan Co., Ltd.

Regulatory Status	• Regulated broker-dealer • Swap dealer
Incorporation	• Kabushiki Kaisha (Joint Stock Company) incorporated in Japan
Primary Regulators	• Japan Financial Services Agency ("JFSA")
Ownership	• Indirect, wholly-owned subsidiary of Group Inc.
Office Location	• Tokyo, Japan
Activities	• Investment banking • Securities and currencies trading and market-making • Investment management and advisory • Client base includes corporations, financial institutions and governments
Funding Sources	• Unsecured funding primarily from Group Inc. or Funding IHC • Secured borrowing from affiliates (primarily GSI and GSCO)
Other Matters	• Client assets are protected under the rules of the JFSA

Summary of GSJCL's Resolution Strategy

The CLSA requires Funding IHC, both before and after a Group Inc. bankruptcy filing, to provide GSJCL with sufficient capital to meet its applicable capital requirements plus an operating buffer, and sufficient liquidity to meet its intraday liquidity requirements and prevent a payment default. This would allow GSJCL, under our preferred resolution strategy, to remain out of proceedings while it winds itself down in an orderly manner over time. After Group Inc. enters bankruptcy proceedings, GSJCL would cease to solicit new business, but would retain the operational functionality needed to dispose of its assets and hedge its remaining risk positions. Because of the steps we have taken, it would continue to have access to both shared services and FMUs throughout the resolution process. This strategy would prevent significant disruptions to clients holding cash or securities in accounts at GSJCL, and would give it the flexibility to execute asset sales and derivative unwinds at a pace that would avoid fire-sales or the use of emergency government facilities.

We expect that clients of GSJCL would transfer their positions to alternate third-party providers. All securities inventory would be sold, and derivatives would be unwound either through early terminations, contractual maturities, portfolio sales, novations or bilateral terminations.

After the market-making and client positions are wound down, GSJCL's balance sheet would largely be cash, financed by a combination of debt and equity.

Our strategy is designed with the goal of having sufficient liquidity and capital to pay GSJCL's third-party creditors in full, with any remaining amounts ultimately returned to the bankruptcy estate of the parent company.

Goldman Sachs International Bank

Regulatory Status	• U.K. registered bank
Incorporation	• Unlimited company incorporated in England and Wales
Primary Regulators	• Prudential Regulation Authority ("PRA") • Financial Conduct Authority ("FCA")
Ownership	• Indirect, wholly-owned subsidiary of Group Inc.
Office Location	• London, England
Activities	• Primary dealer for U.K. government bonds • Lending and deposit taking
Funding Sources	• Deposits from third parties • Unsecured funding primarily from Funding IHC
Other Matters	• Client assets are protected under Financial Conduct Authority rules

Summary of GSIB's Resolution Strategy

The CLSA requires Funding IHC, both before and after a Group Inc. bankruptcy filing, to provide GSIB with sufficient capital to meet its applicable capital requirements plus an operating buffer, and sufficient liquidity to meet its intraday liquidity requirements and prevent a payment default. This would allow GSIB, under our preferred resolution strategy, to remain out of proceedings while it winds itself down in an orderly manner over time. This would result in a better systemic outcome because GSIB would have the flexibility to determine the optimal pace of asset sales and derivative unwinds, thereby avoiding fire-sales, disruptions for clients, and the use of emergency government facilities.

GSIB would sell all loans and securities inventory, and the limited derivatives held in the entity could be unwound either through early terminations, contractual maturities, portfolio sales, novations or bilateral terminations. Deposits would be repaid.

After the lending activities are wound down and deposits repaid, GSIB's balance sheet would largely be cash, financed by a combination of debt and equity.

Our strategy is designed with the goal of having sufficient liquidity and capital to pay GSIB's third-party creditors in full, with any remaining amounts ultimately returned to the bankruptcy estate of the parent company.

Goldman Sachs Bank Europe SE

Regulatory Status	• German registered bank • Swap dealer and security-based swap dealer
Incorporation	• Limited liability company incorporated in Germany
Primary Regulators	• European Central Bank ("ECB") • Deutsche Bundesbank • Federal Financial Supervisory Authority ("BaFin")
Ownership	• Indirect, wholly-owned subsidiary of Group Inc.[18]
Office Location	• Frankfurt, Germany and branches in Europe
Activities	• Investment banking • Securities trading and market making • Investment management • Primary dealer for European government bonds • Lending and deposit taking
Funding Sources	• Deposits from third parties • Unsecured funding primarily from GS Bank USA • Unsecured funding from third parties • Secured borrowing from affiliates (primarily other material entities)

Summary of GSBE's Resolution Strategy

The CLSA requires Funding IHC, both before and after a Group Inc. bankruptcy filing, to provide GSBE with sufficient capital to meet its applicable capital requirements plus an operating buffer, and sufficient liquidity to meet its intraday liquidity requirements and prevent a payment default. This would allow GSBE, under our preferred resolution strategy, to remain out of proceedings while it winds itself down in an orderly manner over time. After Group Inc. enters bankruptcy proceedings, GSBE would cease to solicit new business, but would retain the operational functionality needed to dispose of its assets and hedge its remaining risk positions. Because of the steps we have taken, it would continue to have access to both shared services and FMUs throughout the resolution process. This strategy would give it the flexibility to execute asset sales and derivative unwinds at a pace that would avoid fire-sales or recourse to emergency government facilities.

We expect that prime brokerage and other clients of GSBE would transfer their positions to alternate third-party providers. All securities inventory would be sold, and derivatives would be unwound either through early terminations, contractual maturities, portfolio sales, novations or bilateral terminations. Deposits would be repaid.

After the market-making and client positions have been wound down, GSBE's residual balance sheet would largely be cash, financed by a combination of debt and equity.

Our strategy is designed with the goal of having sufficient liquidity and capital to pay GSBE's third-party creditors in full, with any remaining amounts ultimately returned to the bankruptcy estate of the parent company.

[18] GSBE is a direct, wholly-owned subsidiary of GS Bank USA, which is itself a direct, wholly-owned subsidiary of Group Inc.

Goldman Sachs Asset Management, L.P.; Goldman Sachs Asset Management International

	GSAM	**GSAMI**
Regulatory Status	• Registered as investment advisor with SEC[19]	• Authorized and regulated by the Financial Conduct Authority ("FCA")
Incorporation	• Limited partnership established in Delaware	• Unlimited company incorporated in England and Wales
Ownership	• Indirect, wholly-owned subsidiary of Group Inc.	• Indirect, wholly-owned subsidiary of Group Inc.
Office Location	• New York, NY	• London, England
Activities	• Asset management and investment advisor	• Asset management and investment advisor
Funding Sources	• Unsecured funding from Funding IHC	• No material borrowing relationships with other material entities

Summary of GSAM's and GSAMI's Resolution Strategy

Our asset management business, including GSAM and GSAMI, would be prepared for sale as part of our resolution strategy. These entities, which provide asset management services and offer investment products, have limited connectivity with other affiliates (to be supported via short-term transition service agreements ("TSAs")) and limited obstacles that would hinder a sale in whole or in part.

We would not expect these entities to require additional capital or liquidity from the parent company or Funding IHC. However, the CLSA requires Funding IHC, both before and after a Group Inc. bankruptcy filing, to provide GSAM and GSAMI with sufficient capital to meet their applicable capital requirements plus an operating buffer and sufficient liquidity to prevent a payment default.

An alternative resolution approach would be to transfer the management of client assets currently contracted with GSAM and GSAMI to other investment managers and wind these entities down in an orderly manner.

[19] GSAM is also registered as a Commodity Pool Operator and Commodity Trading Advisor with the CFTC; in addition, it is registered with various Canadian regulators, including the Ontario Securities Commission as a Non-Canadian Adviser (Investment Counsel and Portfolio Manager).

Goldman Sachs Funding LLC (Funding IHC)

Regulatory Status	• Not prudentially regulated
Incorporation	• Limited liability company incorporated in Delaware
Ownership	• Direct, wholly-owned subsidiary of Group Inc.
Office Location	• New York, NY
Activities	• Primary funding vehicle for Group Inc., certain material operating entities and the material service entities
Funding Sources	• Pursuant to the CLSA, Funding IHC receives unsecured funding from Group Inc. via the Funding Note

Summary of Funding IHC's Resolution Strategy

Funding IHC was established in order to facilitate our preferred resolution strategy and has a role in funding our material entities in business-as-usual operations. We transferred to Funding IHC two types of assets that could be used to support material entities leading up to and following a Group Inc. bankruptcy filing: (i) Group Inc. GCLA and (ii) unsecured receivables that could be forgiven to recapitalize material entities (also referred to as internal TLAC). Forming Funding IHC and pre-funding it with these assets has two main benefits to our preferred resolution strategy. First, it provides incremental protection against potential creditor challenge to the provision of support of material entities leading up to a Group Inc. bankruptcy filing. Second, because Funding IHC would not enter resolution proceedings, it would have the flexibility to provide capital and liquidity support to material entities as and when needed following a Group Inc. bankruptcy filing.

Funding IHC is a party to the CLSA, which governs the relationship between Group Inc. and Funding IHC, and Funding IHC's obligation to provide capital and liquidity support to participating material entities during the period leading up to and following Group Inc.'s bankruptcy filing. During business-as-usual and through a runway period, Funding IHC is required to provide liquidity to Group Inc. via the Revolver. During the runway, Funding IHC is also required to provide participating material entities with any capital required to meet their applicable regulatory requirements plus an operating buffer, and any liquidity required to maintain intraday liquidity requirements and prevent a payment failure. Upon the occurrence of a Resolution Trigger Event under the CLSA, (i) the Revolver automatically terminates, Group Inc. is obligated to use its available liquidity to repay outstanding amounts and, to the extent not repaid, outstanding amounts are automatically forgiven, (ii) Group Inc. is required to make a final contribution of GCLA and intercompany receivables to Funding IHC, and (iii) the Funding Note is automatically forgiven. In addition, Funding IHC remains contractually obligated to provide the same level of support to participating material entities as during the runway.

Our runway and resolution triggers are designed to ensure that Funding IHC maintains sufficient capital and liquidity resources to support the orderly wind-down of our participating material entities in accordance with our preferred resolution strategy.

Other Material Service Entities

In addition to Funding IHC, we have designated the following eight entities as material service entities. These entities earn revenue by charging their operating costs to operating entities with a mark-up, as applicable.

Goldman Sachs Services Private Ltd: GSSE is a Private Limited Company domiciled in India and wholly owned indirectly by Group Inc. The entity operates from its office location in Bengaluru, India, with a branch office in Hyderabad, India. GSSE is a staffing entity, employing predominantly Engineering, Operations, Human Capital Management ("HCM"), Corporate Workplace Solution ("CWS"), Treasury, Internal Audit and independent risk oversight and control functions employees, and owns technology (e.g. data servers, computer equipment, etc.) and facilities assets. It provides operational support services primarily to material operating entities under service level agreements.

Goldman Sachs Services LLC: GSPW is a Limited Liability Company domiciled in Delaware and wholly owned indirectly by Group Inc. It operates primarily from its offices in New Jersey, New York, Texas and Utah. GSPW is a staffing entity employing primarily Engineering, Operations, HCM, CWS, Treasury and independent risk oversight and control functions' employees, providing operational support services primarily to material entities under a service level agreement.

Goldman Sachs Property Management: GSPM is a Private Unlimited Company domiciled in England and wholly owned indirectly by Group Inc. It operates from its office location in London. GSPM is a property management company that provides material entities with access to the technology (e.g. data servers, computer equipment, etc.) and facilities assets that it owns.

Goldman Sachs Property Management USA LLC: GPMU is a Limited Liability Company, domiciled in Delaware and wholly owned indirectly by Group Inc. It operates from its office locations in New York and New Jersey. GPMU is a property management company that provides material entities with access to the technology assets (e.g. data servers, computer equipment, etc.) that it owns.

Goldman Sachs Services (Asia) Limited: GHKL is a Private Limited Company domiciled in Hong Kong and wholly owned indirectly by Group Inc. It operates from its office location in Hong Kong. GHKL is a staffing entity employing primarily Engineering, Operations, HCM, CWS, Treasury, Internal Audit and independent risk oversight and control functions' employees. It provides operational support services primarily to operating entities under service level agreements. It is also a property management company that provides operating entities with access to the office space it has leased out and technology (e.g. data servers, computer equipment, etc.) and facilities assets that it owns.

Goldman Sachs Services (Singapore) Pte. Ltd.: GPMS is a Private Limited Company domiciled in Singapore and wholly owned indirectly by Group Inc. It operates from its office location in Singapore. GPMS is a staffing entity employing primarily Engineering, Operations, HCM, CWS, Treasury, Internal Audit and independent risk oversight and control functions' employees and provides operational support services primarily to operating entities under service level agreements; it is also a property management company that provides operating entities with access to office space it has leased out and the technology assets (e.g. data servers, computer equipment, etc.) that it owns.

Goldman Sachs (UK) Svc. Limited: GSUL is a Private Limited Company domiciled in England and wholly owned indirectly by Group Inc. It operates from its office locations in London and Birmingham. GSUL is a staffing entity primarily employing Engineering, Operations, HCM and CWS employees and provides operational support services to material entities under service level agreements; the entity also provides material entities with access to office space it has leased.

Goldman Sachs Japan Services Co., Ltd.: GSJS is a Kabushiki Kaisha Company domiciled in Japan and wholly owned indirectly by Group Inc. The entity operates from its office location in Tokyo. GSJS is a staffing entity employing Engineering, HCM and CWS employees, and provides operational support services to material entities under service level agreements; it is also a property management company that provides operating entities with access to the office space it has leased and technology assets (e.g. data servers, computer equipment, etc.) that it owns.

Summary of Resolution Strategy for our Material Service Entities

We would not expect any of these eight material service entities to require additional capital or liquidity from either the parent company or Funding IHC, because we maintain six months' working capital at each of them, and because the Service Level Agreements ("SLAs") require these entities to be paid in a timely manner for services they provide to material operating entities. Nevertheless, the CLSA requires Funding IHC, both before and after a Group Inc. bankruptcy filing, to provide these material service entities with sufficient capital or liquidity to maintain positive equity and prevent a payment default. As the material operating entities gradually unwind their positions, the material service entities will reduce their corresponding level of support. Under our preferred resolution strategy, our material service entities remain in operation during the wind-down period, and they have sufficient liquidity to pay their creditors in full. Once their services are no longer required, they are wound down and any cash that remains on their balance sheet is returned to the parent company's bankruptcy estate.

SI.3. Summary Financial Information: Assets, Liabilities, Capital and Funding

Set out on the following pages is financial information extracted from our 2024 Form 10-K[20].

Please see Part II, Items 7 and 8 of our 2024 Form 10-K for management's discussion and analysis of financial condition and results of operations, and the notes to these consolidated financial statements, respectively.

- Set forth below are the consolidated statements of earnings from our 2024 Form 10-K[21]:

	Year Ended December		
in millions, except per share amounts	**2024**	2023	2022
Revenues			
Investment banking	**$ 7,738**	$ 6,218	$ 7,360
Investment management	**10,596**	9,532	9,005
Commissions and fees	**4,086**	3,789	4,034
Market making	**18,390**	18,238	18,634
Other principal transactions	**4,646**	2,126	654
Total non-interest revenues	**45,456**	39,903	39,687
Interest income	**81,397**	68,515	29,024
Interest expense	**73,341**	62,164	21,346
Net interest income	**8,056**	6,351	7,678
Total net revenues	**53,512**	46,254	47,365
Provision for credit losses	**1,348**	1,028	2,715
Operating expenses			
Compensation and benefits	**16,706**	15,499	15,148
Transaction based	**6,724**	5,698	5,312
Market development	**646**	629	812
Communications and technology	**1,991**	1,919	1,808
Depreciation and amortization	**2,392**	4,856	2,455
Occupancy	**973**	1,053	1,026
Professional fees	**1,652**	1,623	1,887
Other expenses	**2,683**	3,210	2,716
Total operating expenses	**33,767**	34,487	31,164
Pre-tax earnings	**18,397**	10,739	13,486
Provision for taxes	**4,121**	2,223	2,225
Net earnings	**14,276**	8,516	11,261
Preferred stock dividends	**751**	609	497
Net earnings applicable to common shareholders	**$ 13,525**	$ 7,907	$ 10,764
Earnings per common share			
Basic	**$ 41.07**	$ 23.05	$ 30.42
Diluted	**$ 40.54**	$ 22.87	$ 30.06
Average common shares			
Basic	**328.1**	340.8	352.1
Diluted	**333.6**	345.8	358.1

[20] As this section is an extract from our 2024 Form 10-K, definitions used in this section may differ from those used elsewhere in this document.
[21] The notes accompanying our consolidated financial statements in our 2024 Form 10-K are an integral part of our consolidated financial statements.

- Set forth below are the consolidated balance sheets from our 2024 Form 10-K[22]:

	As of December	
$ in millions	**2024**	2023
Assets		
Cash and cash equivalents	**$ 182,092**	$ 241,577
Collateralized agreements:		
Securities purchased under agreements to resell (includes **$179,793** and $223,543 at fair value)	**180,062**	223,805
Securities borrowed (includes **$46,902** and $44,930 at fair value)	**194,645**	199,420
Customer and other receivables (includes **$23** and $23 at fair value)	**133,717**	132,495
Trading assets (at fair value and includes **$148,417** and $110,567 pledged as collateral)	**570,555**	477,510
Investments:		—
Available-for-sale securities (at fair value; amortized cost of **$80,777** and $51,001)	**79,458**	49,141
Held-to-maturity securities	**78,713**	70,310
Other investments (includes **$25,284** and $26,626 at fair value)	**26,343**	27,388
Loans (net of allowance of **$4,666** and $5,050, and includes **$5,460** and $6,506 at fair value)	**196,200**	183,358
Other assets (includes **$194** and $366 at fair value)	**34,187**	36,590
Total assets	**$ 1,675,972**	$ 1,641,594
Liabilities and shareholders' equity		
Deposits (includes **$44,855** and $29,460 at fair value)	**$ 433,013**	$ 428,417
Collateralized financings:		
Securities sold under agreements to repurchase (at fair value)	**274,380**	249,887
Securities loaned (includes **$10,246** and $8,934 at fair value)	**56,060**	60,483
Other secured financings (includes **$27,985** and $12,554 at fair value)	**28,150**	13,194
Customer and other payables	**223,255**	230,728
Trading liabilities (at fair value)	**202,555**	200,355
Unsecured short-term borrowings (includes **$50,367** and $46,127 at fair value)	**69,709**	75,945
Unsecured long-term borrowings (includes **$89,189** and $86,410 at fair value)	**242,634**	241,877
Other liabilities (includes **$84** and $266 at fair value)	**24,220**	23,803
Total liabilities	**1,553,976**	1,524,689
Commitments, contingencies and guarantees		
Shareholders' equity		
Preferred stock; aggregate liquidation preference of **$13,253** and $11,203	**13,253**	11,203
Common stock; **927,499,667** and 922,895,030 shares issued, and **310,653,708** and 323,376,354 shares outstanding	**9**	9
Share-based awards	**5,148**	5,121
Nonvoting common stock; no shares issued and outstanding	**–**	–
Additional paid-in capital	**61,376**	60,247
Retained earnings	**153,412**	143,688
Accumulated other comprehensive loss	**(2,702)**	(2,918)
Stock held in treasury, at cost; **616,845,961** and 599,518,678 shares	**(108,500)**	(100,445)
Total shareholders' equity	**121,996**	116,905
Total liabilities and shareholders' equity	**$ 1,675,972**	$ 1,641,594

[22] The notes accompanying our consolidated financial statements in our 2024 Form 10-K are an integral part of our consolidated financial statements.

Capital Management

We determine the appropriate amount and composition of our capital by considering multiple factors, including our current and future regulatory capital requirements, the results of our capital planning and stress testing process, the results of resolution capital models and other factors, such as rating agency guidelines, subsidiary capital requirements, the business environment and conditions in the financial markets.

We manage our capital requirements and the levels of our capital usage principally by setting targets on our balance sheet and RWAs, in each case at both the firmwide and business levels.

We principally manage the level and composition of our capital through issuances and repurchases of our common stock.

We may issue, redeem or repurchase our preferred stock and subordinated debt or other forms of capital as business conditions warrant. Prior to such redemptions or repurchases, we must receive approval from the FRB.

The FRB is the primary regulator of Group Inc., a BHC under the U.S. Bank Holding Company Act of 1956 and a financial holding company under amendments to this Act. We are 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 RWAs, average assets and off-balance sheet exposures. Failure to comply with these capital requirements would result in restrictions being imposed by our regulators and could limit our ability to repurchase shares, pay dividends and make certain discretionary compensation payments. Our capital levels are also subject to qualitative judgments by the regulators about components of capital, risk weightings and other factors. Furthermore, certain of our 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 ("Basel Committee") capital framework for strengthening international capital standards ("Basel III") and also implement certain provisions of the Dodd-Frank Act. Under the Capital Framework, we are an “Advanced approaches” banking organization and have been designated as a G-SIB.

The Capital Framework includes the minimum risk-based capital and the capital conservation buffer requirements. The buffer must consist entirely of capital that qualifies as Common Equity Tier 1 ("CET1") capital.

We calculate our CET1 capital, Tier 1 capital and total capital ratios in accordance with both the Standardized and Advanced Capital Rules. Each of the ratios calculated under the Standardized and Advanced Capital Rules must meet its respective capital requirements.

Under the Capital Framework, we are also subject to leverage requirements which consist of a minimum Tier 1 leverage ratio and a minimum supplementary leverage ratio ("SLR"), as well as the SLR buffer.

Consolidated Regulatory Capital Requirements

Risk-Based Capital Ratios. The table below presents the risk-based capital requirements.

	Standardized	Advanced
As of December 2024		
CET1 capital ratio	**13.7 %**	**10.0 %**
Tier 1 capital ratio	**15.2 %**	**11.5 %**
Total capital ratio	**17.2 %**	**13.5 %**
As of December 2023		
CET1 capital ratio	13.0 %	10.0 %
Tier 1 capital ratio	14.5 %	11.5 %
Total capital ratio	16.5 %	13.5 %

In the table above:

- As of both December 2024 and December 2023, under both the Standardized and Advanced Capital Rules, 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 the G-SIB surcharge (Method 2) of 3.0% and the countercyclical capital buffer, which the FRB has set to zero percent. In addition, the capital conservation buffer requirements include the SCB of 6.2% as of December 2024 and 5.5% as of December 2023 under the Standardized Capital Rules and a buffer of 2.5% as of both December 2024 and December 2023 under the Advanced Capital Rules.

- The G-SIB surcharge is updated annually based on financial data from the prior year and is generally applicable for the following year. The G-SIB surcharge is calculated using two methodologies, the higher of which is reflected in our risk-based capital requirements. The first calculation (Method 1) is based on the Basel Committee's methodology which, among other factors, relies upon measures of the size, activity and complexity of each G-SIB. The second calculation (Method 2) uses similar inputs but includes a measure of reliance on short-term wholesale funding.

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

$ in millions	Standardized	Advanced
As of December 2024		
CET1 capital	**$ 103,065**	**$ 103,065**
Tier 1 capital	**$ 115,647**	**$ 115,647**
Tier 2 capital	**$ 14,125**	**$ 10,164**
Total capital	**$ 129,772**	**$ 125,811**
RWAs	**$ 688,541**	**$ 674,812**
CET1 capital ratio	**15.0 %**	**15.3 %**
Tier 1 capital ratio	**16.8 %**	**17.1 %**
Total capital ratio	**18.8 %**	**18.6 %**
As of December 2023		
CET1 capital	$ 99,442	$ 99,442
Tier 1 capital	$ 110,288	$ 110,288
Tier 2 capital	$ 14,874	$ 10,684
Total capital	$ 125,162	$ 120,972
RWAs	$ 692,737	$ 665,348
CET1 capital ratio	14.4 %	14.9 %
Tier 1 capital ratio	15.9 %	16.6 %
Total capital ratio	18.1 %	18.2 %

Leverage Ratios. The table below presents the leverage requirements.

	As of December	
	2024	2023
Tier 1 leverage ratio	**4.0 %**	4.0 %
SLR	**5.0 %**	5.0 %

In the table above, the SLR requirement of 5% includes a minimum of 3% and a 2% buffer applicable to G-SIBs.

The table below presents information about leverage ratios.

$ in millions	For the Three Months Ended or as of December 2024	2023
Tier 1 capital	**$ 115,647**	$ 110,288
Average total assets	**$ 1,699,419**	$ 1,579,237
Deductions from Tier 1 capital	**(6,919)**	(7,167)
Average adjusted total assets	**1,692,500**	1,572,070
Off-balance sheet and other exposures	**428,256**	423,686
Total leverage exposure	**$ 2,120,756**	$ 1,995,756
Tier 1 leverage ratio	**6.8 %**	7.0 %
SLR	**5.5 %**	5.5 %

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.

	As of December	
$ in millions	**2024**	2023
Common shareholders' equity	**$ 108,743**	$ 105,702
Impact of CECL transition	**276**	553
Deduction for goodwill	**(5,159)**	(5,224)
Deduction for identifiable intangible assets	**(638)**	(950)
Other adjustments	**(157)**	(639)
CET1 capital	**103,065**	99,442
Preferred stock	**13,253**	11,203
Deduction for investments in covered funds	**(669)**	(354)
Other adjustments	**(2)**	(3)
Tier 1 capital	**$ 115,647**	$ 110,288
Standardized Tier 2 and Total capital		
Tier 1 capital	**$ 115,647**	$ 110,288
Qualifying subordinated debt	**9,124**	9,886
Allowance for credit losses	**5,011**	5,012
Other adjustments	**(10)**	(24)
Standardized Tier 2 capital	**14,125**	14,874
Standardized Total capital	**$ 129,772**	$ 125,162
Advanced Tier 2 and Total capital		
Tier 1 capital	**$ 115,647**	$ 110,288
Standardized Tier 2 capital	**14,125**	14,874
Allowance for credit losses	**(5,011)**	(5,012)
Other adjustments	**1,050**	822
Advanced Tier 2 capital	**10,164**	10,684
Advanced Total capital	**$ 125,811**	$ 120,972

In the table above:

- Beginning in January 2022, the firm started to phase in the estimated reduction to regulatory capital as a result of adopting the CECL model. The total amount of reduction to be phased in from January 1, 2022 through January 1, 2025 (at 25% per year) was $1.11 billion, of which $829 million had been phased in as of December 2024. 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. The impact of CECL transition reflects the remaining amount of reduction to be phased in as of both December 2024 and December 2023.

- Deduction for goodwill was net of deferred tax liabilities of $694 million as of December 2024 and $692 million as of December 2023.
- Deduction for identifiable intangible assets was net of deferred tax liabilities of $209 million as of December 2024 and $227 million as of December 2023.
- Deduction for investments in covered funds represents our aggregate investments in applicable covered funds as defined in the Volcker Rule.
- Other adjustments within CET1 capital and Tier 1 capital primarily include credit valuation adjustments on derivative liabilities, the overfunded portion of our defined benefit pension plan obligation net of associated deferred tax liabilities, disallowed deferred tax assets, debt valuation adjustments and other required credit risk-based deductions. Other adjustments within Advanced Tier 2 capital include eligible credit reserves.
- Qualifying subordinated debt is subordinated debt issued by Group Inc. 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.

The table below presents changes in CET1 capital, Tier 1 capital and Tier 2 capital.

$ in millions	Standardized	Advanced
Year Ended December 2024		
CET1 capital		
Beginning balance	$ **99,442**	$ **99,442**
Change in:		
Common shareholders' equity	**3,041**	**3,041**
Impact of CECL transition	**(277)**	**(277)**
Deduction for goodwill	**65**	**65**
Deduction for identifiable intangible assets	**312**	**312**
Other adjustments	**482**	**482**
Ending balance	$ **103,065**	$ **103,065**
Tier 1 capital		
Beginning balance	$ **110,288**	$ **110,288**
Change in:		
CET1 capital	**3,623**	**3,623**
Preferred stock	**2,050**	**2,050**
Deduction for investments in covered funds	**(315)**	**(315)**
Other adjustments	**1**	**1**
Ending balance	**115,647**	**115,647**
Tier 2 capital		
Beginning balance	**14,874**	**10,684**
Change in:		
Qualifying subordinated debt	**(762)**	**(762)**
Allowance for credit losses	**(1)**	**–**
Other adjustments	**14**	**242**
Ending balance	**14,125**	**10,164**
Total capital	$ **129,772**	$ **125,811**

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

Credit Risk

Credit RWAs are calculated based on measures of exposure, which are then risk weighted under the Standardized and Advanced Capital Rules:

- The Standardized Capital Rules apply prescribed risk-weights, which depend largely on the type of counterparty. The exposure measures for derivatives and securities financing transactions are based on specific formulas which take certain factors into consideration.
- Under the Advanced Capital Rules, we compute risk-weights for wholesale and retail credit exposures in accordance with the Advanced Internal Ratings-Based approach. The exposure measures for derivatives and securities financing transactions are computed utilizing internal models.
- For both Standardized and Advanced credit RWAs, the risk-weights for securitizations and equities are based on specific required formulaic approaches.

Market Risk

RWAs for market risk in accordance with the Standardized and Advanced Capital Rules are generally consistent. Market RWAs are calculated based on measures of exposure which include the following:

- Value-at-Risk ("VaR") is the potential loss in value of trading assets and liabilities, as well as certain investments, loans, and other financial assets and liabilities accounted for at fair value, due to adverse market movements over a defined time horizon with a specified confidence level.

  For both risk management purposes and regulatory capital calculations, we use a single VaR model which captures risks, including those related to interest rates, equity prices, currency rates and commodity prices. However, VaR used for risk management purposes differs from VaR used for regulatory capital requirements (regulatory VaR) due to differences in time horizons, confidence levels and the scope of positions on which VaR is calculated. For risk management purposes, a 95% one-day VaR is used, whereas for regulatory capital requirements, a 99% 10-day VaR is used to determine Market RWAs and a 99% one-day VaR is used to determine regulatory VaR exceptions. In addition, the daily net revenues used to determine risk management VaR exceptions (i.e., comparing the daily net revenues to the VaR measure calculated as of the end of the prior business day) include intraday activity, whereas the Capital Framework requires that intraday activity be excluded from daily net revenues when calculating regulatory VaR exceptions. Intraday activity includes bid/offer net revenues, which are more likely than not to be positive by their nature. As a result, there may be differences in the number of VaR exceptions and the amount of daily net revenues calculated for regulatory VaR compared to the amounts calculated for risk management VaR.

Our positional losses observed on a single day exceeded its 99% one-day regulatory VaR on two occasions during 2024 and on one occasion during 2023. There was no change in our VaR multiplier used to calculate Market RWAs;

- Stressed VaR is the potential loss in value of trading assets and liabilities, as well as certain investments, loans, and other financial assets and liabilities accounted for at fair value, during a period of significant market stress;
- Incremental risk is the potential loss in value of non-securitized positions due to the default or credit migration of issuers of financial instruments over a one-year time horizon;
- Comprehensive risk is the potential loss in value, due to price risk and defaults, within our credit correlation positions; and
- Specific risk is the risk of loss on a position that could result from factors other than broad market movements, including event risk, default risk and idiosyncratic risk. The standardized measurement method is used to determine specific risk RWAs, by applying supervisory defined risk-weighting factors after applicable netting is performed.

<u>*Operational Risk*</u>

Operational RWAs are only required to be included under the Advanced Capital Rules. We utilize an internal risk-based model to quantify Operational RWAs.

Liquidity Risk Management

<u>*Overview*</u>

Liquidity risk is the risk that we will be unable to fund ourselves or meet our liquidity needs in the event of firm-specific, broader industry or market liquidity stress events. We have in place a comprehensive and conservative set of liquidity and funding policies. Our principal objective is to be able to fund ourselves and to enable our core businesses to continue to serve clients and generate revenues, even under adverse circumstances.

Corporate Treasury is responsible for our liquidity, including developing and executing our liquidity and funding strategy.

Liquidity Risk, which is part of our second line of defense and reports to our chief risk officer, has primary responsibility for assessing, monitoring and managing our liquidity risk by providing independent firmwide oversight and challenge across our global businesses. Liquidity Risk is also responsible for the establishment of stress testing and limits frameworks.

Liquidity Risk Management Principles

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

GCLA. GCLA is liquidity that we maintain to meet a broad range of potential cash outflows and collateral needs in a stressed environment. A primary liquidity principle is to pre-fund our estimated potential cash and collateral needs during a liquidity crisis and hold this liquidity in the form of unencumbered, highly liquid securities and cash. We believe that the securities held in our GCLA would be readily convertible to cash in a matter of days, through liquidation, by entering into repurchase agreements or from maturities of resale agreements, and that this cash would allow us to meet immediate obligations without needing to sell other assets or depend on additional funding from credit-sensitive markets.

Our GCLA reflects the following principles:

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

We maintain our GCLA across Group Inc., Funding IHC and material operating entities, asset types and FMUs to provide us with sufficient operating liquidity to ensure timely settlement in all major markets, even in a difficult funding environment. In addition to the GCLA, we maintain cash balances and securities in several of our other entities, primarily for use in specific currencies, entities or jurisdictions where we do not have immediate access to parent company liquidity.

Asset-Liability Management. Our liquidity risk management policies are designed to ensure we have a sufficient amount of financing, even when funding markets experience persistent stress. We manage the maturities and diversity of our funding across markets, products and counterparties, and seek to maintain a diversified funding profile with an appropriate tenor, taking into consideration the characteristics and liquidity profile of our assets.

Our approach to asset-liability management includes:

- Conservatively managing the overall characteristics of our funding book, with a focus on maintaining long-term, diversified sources of funding in excess of our current requirements;

- Actively managing and monitoring our asset base, with particular focus on the liquidity, holding period and ability to fund assets on a secured basis. We assess our funding requirements and our ability to liquidate assets in a stressed environment while appropriately managing risk. This enables us to determine the most appropriate funding products and tenors; and

- Raising secured and unsecured financing that has a long tenor relative to the liquidity profile of our assets. This reduces the risk that our liabilities will come due in advance of our ability to generate liquidity from the sale of our assets. Because we maintain a highly liquid balance sheet, the holding period of certain of our assets may be materially shorter than their contractual maturity dates.

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. Through our dynamic balance sheet management process, we use actual and projected asset balances to determine secured and unsecured funding requirements. Funding plans are reviewed and approved by the Firmwide Asset Liability Committee. In addition, Risk and the Firmwide Asset Liability Committee review our total unsecured long-term borrowings and total shareholders' equity to help ensure that we maintain a level of long-term funding that is sufficient to meet our long-term financing requirements. In a liquidity crisis, we would begin by liquidating and monetizing our GCLA before selling other assets. However, we recognize that orderly asset sales may be prudent or necessary in a severe or persistent liquidity crisis.

Subsidiary Funding Policies

The majority of our unsecured borrowings is raised by Group Inc., which provides the necessary funds to Funding IHC and other subsidiaries, some of which are regulated, to meet their asset financing, liquidity and capital requirements. In addition, Group Inc. provides its regulated subsidiaries with the necessary capital to meet their regulatory requirements. The benefits of this approach to subsidiary funding are enhanced control and greater flexibility to meet the funding requirements of our subsidiaries. Funding is also raised at the subsidiary level through a variety of products, including deposits, secured funding and unsecured borrowings.

Our intercompany funding policies assume that a subsidiary's funds or securities are not freely available to its parent, Funding IHC or other subsidiaries unless (i) legally provided for and (ii) there are no additional regulatory, tax or other restrictions. In particular, many of our subsidiaries are subject to laws that authorize regulatory bodies to block or reduce the flow of funds from those subsidiaries to Group Inc. or Funding IHC. Regulatory action of that kind could impede access to funds that Group Inc. needs to make payments on its obligations. Accordingly, we assume that the capital provided to our regulated subsidiaries is not available to Group Inc. or other subsidiaries and any other financing provided to our regulated subsidiaries is not available to Group Inc. or Funding IHC until the maturity of such financing.

Group Inc. has provided substantial amounts of equity and subordinated indebtedness, directly or indirectly, to its regulated subsidiaries.

Contingency Funding Plan. We maintain a contingency funding plan to provide a framework for analyzing and responding to a liquidity crisis situation or periods of market stress. Our contingency funding plan outlines a list of potential risk factors, key reports and metrics that are reviewed on an ongoing basis to assist in assessing the severity of, and managing through, a liquidity crisis and/or market dislocation. The contingency funding plan also describes in detail our potential responses if our assessments indicate that we have entered a liquidity crisis, which include pre-funding for what we estimate will be our potential cash and collateral needs, as well as utilizing secondary sources of liquidity. Mitigants and action items to address specific risks which may arise are also described and assigned to individuals responsible for execution.

The contingency funding plan identifies key groups of individuals and their responsibilities, which include fostering effective coordination, control and distribution of information, implementing liquidity maintenance activities and managing internal and external communication, all of which are critical in the management of a crisis or period of market stress.

Stress Tests

In order to determine the appropriate size of our GCLA, we model liquidity outflows over a range of scenarios and time horizons. One of our primary internal liquidity risk models, referred to as the Modeled Liquidity Outflow, quantifies our liquidity risks over a 30-day stress scenario. We also consider other factors, including, but not limited to, an assessment of our potential intraday liquidity needs through an additional internal liquidity risk model, referred to as the Intraday Liquidity Model, the results of our long-term stress testing models, our resolution liquidity models and other applicable regulatory requirements and a qualitative assessment of our condition, as well as the financial markets. The results of the Modeled Liquidity Outflow, the Intraday Liquidity Model, the long-term stress testing models and the resolution liquidity models are reported to senior management on a regular basis. We also perform firmwide stress tests.

Modeled Liquidity Outflow. Our Modeled Liquidity Outflow is based on conducting multiple scenarios that include combinations of market-wide and firm-specific stress. These scenarios are characterized by the following qualitative elements:

- Severely challenged market environments, which include low consumer and corporate confidence, financial and political instability, and adverse changes in market values, including potential declines in equity markets and widening of credit spreads; and
- A firm-specific crisis potentially triggered by material losses, reputational damage (including, as a result of, the dissemination of negative information through social media), litigation and/or a ratings downgrade.

The following are key modeling elements of our Modeled Liquidity Outflow:

- Liquidity needs over a 30-day scenario;
- A two-notch downgrade of our long-term senior unsecured credit ratings;
- Changing conditions in funding markets, which limit our access to unsecured and secured funding;
- No support from additional government funding facilities. Although we have access to various central bank funding programs, we do not assume reliance on additional sources of funding in a liquidity crisis; and
- A combination of contractual outflows and contingent outflows arising from both our on- and off-balance sheet arrangements. Contractual outflows include, among other things, upcoming maturities of unsecured debt, term deposits and secured funding. Contingent outflows include, among other things, the withdrawal of customer credit balances in our prime brokerage business, increase in variation margin requirements due to adverse changes in the value of our exchange-traded and OTC-cleared derivatives, draws on unfunded commitments and withdrawals of deposits that have no contractual maturity.

Intraday Liquidity Model. Our Intraday Liquidity Model measures our intraday liquidity needs in a scenario where access to sources of intraday liquidity may become constrained. The intraday liquidity model considers a variety of factors, including historical settlement activity.

Long-Term Stress Testing. We utilize longer-term stress tests to take a forward view on our liquidity position through prolonged stress periods in which we experience a severe liquidity stress and recover in an environment that continues to be challenging. We are focused on ensuring conservative asset-liability management to prepare for a prolonged period of potential stress, seeking to maintain a diversified funding profile with an appropriate tenor, taking into consideration the characteristics and liquidity profile of our assets.

Resolution Liquidity Models. In connection with our resolution planning efforts, we have established our Resolution Liquidity Adequacy and Positioning framework, which estimates liquidity needs of our major subsidiaries in a stressed environment. The liquidity needs are measured using our Modeled Liquidity Outflow assumptions and include certain additional inter-affiliate exposures. We have also established our Resolution Liquidity Execution Need framework, which measures the liquidity needs of our major subsidiaries to stabilize and wind down following a Group Inc. bankruptcy filing in accordance with our preferred resolution strategy.

In addition, we have established a triggers and alerts framework, which is designed to provide the Board with information needed to make an informed decision on whether and when to commence bankruptcy proceedings for Group Inc.

Limits

We use liquidity risk limits at various levels and across liquidity risk types to manage the size of our liquidity exposures. Limits are measured relative to acceptable levels of risk given our liquidity risk tolerance.

Limits are monitored by Corporate Treasury and Liquidity Risk. Liquidity Risk is responsible for identifying and escalating to senior management and/or the appropriate risk committee, on a timely basis, instances where limits have been exceeded.

GCLA and Unencumbered Metrics

GCLA. Based on the results of our internal liquidity risk models, described above, as well as our consideration of other factors, including, but not limited to, a qualitative assessment of our condition, as well as the financial markets, we believe our liquidity position as of both December 2024 and December 2023 was appropriate. We strictly limit our GCLA to a narrowly defined list of securities and cash because they are highly liquid, even in a difficult funding environment. We do not include other potential sources of excess liquidity in our GCLA, such as less liquid unencumbered securities or committed credit facilities.

The table below presents information about our GCLA.

	Average for the			
	Three Months Ended December		Year Ended December	
$ in millions	**2024**	2023	**2024**	2023
Denomination				
U.S. dollar	**$ 311,839**	$ 282,414	**$ 300,535**	$ 282,307
Non-U.S. dollar	**110,252**	131,176	**128,645**	124,691
Total	**$ 422,091**	$ 413,590	**$ 429,180**	$ 406,998
Asset Class				
Overnight cash deposits	**$ 143,563**	$ 204,929	**$ 184,370**	$ 231,066
U.S. government obligations	**177,721**	150,806	**163,983**	133,000
U.S. agency obligations	**46,979**	22,895	**32,102**	16,387
Non-U.S. government obligations	**53,828**	34,960	**48,725**	26,545
Total	**$ 422,091**	$ 413,590	**$ 429,180**	$ 406,998
Entity Type				
Group Inc. and Funding IHC	**$ 60,609**	$ 65,952	**$ 65,965**	$ 66,803
Major broker-dealer subsidiaries	**113,996**	117,818	**117,204**	114,824
Major bank subsidiaries	**247,486**	229,820	**246,011**	225,371
Total	**$ 422,091**	$ 413,590	**$ 429,180**	$ 406,998

In the table above:

- The U.S. dollar-denominated GCLA consists of (i) unencumbered U.S. government and agency obligations (including highly liquid U.S. agency mortgage-backed obligations), all of which are eligible as collateral in Federal Reserve open market operations and (ii) certain overnight U.S. dollar cash deposits.

- The non-U.S. dollar-denominated GCLA consists of non-U.S. government obligations (only unencumbered German, French, Japanese and U.K. government obligations) and certain overnight cash deposits in highly liquid currencies.

We maintain our GCLA to enable us to meet current and potential liquidity requirements of our parent company, Group Inc., and its subsidiaries. Our Modeled Liquidity Outflow and Intraday Liquidity Model incorporate a requirement for Group Inc., as well as a standalone requirement for each material operating entity. Funding IHC is required to provide the necessary liquidity to Group Inc. during the ordinary course of business, and is also obligated to provide capital and liquidity support to material operating entities in the event of our material financial distress or failure. Liquidity held directly in each of our material operating entities is intended for use only by that entity to meet its liquidity requirements and is assumed not to be available to Group Inc. or Funding IHC unless (i) legally provided for and (ii) there are no additional regulatory, tax or other restrictions. In addition, the Modeled Liquidity Outflow and Intraday Liquidity Model also incorporate a broader assessment of standalone liquidity requirements for other subsidiaries and we hold a portion of our GCLA directly at Group Inc. or Funding IHC to support such requirements.

Note that a large portion of the GCLA previously held at Group Inc. is now held at Funding IHC.

Other Unencumbered Assets. In addition to our GCLA, we have a significant amount of other unencumbered cash and financial instruments, including other government obligations, high-grade money market securities, corporate obligations, marginable equities, loans and cash deposits not included in our GCLA. The fair value of our unencumbered assets averaged $295.49 billion for the three months ended December 2024, $286.51 billion for the three months ended December 2023, $292.22 billion for the year ended December 2024 and $281.95 billion for the year ended December 2023. We do not consider these assets liquid enough to be eligible for our GCLA.

Liquidity Regulatory Framework

We are subject to a minimum LCR under the LCR rule approved by the U.S. federal bank regulatory agencies. The LCR rule requires organizations to maintain an adequate ratio of eligible HQLA to expected net cash outflows under an acute, short-term liquidity stress scenario. Eligible HQLA excludes HQLA held by subsidiaries that is in excess of their minimum requirement and is subject to transfer restrictions. We are required to maintain a minimum LCR of 100%. We expect that fluctuations in client activity, business mix and the market environment will impact our LCR.

The table below presents information about our average daily LCR.

	Average for the Three Months Ended	
$ in millions		**December 2024**
Total HQLA	**$**	**407,348**
Eligible HQLA	**$**	**352,494**
Net cash outflows	**$**	**279,368**
LCR		**126%**

In the table above, our average quarterly LCR represents the average of our daily LCRs during the quarter.

We are also subject to a minimum NSFR under the NSFR rule approved by the U.S. federal bank regulatory agencies. The NSFR rule requires large U.S. banking organizations to maintain ASF above their RSF over a one-year time horizon. Total ASF excludes ASF held by subsidiaries that is in excess of their minimum requirement and is subject to transfer restrictions. We are required to maintain a minimum NSFR of 100%. We expect that fluctuations in client activity, business mix and the market environment will impact our NSFR.

The table below presents information about our average daily NSFR.

		Average for the Three Months Ended
$ in millions		**December 2024**
Total ASF	**$**	**692,474**
Total RSF	**$**	**595,352**
NSFR		**116%**

In the table above, our average quarterly NSFR represents the average of our daily NSFRs during the quarter.

The following provides information about our subsidiary liquidity regulatory requirements:

- **GS Bank USA.** GS Bank USA is subject to a minimum LCR of 100% under the LCR rule approved by the U.S. federal bank regulatory agencies. As of December 2024, GS Bank USA's LCR exceeded the minimum requirement. The NSFR requirement described above also applies to GS Bank USA. As of December 2024, GS Bank USA's NSFR exceeded the minimum requirement.

- **GSI and GSIB.** GSI and GSIB are subject to a minimum LCR of 100% under the LCR rule approved by the U.K. regulatory authorities. GSI's and GSIB's average monthly LCR for the trailing twelve-month period ended December 2024 exceeded the minimum requirement. GSI and GSIB are subject to the applicable NSFR requirement in the U.K. As of December 2024, both GSI's and GSIB's NSFR exceeded the minimum requirement.

- **GSBE.** GSBE is subject to a minimum LCR of 100% under the LCR rule approved by the European Parliament and Council. GSBE's average monthly LCR for the trailing twelve-month period ended December 2024 exceeded the minimum requirement. GSBE is subject to the applicable NSFR requirement in the E.U. As of December 2024, GSBE's NSFR exceeded the minimum requirement.

- **Other Subsidiaries.** We monitor local regulatory liquidity requirements of our subsidiaries to ensure compliance. For many of our subsidiaries, these requirements either have changed or are likely to change in the future due to the implementation of the Basel Committee's framework for liquidity risk measurement, standards and monitoring, as well as other regulatory developments.

The implementation of these rules and any amendments adopted by the regulatory authorities could impact our liquidity and funding requirements and practices in the future.

Funding Sources

Our primary sources of funding are deposits, collateralized financings, unsecured short- and long-term borrowings, and shareholders' equity. We seek to maintain broad and diversified funding sources globally across products, programs, markets, currencies and creditors to avoid funding concentrations.

The table below presents information about our funding sources.

	As of December			
$ in millions	**2024**		2023	
Deposits	**$ 433,013**	**35 %**	$ 428,417	36 %
Collateralized financings	**358,590**	**29 %**	323,564	27 %
Unsecured short-term borrowings	**69,709**	**6 %**	75,945	6 %
Unsecured long-term borrowings	**242,634**	**20 %**	241,877	21 %
Total shareholders' equity	**121,996**	**10 %**	116,905	10 %
Total	**$ 1,225,942**	**100 %**	$ 1,186,708	100 %

Our funding is primarily raised in U.S. dollar, Euro, British pound and Japanese yen. We generally distribute our funding products through our own sales force and third-party distributors to a large, diverse creditor base in a variety of markets in the Americas, Europe and Asia. We believe that our relationships with our creditors are critical to our liquidity. Our creditors include banks, governments, securities lenders, corporations, pension funds, insurance companies, mutual funds and individuals. We have imposed various internal guidelines to monitor creditor concentration across our funding programs.

Deposits. Our deposits provide us with a diversified source of funding and reduce our reliance on wholesale funding. We raise deposits, including savings, demand and time deposits, from consumers, private bank clients, through internal and third-party broker-dealers, transaction banking clients and other institutional clients. Substantially all of our deposits are raised through GS Bank USA, GSIB and GSBE.

The table below presents the types and sources of deposits.

$ in millions	Savings and Demand	Time	Total
As of December 2024			
Consumer	**$ 126,694**	**$ 54,541**	**$ 181,235**
Private bank	**90,013**	**6,489**	**96,502**
Brokered certificates of deposit	**—**	**41,014**	**41,014**
Deposit sweep programs	**30,927**	**—**	**30,927**
Transaction banking	**60,925**	**1,820**	**62,745**
Other	**1,776**	**18,814**	**20,590**
Total	**$ 310,335**	**$ 122,678**	**$ 433,013**
As of December 2023			
Consumer	$ 120,211	$ 36,903	$ 157,114
Private bank	86,457	6,855	93,312
Brokered certificates of deposit	—	46,860	46,860
Deposit sweep programs	31,916	—	31,916
Transaction banking	68,177	3,643	71,820
Other	1,568	25,827	27,395
Total	$ 308,329	$ 120,088	$ 428,417

In the table above:

- Savings and demand accounts consist of money market deposit accounts, negotiable order of withdrawal accounts and demand deposit accounts that have no stated maturity or expiration date.
- Time deposits had a weighted average maturity of approximately 0.6 years as of both December 2024 and December 2023.
- Consumer deposits consist of deposits from both Marcus and Apple Card customers.
- Deposit sweep programs include contractual agreements with U.S. broker-dealers who sweep client cash to FDIC-insured deposits.
- Transaction banking deposits consist of deposits that we raised through our cash management services business for corporate and other institutional clients.
- Other deposits are substantially all from institutional clients.
- Deposits insured by the FDIC were $234.54 billion as of December 2024 and $221.52 billion as of December 2023.
- Deposits insured by non-U.S. insurance programs were $25.98 billion as of December 2024 and $26.00 billion as of December 2023.

Secured Funding. We fund a significant amount of inventory and a portion of investments on a secured basis. Secured funding includes collateralized financings in the consolidated balance sheets. We may also pledge our inventory and investments as collateral for securities borrowed under a securities lending agreement. We also use our own inventory and investments to cover transactions in which we or our clients have sold securities that have not yet been purchased. Secured funding is less sensitive to changes in our credit quality than unsecured funding, due to our posting of collateral to our lenders. Nonetheless, we analyze the refinancing risk of our secured funding activities, taking into account trade tenors, maturity profiles, counterparty concentrations, collateral eligibility and counterparty rollover probabilities. We seek to mitigate our refinancing risk by executing term trades with staggered maturities, diversifying counterparties, raising excess secured funding and pre-funding residual risk through our GCLA.

We seek to raise secured funding with a term appropriate for the liquidity of the assets that are being financed, and we seek longer maturities for secured funding collateralized by asset classes that may be harder to fund on a secured basis, especially during times of market stress. Our secured funding, excluding funding collateralized by liquid government and agency obligations, is primarily executed for tenors of one month or greater and is primarily executed through term repurchase agreements and securities loaned contracts.

Assets that may be harder to fund on a secured basis during times of market stress include certain financial instruments in the following categories: mortgage- and other asset-backed loans and securities, non-investment-grade corporate debt securities, equity securities and emerging market securities.

We also raise financing through other types of collateralized financings, such as secured loans and notes. GS Bank USA has access to funding from the Federal Home Loan Bank. Our outstanding borrowings from the Federal Home Loan Bank were $5.04 billion as of December 2024 and we had no outstanding borrowings as of December 2023. Additionally, we have access to funding through the Federal Reserve discount window, but we do not rely on this funding in our liquidity planning and stress testing.

Unsecured Short-Term Borrowings. A significant portion of our unsecured short-term borrowings was originally long-term debt that is scheduled to mature within one year of the reporting date. We use unsecured short-term borrowings, including U.S. and non-U.S. hybrid financial instruments and commercial paper, to finance liquid assets and for other cash management purposes. In accordance with regulatory requirements, Group Inc. does not issue debt with an original maturity of less than one year, other than to its subsidiaries.

Unsecured Long-Term Borrowings. Unsecured long-term borrowings, including structured notes, are raised through syndicated U.S. registered offerings, U.S. registered and Rule 144A medium-term note programs, offshore medium-term note offerings and other debt offerings. We issue in different tenors, currencies and products to maximize the diversification of our investor base.

The table below presents our quarterly unsecured long-term borrowings maturity profile.

$ in millions	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
As of December 2024					
2026	$ 10,016	$ 6,947	$ 8,179	$ 11,788	$ 36,930
2027	$ 13,058	$ 8,700	$ 8,091	$ 11,289	41,138
2028	$ 11,495	$ 6,191	$ 4,542	$ 6,976	29,204
2029	$ 4,490	$ 10,308	$ 6,912	$ 11,026	32,736
2030 - thereafter					102,626
Total					$ 242,634

The weighted average maturity of our unsecured long-term borrowings as of December 2024 was approximately seven years. To mitigate refinancing risk, we seek to limit the principal amount of debt maturing over the course of any monthly, quarterly, semi-annual or annual time horizon. We enter into interest rate swaps to convert a portion of our unsecured long-term borrowings into floating-rate obligations to manage our exposure to interest rates.

Shareholders' Equity. Shareholders' equity is a stable and perpetual source of funding.

SI.4. 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 traded on an exchange ("exchange-traded") or they may be privately negotiated contracts, which are usually referred to as OTC derivatives. Certain of our OTC derivatives are cleared and settled through central clearing counterparties ("OTC-cleared"), while others are bilateral contracts between two counterparties ("bilateral OTC").

Market Making. As a market maker, we enter into derivative transactions to provide liquidity to clients and to facilitate the transfer and hedging of their risks. In this role, we typically act as principal and are required to commit capital to provide execution, and maintain market-making positions in response to, or in anticipation of, client demand.

Risk Management. We also enter into derivatives to actively manage risk exposures that arise from our market-making and investing and financing activities. Our holdings and exposures are hedged, in many cases, on either a portfolio or risk-specific basis, as opposed to an instrument-by-instrument basis. The offsetting impact of this economic hedging is reflected in the same business segment as the related revenues. In addition, we may enter into derivatives designated as hedges under U.S. GAAP. These derivatives are used to manage interest rate exposure of certain fixed-rate unsecured borrowings and deposits and certain U.S. and non-U.S. government securities classified as available-for-sale, foreign exchange risk of certain available-for-sale securities, the net investment in certain non-U.S. operations and the exposure to the variability of the forecasted cash flows associated with certain floating-rate assets.

We enter into various types of derivatives, including:

- **Futures and Forwards.** Contracts that commit counterparties to purchase or sell financial instruments, commodities 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, commodities, 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, commodities 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 (counterparty netting). Derivatives are accounted for at fair value, net of cash collateral received or posted under enforceable credit support agreements (cash collateral netting).

SI.5. 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 ("PCS") systems that are most material to our activities:

PCS System	Description of Services
Bank of Japan	Agent bank providing settlement and custody services in Japan and the primary custodian for Japanese Government Bonds.
Bank of New York Mellon	Agent bank whose services include tri-party, custody, and US government security clearing services.
Barclays Bank Plc	Cash agent bank where the firm holds GBP nostro accounts.
Chicago Mercantile Exchange Clearing, Inc	Service provider for clearing and settlement of futures, options and OTC derivatives.
Citibank, N.A.	Agent bank providing payment, settlement and custody services across multiple global markets.
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.
CLS Bank Limited	Multi-currency cash settlement system.
Depository Trust Company	Central depository providing depository and book-entry services for eligible securities.
Eurex Clearing AG	Central counterparty for derivatives, equities, bonds and other instruments.
Euroclear Group	Central securities depository and provider of settlement and custody services.
Euronext Clearing	Clearing house for instruments, including exchange traded funds ("ETFs"), closed-end funds, derivatives, bonds and repos.
FedWire/FedACH	Real-time gross settlement funds transfer system operated by the United States Federal Reserve Banks.
Fixed Income Clearing Corporation	Central counterparty for clearing and settlement of U.S. government and mortgage-backed securities.
HSBC	Cash agent bank providing settlement and custody services.
ICE Clear Credit LLC	Clearing house for North American credit default swaps.
ICE Clear Europe	Clearing house for interest rate, equity index and energy derivatives, and credit default swaps.
ICE Clear U.S.	Clearing house for futures, options and OTC derivatives.
Japan Securities Clearing Corporation	Clearing service provider for Japanese equities, bonds and derivatives.
Japan Securities Depository Center, Inc.	Central depository for Japanese securities and foreign securities listed on Japanese exchanges.
JPMorgan Chase & Co.	Cash agent bank where the firm holds USD & EUR nostro accounts.
LCH Clearnet Ltd.	Central counterparty for securities, exchange-traded derivatives and other instruments.
LCH Clearnet SA	Clearing house for instruments, including equities, bonds, futures, options and credit default swaps.

PCS System	Description of Services
National Securities Clearing Corp. Ltd.	Central clearing counterparty for equities, corporate bonds, municipal securities and other instruments.
Options Clearing Corporation	Central clearing and settlement services provider for options.
Royal Bank of Canada	Agent bank providing cash clearing, cash deposit, Canadian Depository for Securities settlement, and continuous linked settlement services.
Standard Chartered Bank	Agent bank providing settlement and custody services across multiple global markets.
Sumitomo Mitsui Banking Corporation	Cash agent bank where the firm holds JPY nostro accounts.
SWIFT	Secure messaging platform for the exchange of instructions and messages about financial transactions.

SI.6. Description of Foreign Operations

Our overseas material operating entities are:

- Goldman Sachs International (U.K. Broker-Dealer)
- Goldman Sachs International Bank (U.K. Bank)
- Goldman Sachs Japan Co., Ltd (Japanese Broker-Dealer)
- Goldman Sachs Bank Europe SE (German Bank)
- Goldman Sachs Asset Management International (U.K. Asset Manager)

In total, we have a physical presence in over 40 countries, but our business activities are highly concentrated in just four: the United States, the United Kingdom, Germany and Japan.

Due to the highly integrated nature of international financial markets, we manage our businesses based on the profitability of the enterprise as a whole. The methodology for allocating profitability to geographic regions is dependent on estimates and management judgment because a significant portion of our activities require cross-border coordination in order to facilitate the needs of our clients.

Our geographic results are generally allocated as follows:

- Global Banking & Markets: Investment banking fees and Other: location of the client and investment banking team; FICC intermediation and Equities intermediation: location of the market-making desk; FICC financing and Equities financing: location of the desk.
- Asset & Wealth Management (excluding direct-to-consumer business, Equity investments and Debt investments): location of the sales team; Direct-to-consumer business: location of the client; Equity investments and Debt investments: location of the investment or investment professional.
- Platform Solutions: location of the client.

The table below presents total net revenues, pre-tax earnings and net earnings by geographic region.

$ in millions	**2024**		2023		2022	
Year Ended December						
Americas	**$ 34,448**	**64 %**	$ 29,335	64 %	$ 28,669	61 %
EMEA	**12,250**	**23 %**	11,744	25 %	12,860	27 %
Asia	**6,814**	**13 %**	5,175	11 %	5,836	12 %
Total net revenues	**$ 53,512**	**100 %**	$ 46,254	100 %	$ 47,365	100 %
Americas	**$ 12,106**	**66 %**	$ 6,038	56 %	$ 7,016	52 %
EMEA	**4,418**	**24 %**	4,033	38 %	5,260	39 %
Asia	**1,873**	**10 %**	668	6 %	1,210	9 %
Total pre-tax earnings	**$ 18,397**	**100 %**	$ 10,739	100 %	$ 13,486	100 %
Americas	**$ 9,354**	**66 %**	$ 4,849	57 %	$ 6,067	54 %
EMEA	**3,470**	**24 %**	3,137	37 %	4,164	37 %
Asia	**1,452**	**10 %**	530	6 %	1,030	9 %
Total net earnings	**$ 14,276**	**100 %**	$ 8,516	100 %	$ 11,261	100 %

In the table above:

- Americas pre-tax earnings for 2023 were impacted by impairments related to commercial real estate in CIEs, the write-down related to GreenSky, an impairment of goodwill related to Consumer platforms and the FDIC special assessment fee.
- Substantially all of the amounts in the Americas were attributable to the U.S.
- Asia includes Australia and New Zealand.

SI.7. Material Supervisory Authorities

As a participant in the global financial services industry, we are subject to extensive regulation and supervision worldwide. The regulatory regimes applicable to our operations have been, and continue to be, subject to significant changes. The following section refers to the firm (i.e., not only the material entities or the core business lines).

New regulations have been adopted or are being considered by regulators and policy makers worldwide, as described below. The impacts of any changes to the regulations affecting our businesses, including as a result of the proposals described below, are uncertain and will not be known until such changes are finalized and market practices and structures develop under the revised regulations.

Group Inc. is a BHC under the U.S. Bank Holding Company Act of 1956 ("BHC Act") and an FHC under amendments to the BHC Act effected by the U.S. Gramm-Leach-Bliley Act of 1999 ("GLB Act"), and is subject to supervision and examination by the FRB, which is our primary regulator.

Under the system of “functional regulation” established under the GLB Act, the primary regulators of our U.S. non-bank subsidiaries directly regulate the activities of those subsidiaries, with the FRB exercising a supervisory role. Such “functionally regulated” subsidiaries include broker-dealers and security-based swap dealers registered with the SEC, such as our principal U.S. broker-dealer, entities registered with or regulated by the CFTC with respect to futures-related and swaps-related activities and investment advisers registered with the SEC with respect to their investment advisory activities.

Our principal subsidiaries operating in the U.S. include GS Bank USA, GSCO, JANY and GSAM.

GS Bank USA is our principal U.S. bank subsidiary and is supervised and regulated by the FRB, the FDIC, the New York State Department of Financial Services ("NYDFS") and the Consumer Financial Protection Bureau ("CFPB"). GS Bank USA also has a London branch, which is regulated by the FCA and PRA. We conduct a number of our activities partially or entirely through GS Bank USA and its subsidiaries, including: corporate loans (including leveraged lending); securities-based and collateralized loans; credit card loans; residential mortgages; transaction banking; deposit-taking; interest rate, credit, currency and other derivatives; and agency lending.

GSCO is our principal U.S. broker-dealer and is registered as a broker-dealer, a security-based swap dealer, a municipal advisor and an investment adviser with the SEC and as a broker-dealer in all 50 states and the District of Columbia. U.S. self-regulatory organizations, such as FINRA and the NYSE, have adopted rules that apply to broker-dealers, such as GSCO.

Our principal subsidiaries operating in Europe include: GSI, GSIB, GSAMI, GSBE, Goldman Sachs Asset Management B.V., and Goldman Sachs Paris Inc. et Cie ("GSPIC").

Our E.U. subsidiaries are subject to various E.U. regulations, as well as national laws, including those implementing European directives. GSBE is directly supervised by the European Central

Bank ("ECB") and additionally by BaFin and Deutsche Bundesbank in the context of the E.U. Single Supervisory Mechanism.

GSBE engages in certain activities primarily in the E.U., including underwriting and market making in debt and equity securities and derivatives, investment, asset and wealth management services, deposit-taking, lending (including securities lending), and financial advisory services. GSBE is also registered with the CFTC as a swap dealer and with the SEC as a security-based swap dealer and as a primary dealer for government bonds issued by E.U. sovereigns. Like our other foreign bank subsidiaries, GSBE is subject to limits on the nature and scope of its activities under the FRB's Regulation K, including limits on its underwriting and market making in equity securities based on GSBE's and/or GS Bank USA's capital.

GSPIC is an investment firm under the French Prudential Supervision and Resolution Authority and the French Financial Markets Authority. GSPIC's activities include certain activities that GSBE is prevented from undertaking. GSPIC is subject to the E.U. Investment Firm Regulation, the prudential regime for E.U. investment firms.

GSI is a U.K. broker-dealer and a designated investment firm, and GSIB is a U.K. bank. Both GSI and GSIB are regulated by the PRA and the FCA. As a designated investment firm, GSI is subject to prudential requirements similar to those applicable to banks, including capital and liquidity requirements. GSI provides broker-dealer services in and from the U.K. and is registered with the CFTC as a swap dealer and with the SEC as a security-based swap dealer. GSIB engages in lending (including securities lending) and deposit-taking activities (including by taking retail deposits) and is a primary dealer for U.K. government bonds. GSI and GSIB maintain branches outside of the U.K. and are subject to the laws and regulations of the jurisdictions where they are located.

Our principal subsidiary operating in Asia is Goldman Sachs Japan Co., Ltd. ("GSJCL"). GSJCL is our regulated Japanese broker-dealer subsidiary and is regulated by Japan's Financial Services Agency, the Tokyo Stock Exchange, the Bank of Japan and the Ministry of Finance, among others.

Banking Supervision and Regulation

The Basel Committee is the primary global standard setter for prudential bank regulation. However, the Basel Committee's standards do not become effective in a jurisdiction until the relevant regulators have adopted rules to implement its standards. The implications of Basel Committee standards and related regulations for our businesses depend to a large extent on their implementation by the relevant regulators globally, and the market practices and structures that develop.

Capital and Liquidity Requirements. We and GS Bank USA are subject to risk-based regulatory capital and leverage requirements that are calculated in accordance with the regulations of the FRB (Capital Framework). The Capital Framework is largely based on the Basel Committee's framework for strengthening the regulation, supervision and risk management of banks (Basel III) and also implements certain provisions of the Dodd-Frank Act. Under the U.S. federal bank regulatory agencies' tailoring framework, we and GS Bank USA are subject to "Category I" standards because we have been designated as a G-SIB. Accordingly, we and GS Bank USA are "Advanced approach" banking organizations. Under the Capital Framework, we and GS Bank USA must meet specific regulatory capital requirements that involve quantitative measures of assets, liabilities and certain off-balance sheet items. The sufficiency of our capital levels is also subject to qualitative judgments by regulators. We and GS Bank USA are also subject to liquidity requirements established by the U.S. federal bank regulatory agencies.

GSBE is subject to capital and liquidity requirements prescribed in the E.U. Capital Requirements Regulation, as amended ("CRR"), and the E.U. Capital Requirements Directive, as amended ("CRD"), which are largely based on Basel III.

GSI and GSIB are subject to the U.K. capital and liquidity frameworks prescribed in the PRA Rulebook and the U.K. Capital Requirements Regulation, which are also largely based on Basel III and are generally aligned with the E.U. capital and liquidity frameworks.

Risk-Based Capital Ratios. As Advanced approach banking organizations, we and GS Bank USA calculate risk-based capital ratios in accordance with both the Standardized and Advanced Capital Rules. Both the Standardized and Advanced Capital Rules include minimum risk-based capital requirements and additional capital conservation buffer requirements that must be satisfied solely with Common Equity Tier 1 ("CET1") capital. Failure to satisfy a buffer requirement in full would result in constraints on capital distributions and discretionary executive compensation. The severity of the constraints would depend on the amount of the shortfall and the organization's "eligible retained income," defined as the greater of (i) net income for the four preceding quarters, net of distributions and associated tax effects not reflected in net income; and (ii) the average of net income over the preceding four quarters. For Group Inc., the capital conservation buffer requirements consist of a 2.5% buffer (under the Advanced Capital Rules), a SCB (under the Standardized Capital Rules), and both a countercyclical buffer and the G-SIB surcharge (under both Capital Rules). For GS Bank USA, the capital conservation buffer requirements consist of a 2.5% buffer and the countercyclical capital buffer.

In 2023, the FRB issued a proposal to implement a revised G-SIB assessment methodology and to revise certain systemic indicators to be based on daily or monthly average values during each year, instead of year-end values.

The SCB is based on the results of the Federal Reserve's supervisory stress tests and our planned common stock dividends and can change significantly over time based on the results of the annual supervisory stress tests. See "Stress Tests and Capital Planning" below. The countercyclical capital buffer is designed to counteract systemic vulnerabilities and currently applies only to banking organizations subject to Category I, II or III standards, including us and GS Bank USA. Several other national supervisors also require countercyclical capital buffers. The G-SIB surcharge and countercyclical capital buffer applicable to us may change in the future, including due to additional guidance from our regulators and/or positional changes. As a result, the minimum capital ratios to which we are subject are likely to change over time.

The capital requirements applicable to GSBE, GSI and GSIB include both minimum requirements and buffers.

The Basel Committee standards include guidelines for calculating incremental capital ratio requirements for banking institutions that are systemically significant from a domestic but not global perspective (D-SIBs). Depending on how these guidelines are implemented by national regulators, they may apply to certain subsidiaries of G-SIBs. These guidelines are in addition to the framework for G-SIBs, but are more principles-based. The U.S. federal bank regulatory agencies have not designated any D-SIBs. The CRD and CRR provide that institutions that are systemically important at the E.U. or member state level, known as other systemically important institutions ("O-SIIs"), may be subject to additional capital ratio requirements, according to their degree of systemic importance (O-SII buffers). BaFin has identified GSBE as an O-SII in Germany and set an O-SII buffer.

In the U.K., the PRA has identified Goldman Sachs Group UK Limited ("GSG UK"), the parent company of GSI and GSIB, as an O-SII but has not applied an O-SII buffer.

The Basel Committee has finalized revisions to the Basel III Capital Requirements ("Basel III Revisions"), and in 2023, the U.S. federal bank regulatory agencies proposed a rule implementing the Basel III Revisions, including the Fundamental Review of the Trading Book ("FRTB"). The FRTB, among other things, revises the standardized and internal model-based approaches used to calculate market risk requirements and clarifies the scope of positions subject to market risk capital requirements.

The U.S. proposal has a three-year transition period for the calculation of Expanded Risk-Based approach RWAs. The proposal includes the replacement of the Advanced approach with an Expanded Risk-Based approach, which eliminates the use of internal models to calculate RWAs for credit and operational risk. The proposal incorporates the application of the SCB requirements in the Expanded Risk-Based approach. The credit risk component of the Expanded Risk-Based approach would include new risk weights for many counterparty and exposure types, a revised collateral haircut approach for certain collateralized transactions and additional restrictions for recognizing collateral in certain securities financing transactions. Under the proposed rules, the RWAs for operational risk would be calculated primarily based on revenues and historical losses. In addition, the proposal introduces the FRTB, which would replace the market risk rule for both the Standardized and Expanded Risk-Based approaches and introduce a new credit valuation adjustment ("CVA") risk RWA calculation for the Expanded Risk-Based approach. The FRB has indicated that it expects to work with the other U.S. federal bank regulatory agencies in 2025 on a revised proposal.

In 2024, the E.U. adopted rules to implement the Basel III Revisions through amendments to the CRR and the CRD, referred to as CRR III and CRD VI. The amendments include the FRTB rules, revised rules for credit risk capital, a new standardized approach for operational risk and CVA risk capital and a floor on internally modeled capital requirements at a percentage of the capital requirements under the standardized approach, commonly known as the "output floor." Substantial parts of these rules became effective in January 2025, though certain provisions applied beginning in July 2024.

The PRA issued near final rules with a proposed effective date of January 1, 2027, implementing Basel III Revisions, including new rules covering the FRTB, credit risk, counterparty credit risk, CVA risk and operational risk for the U.K. Under the PRA near final rules, our U.K. subsidiaries are not expected to be subject to a floor on internally modeled capital requirements.

The Basel Committee has published an updated securitization framework and a revised G-SIB assessment methodology. The U.S. federal bank regulatory agencies' July 2023 proposal would implement the updated securitization framework. The updated securitization framework has been implemented in the E.U. and U.K.

The Basel Committee has also published a final standard on the prudential treatment of cryptoasset exposures. The Basel Committee contemplates that national regulators will have incorporated the standard into local capital requirements by January 1, 2026. U.S. federal bank regulatory agencies and E.U. and U.K. authorities have not yet proposed rules implementing the standards.

Leverage Ratios. Under the Capital Framework, we and GS Bank USA are subject to Tier 1 leverage ratios and supplementary leverage ratios ("SLRs") established by the FRB. As a G-SIB, the SLR requirements applicable to us include both a minimum requirement and a buffer requirement, which operates in the same manner as the risk-based buffer requirements described above.

GSBE and certain of our U.K. entities are also subject to requirements relating to leverage ratios, which are generally based on the Basel Committee leverage ratio standards.

Liquidity Ratios. The Basel Committee's framework for liquidity risk measurement, standards and monitoring requires banking organizations to measure their liquidity against two specific liquidity tests: the LCR and the NSFR.

The LCR rule issued by the U.S. federal bank regulatory agencies and applicable to both us and GS Bank USA is generally consistent with the Basel Committee's framework and is designed to ensure that a banking organization maintains an adequate level of unencumbered, high-quality liquid assets equal to or greater than the expected net cash outflows under an acute short-term liquidity stress scenario. We and GS Bank USA are required to maintain a minimum LCR of 100%.

GSBE is subject to the LCR rule approved by the European Parliament and Council, and GSI and GSIB are subject to the U.K. regulatory authorities' LCR rules, which are generally consistent with the Basel Committee's framework.

The NSFR is designed to promote medium- and long-term stable funding of the assets and off-balance sheet activities of banking organizations over a one-year time horizon. The Basel Committee's NSFR framework requires banking organizations to maintain a minimum NSFR of 100%. We and GS Bank USA are subject to the U.S. NSFR rule.

The CRR implements the NSFR for certain E.U. financial institutions, including GSBE. The NSFR requirement implemented in the U.K. is applicable to both GSI and GSIB.

The FRB's enhanced prudential standards require BHCs with $100 billion or more in total consolidated assets to comply with enhanced liquidity and overall risk management standards, which include maintaining a level of highly liquid assets based on projected funding needs for 30 days, and increased involvement by boards of directors in liquidity and overall risk management. Although the liquidity requirement under these rules has some similarities to the LCR, it is a separate requirement. GSBE also has its own liquidity planning process, which incorporates internally designed stress tests and those required under German regulatory requirements and the ECB Guide to Internal Liquidity Adequacy Assessment Process ("ILAAP"). GSI and GSIB have their own liquidity planning processes, which incorporate internally designed stress tests developed in accordance with the guidelines of the PRA's ILAAP.

Stress Tests and Capital Planning. The FRB's Comprehensive Capital Analysis and Review ("CCAR") is designed to ensure that large BHCs, including us, have sufficient capital to permit continued operations during times of economic and financial stress. As required by the FRB, we perform an annual capital stress test and incorporate the results into an annual capital plan, which we submit to the FRB for review.

As part of the CCAR process, the FRB evaluates our plan to make capital distributions across a range of macroeconomic and company-specific assumptions, based on our and the FRB's own stress tests. In December 2024 and February 2025, the FRB indicated that it intends to propose significant changes to the stress test framework in 2025 and, for the 2025 stress test, take steps to reduce the volatility of results and to begin to improve model transparency.

Under the FRB's rule applicable to BHCs with $100 billion or more in total consolidated assets, including us, the SCB applies to the Standardized approach capital requirements. The SCB reflects stressed losses estimated under the supervisory severely adverse scenario of the CCAR stress tests, as calculated by the FRB, and includes four quarters of planned common stock dividends. The SCB, which is subject to a 2.5% floor, is generally effective on October 1 of each year and remains in effect until October 1 of the following year, unless it is reset in connection with the resubmission of a capital plan.

The SCB rule requires a BHC to receive the FRB's approval for any dividend, stock repurchase or other capital distribution, other than a capital distribution on a newly issued capital instrument, if the BHC is required to resubmit its capital plan, which may occur if the BHC determines there has been or will be a "material change" in its risk profile, financial condition or corporate structure since the plan was last submitted, or if the FRB directs the BHC to revise and resubmit its capital plan.

U.S. depository institutions with total consolidated assets of $250 billion or more that are subsidiaries of U.S. G-SIBs, such as GS Bank USA, are required to submit annual company-run stress test results to the FRB. GSBE also has its own capital and stress testing process, which incorporates internally designed stress tests and those required under German regulatory requirements and the ECB Guide to Internal Capital Adequacy Assessment Process ("ICAAP"). In addition, GSI and GSIB have their own capital planning and stress testing processes, which incorporate internally designed stress tests developed in accordance with the PRA's ICAAP guidelines.

Limitations on the Payment of Dividends. U.S. federal and state laws impose limitations on the payment of dividends by U.S. depository institutions, such as GS Bank USA. In general, the amount of dividends that may be paid by GS Bank USA is limited to the lesser of the amounts calculated under a recent earnings test and an undivided profits test. Under the recent earnings test, a dividend may not be paid if the total of all dividends declared by the entity in any calendar year is in excess of the current year's net income combined with the retained net income of the two preceding years, unless the entity obtains regulatory approval. Under the undivided profits test, a dividend may not be paid in excess of the entity's undivided profits (generally, accumulated net profits that have not been paid out as dividends or transferred to surplus), unless the entity receives regulatory and stockholder approval.

The applicable U.S. banking regulators have authority to prohibit or limit the payment of dividends if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization.

Source of Strength. The Dodd-Frank Act requires BHCs to act as a source of strength to their U.S. bank subsidiaries and to commit capital and financial resources to support those subsidiaries. This support may be required by the FRB at times when BHCs might otherwise determine not to provide it. Capital loans by a BHC to a U.S. subsidiary bank are subordinate in right of payment to deposits and to certain other indebtedness of the subsidiary bank. In addition, if a BHC commits to a U.S. federal bank regulatory agency that it will maintain the capital of its bank subsidiary, whether in response to the FRB's invoking its source-of-strength authority or in response to other regulatory measures, that commitment will be assumed by the bankruptcy trustee for the BHC and the bank will be entitled to priority payment in respect of that commitment, ahead of other creditors of the BHC.

Transactions Between Affiliates. Transactions between GS Bank USA or its subsidiaries, including GSBE, and Group Inc. or its other subsidiaries and affiliates are subject to restrictions under the Federal Reserve Act and regulations issued by the FRB. These laws and regulations generally limit the types and amounts of transactions (such as loans and other credit extensions, including credit exposure arising from resale agreements, securities borrowing and derivative transactions, from GS Bank USA or its subsidiaries to Group Inc. or its other subsidiaries and affiliates and purchases of assets by GS Bank USA or its subsidiaries from Group Inc. or its other subsidiaries and affiliates) that may take place and generally require those transactions, to the extent permitted, to be on market terms or better to GS Bank USA or its subsidiaries. These laws and regulations generally do not apply to transactions between GS Bank USA and its subsidiaries. Similarly, German regulatory requirements provide that certain transactions between GSBE and GS Bank USA or its other affiliates, including Group Inc., must be on market terms and are subject to special internal approval requirements. PRA rules also provide requirements for transactions between GSI and GSIB and their respective affiliates.

Resolution and Recovery Plans. We are required by the FRB and the FDIC to submit a periodic plan for our rapid and orderly resolution in the event of material financial distress or failure (resolution plan). If these regulators jointly determine that an institution has failed to remediate identified deficiencies in its resolution plan or that its resolution plan, after any permitted resubmission, is not credible or would not facilitate an orderly resolution under the U.S. Bankruptcy Code, they may jointly impose more stringent capital, leverage or liquidity requirements or restrictions on growth, activities or operations, or may jointly order the institution to divest assets or operations, in order to facilitate orderly resolution in the event of failure. The FRB and FDIC require U.S. G-SIBs to submit resolution plans every two years (alternating between submissions of full plans and targeted plans that include only select information).

We are also required by the FRB to submit, on a periodic basis, a global recovery plan that outlines the steps that we could take to reduce risk, maintain sufficient liquidity and conserve capital in times of prolonged stress. Certain of our subsidiaries are also subject to similar recovery plan requirements in their local jurisdictions.

GS Bank USA is required to provide a resolution plan to the FDIC that must, among other things, demonstrate that it is adequately protected from risks arising from our other entities. GS Bank USA's most recent resolution plan was submitted in December 2023. In June 2024, the FDIC adopted revisions to its rule that requires the submission of resolution plans by IDIs with $50 billion or more in total assets. These revisions modify the requirements regarding the content and timing of resolution submissions, as well as interim supplements to those submissions provided to the FDIC. IDIs with $100 billion or more in total assets, including GS Bank USA, are required to submit full resolution plans biennially. GS Bank USA's next required full submission is due by July 1, 2026.

The U.S. federal bank regulatory agencies have adopted rules imposing restrictions on QFCs entered into by G-SIBs. The rules are intended to facilitate the orderly resolution of a failed G-SIB by limiting the ability of the G-SIB to enter into a QFC unless (i) the counterparty waives certain default rights in such contract arising upon the entry of the G-SIB or one of its affiliates into resolution, (ii) the contract does not contain enumerated prohibitions on the transfer of such contract and/or any related credit enhancement, and (iii) the counterparty agrees that the contract will be subject to the special resolution regimes set forth in the Dodd-Frank Act orderly liquidation authority ("OLA") and the Federal Deposit Insurance Act ("FDIA"), described below. GS Bank USA has achieved compliance by adhering to the International Swaps and Derivatives Association Universal Resolution Stay Protocol ("ISDA Universal Protocol") and International Swaps and Derivatives Association 2018 U.S. Resolution Stay Protocol ("U.S. ISDA Protocol") described below.

Certain of our other subsidiaries also adhere to these protocols. The ISDA Universal Protocol imposes a stay on certain cross-default and early termination rights within standard ISDA derivative contracts and securities financing transactions between adhering parties in the event that one of them is subject to resolution in its home jurisdiction, including a resolution under OLA or the FDIA in the U.S. The U.S. ISDA Protocol, which was based on the ISDA Universal Protocol, was created to allow market participants to comply with the final QFC rules adopted by the federal bank regulatory agencies.

The E.U. Bank Recovery and Resolution Directive ("BRRD"), as amended by the BRRD II, establishes a framework for the recovery and resolution of financial institutions in the E.U., such as GSBE. The BRRD provides national supervisory authorities with tools and powers to pre-emptively address potential financial crises in order to promote financial stability and minimize taxpayers' exposure to losses. The BRRD requires E.U. member states to grant certain resolution powers to national and, where relevant, E.U. resolution authorities, including the power to impose a temporary stay, and to recapitalize a failing entity by writing down its unsecured debt or converting its unsecured debt into equity. Financial institutions in the E.U. must provide that contracts governed by non-E.U. law recognize those temporary stay and bail-in powers unless doing so would be impracticable. GSBE is under the direct authority of the Single Resolution Board for resolution planning. E.U. law requires financial institutions in the E.U., including subsidiaries of non-E.U. groups, to submit recovery plans and to assist the relevant resolution authority in constructing resolution plans for the E.U. entities. GSBE's primary regulator with respect to recovery planning is the ECB, and it is also regulated by BaFin and Deutsche Bundesbank.

The U.K. Special Resolution Regime confers substantially the same powers on the Bank of England, as the U.K. resolution authority, and substantially the same requirements on U.K. financial institutions. Further, certain U.K. financial institutions, including GSI and GSIB, are required to meet the Bank of England's expectations contained in the U.K. Resolution Assessment Framework, including with respect to loss absorbency, contractual stays, operational continuity and funding in resolution. They are also required by the PRA to submit solvent wind-down plans on how they could be wound down in a stressed environment. The PRA is also the regulatory authority in the U.K. that supervises recovery planning, and GSI and GSIB are each required to submit recovery plans to the PRA.

TLAC. The FRB's TLAC rule, among other things, establishes minimum TLAC requirements and establishes minimum requirements for "eligible long-term debt" (i.e., debt that is unsecured, has a maturity of at least one year from issuance and satisfies certain additional criteria). In 2023, the FRB proposed to introduce a minimum denomination requirement for eligible long-term debt, among other changes.

The rule also prohibits a BHC that has been designated as a U.S. G-SIB from (i) guaranteeing subsidiaries' liabilities that are subject to early termination provisions if the BHC enters into an insolvency or receivership proceeding, subject to an exception for guarantees permitted by rules of the U.S. federal bank regulatory agencies imposing restrictions on QFCs; (ii) incurring liabilities guaranteed by subsidiaries; (iii) issuing short-term debt to third parties; or (iv) entering into derivatives and certain other financial contracts with external counterparties.

Additionally, the rule caps, at 5% of the value of the parent company's eligible TLAC, the amount of unsecured non-contingent third-party liabilities that are not eligible long-term debt that could rank equally with or junior to eligible long-term debt.

The CRR, the BRRD and U.K. financial services regime also impose minimum TLAC requirements on G-SIBs. For example, the CRR requires E.U. subsidiaries of a non-E.U. G-SIB that exceed the threshold of 5% of the G-SIB's RWAs, operating income or leverage exposure, such as GSBE, to meet requirements for the issuance of instruments to qualifying affiliates (internal TLAC) in order to be able to transfer losses or otherwise recapitalize those subsidiaries. Under the U.K. financial services regime, GSG UK exceeds the applicable thresholds and therefore, it is subject to internal TLAC requirements.

The CRD requires a non-E.U. group with more than €40 billion of assets in the E.U., such as us, to have an E.U. intermediate holding company ("E.U. IHC") if it has, as in our case, two or more of certain types of E.U. financial institution subsidiaries, including broker-dealers and banks. The ECB granted GSBE and GSPIC an exemption to operate under two E.U. IHCs. The CRR requires E.U. IHCs to satisfy capital and liquidity requirements, a minimum requirement for own funds and eligible liabilities ("MREL"), and certain other prudential requirements at a consolidated level. The U.K. has not implemented a similar requirement to establish an IHC; however, the PRA requires that certain U.K. financial holding companies or a designated U.K. group entity be responsible for the U.K. group's regulatory compliance. We have designated GSI for that responsibility.

The BRRD II and the U.K. resolution regime subject institutions to a MREL, which is generally consistent with the Financial Stability Board's ("FSB's") TLAC standard. The Single Resolution Board imposes internal MREL requirements applicable to GSBE. GSI is required to maintain a minimum level of internal MREL and provide the Bank of England the right to exercise bail-in triggers over certain intercompany regulatory capital and senior debt instruments issued by GSI.

These triggers enable the Bank of England to write down such instruments or convert such instruments to equity. The triggers can be exercised by the Bank of England if it determines that GSI has reached the point of non-viability and the FRB and the FDIC have not objected to the bail-in or if Group Inc. enters bankruptcy or similar proceedings.

Insolvency of a BHC or IDI. The Dodd-Frank Act created a resolution regime, OLA, for BHCs and their affiliates that are systemically important. Under OLA, the FDIC may be appointed as receiver for the systemically important institution and its failed non-bank subsidiaries if, upon the recommendation of applicable regulators, the U.S. Secretary of the Treasury determines, among other things, that the institution is in default or in danger of default, that the institution's failure would have serious adverse effects on the U.S. financial system and that resolution under OLA would avoid or mitigate those effects.

If the FDIC is appointed as receiver under OLA, then the powers of the receiver, and the rights and obligations of creditors and other parties who have dealt with the institution, would be determined under OLA, and not under the bankruptcy or insolvency law that would otherwise apply. The powers of the receiver under OLA are generally based on the powers of the FDIC as receiver for depository institutions under the FDIA, described below.

Substantial differences in the rights of creditors exist between OLA and the U.S. Bankruptcy Code, including the right of the FDIC under OLA to disregard the strict priority of creditor claims in some circumstances, the use of an administrative claims procedure to determine creditors' claims (as opposed to the judicial procedure utilized in bankruptcy proceedings), and the right of the FDIC to transfer claims to a "bridge" entity. In addition, OLA limits the ability of creditors to enforce certain contractual cross-defaults against affiliates of the institution in receivership. The FDIC has issued a notice that it would likely resolve a failed FHC by transferring its assets to a "bridge" holding company under its "single point of entry" or "SPOE" strategy pursuant to OLA.

Under the FDIA, if the FDIC is appointed as conservator or receiver for an IDI such as GS Bank USA, upon its insolvency or in certain other events, the FDIC has broad powers, including the power:

- To transfer any of the IDI's assets and liabilities to a new obligor, including a newly formed "bridge" bank, without the approval of the depository institution's creditors;
- To enforce the IDI's contracts pursuant to their terms without regard to any provisions triggered by the appointment of the FDIC in that capacity; or
- To repudiate or disaffirm any contract or lease to which the IDI is a party, the performance of which is determined by the FDIC to be burdensome and the repudiation or disaffirmance of which is determined by the FDIC to promote the orderly administration of the IDI.

In addition, the claims of holders of domestic deposit liabilities and certain claims for administrative expenses against an IDI would be afforded a priority over other general unsecured claims, including deposits at non-U.S. branches and claims of debtholders of the IDI, in the “liquidation or other resolution” of such an institution by any receiver. As a result, whether or not the FDIC ever sought to repudiate any debt obligations of GS Bank USA, the debtholders (other than depositors at U.S. branches) would be treated differently from, and could receive, if anything, substantially less than, the depositors at U.S. branches of GS Bank USA.

Deposit Insurance. Deposits at GS Bank USA have the benefit of FDIC insurance up to the applicable limits. The FDIC’s Deposit Insurance Fund is funded by assessments on IDIs. GS Bank USA’s assessment (subject to adjustment by the FDIC) is currently based on its average total consolidated assets less its average tangible equity during the assessment period, its supervisory ratings and specified forward-looking financial measures used to calculate the assessment rate. In addition, the FDIC must recover, by special assessment, losses to the FDIC deposit insurance fund as a result of the FDIC’s use of the systemic risk exception to the least cost resolution test under the FDIA. The deposits of GSBE are covered by the German statutory deposit protection program to the extent provided by law. In addition, GSBE has elected to participate in the German voluntary deposit protection program which provides further insurance for certain eligible deposits beyond the coverage of the German statutory deposit program. Eligible deposits at GSIB and the London branch of GS Bank USA are covered by the U.K. Financial Services Compensation Scheme up to the applicable limits.

Prompt Corrective Action. The U.S. Federal Deposit Insurance Corporation Improvement Act of 1991 ("FDICIA") requires the U.S. 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, such as GS Bank USA: well-capitalized, adequately capitalized, undercapitalized, significantly undercapitalized and critically undercapitalized.

An institution may be downgraded to, or deemed to be in, a capital category that is lower than is indicated by its capital ratios if it is determined to be in an unsafe or unsound condition or if it receives an unsatisfactory examination rating with respect to certain matters. FDICIA imposes progressively more restrictive constraints on operations, management and capital distributions, as the capital category of an institution declines. Failure to meet the capital requirements could also require a depository institution to raise capital. Ultimately, critically undercapitalized institutions are subject to the appointment of a receiver or conservator, as described in “Insolvency of an IDI or a BHC” above.

The prompt corrective action regulations do not apply to BHCs. However, the FRB is authorized to take appropriate action at the BHC level, based upon the undercapitalized status of the BHC’s depository institution subsidiaries. In certain instances, relating to an undercapitalized depository institution subsidiary, the BHC would be required to guarantee the performance of the undercapitalized subsidiary’s capital restoration plan and might be liable for civil money damages for failure to fulfill its commitments on that guarantee. Furthermore, in the event of the bankruptcy of the BHC, the guarantee would take priority over the BHC's general unsecured creditors, as described in "Source of Strength" above.

Volcker Rule and Other Restrictions on Activities. As a BHC, we are subject to limitations on the types of business activities in which we may engage.

Volcker Rule. The Volcker Rule prohibits "proprietary trading," but permits activities such as underwriting, market making and risk-mitigation hedging, requires an extensive compliance program and includes additional reporting and record-keeping requirements.

In addition, the Volcker Rule limits the sponsorship of, and investment in, "covered funds" (as defined in the rule) by banking entities, including us. It also limits certain types of transactions between us and our sponsored and advised funds, similar to the limitations on transactions between depository institutions and their affiliates. Covered funds include our private equity funds, certain of our credit and real estate funds, our hedge funds and certain other investment structures. The limitation on investments in covered funds requires us to limit our investment in each such fund to 3% or less of the fund's net asset value, and to limit our aggregate investment in all such funds to 3% or less of our Tier 1 capital.

Other Restrictions. FHCs generally can engage in a broader range of financial and related activities than are otherwise permissible for BHCs as long as they continue to meet the eligibility requirements for FHCs. The broader range of permissible activities for FHCs includes underwriting, dealing and making markets in securities and making investments in non-FHCs (merchant banking activities). In addition, certain FHCs, including us, are permitted to engage in certain commodities activities in the U.S. that may otherwise be impermissible for BHCs, so long as the assets held pursuant to these activities do not equal 5% or more of their consolidated assets.

The FRB, however, has the authority to limit an FHC's ability to conduct activities that would otherwise be permissible, and will likely do so if the FHC does not satisfactorily meet certain requirements of the FRB. For example, if an FHC or any of its U.S. depository institution subsidiaries ceases to maintain its status as well-capitalized or well-managed, the FRB may impose corrective capital and/or managerial requirements, as well as additional limitations or conditions. If the deficiencies persist, the FHC may be required to divest its U.S. depository institution subsidiaries or to cease engaging in activities other than the business of banking and certain closely related activities.

In addition, we are required to obtain prior FRB approval before certain acquisitions and before engaging in certain banking and other financial activities both within and outside the U.S.

U.S. G-SIBs, like us, are also required to comply with a rule regarding single counterparty credit limits, which imposes more stringent requirements for credit exposures to major financial institutions.

The New York State banking law imposes lending limits (which take into account credit exposure from derivative transactions) and other requirements that have in the past impacted and could in the future impact the manner and scope of GS Bank USA's activities.

The U.S. federal bank regulatory agencies have issued guidance that focuses on transaction structures and risk management frameworks and that outlines high-level principles for safe-and-sound leveraged lending, including underwriting standards, valuation and stress testing. This guidance has, among other things, limited the percentage amount of debt that can be included in certain transactions.

As a German credit institution, GSBE is subject to Volcker Rule-type prohibitions under German banking law and regulations because its financial assets exceed certain thresholds. Prohibited activities include (i) proprietary trading, (ii) high-frequency trading at a German trading venue, and (iii) lending and guarantee businesses with German hedge funds, German funds of hedge funds or any non-German substantially leveraged alternative investment funds, unless an exclusion or an exemption applies.

As part of its implementation of the Basel III Revisions, the E.U. introduced new restrictions on the provision of certain "core" banking services (i.e., deposit-taking, lending and the provision of commitments and guarantees) cross-border into the E.U. Contracts in place before June 2026 will be subject to a "grandfathering" provision and new core banking services will need to be executed out of our subsidiaries established in the E.U., including GSBE.

U.K. banks that have over £35 billion of core retail deposits are required to separate their retail banking services from their investment and international banking activities, commonly known as "ring-fencing." GSIB is not currently subject to the ring-fencing requirement.

CRA. In 2023, GS Bank USA ceased to be assessed as a "wholesale bank" for CRA and New York Community Reinvestment Act ("NYCRA") compliance purposes. GS Bank USA instead adopted a strategic plan that was approved by the FRB and NYDFS. The 2023 strategic plan will be in effect through 2028.

If GS Bank USA fails to maintain at least a "satisfactory" rating under the CRA, we would be subject to restrictions on certain new activities and acquisitions.

We are also subject to provisions of the New York Banking Law that impose continuing and affirmative obligations upon New York State-chartered banks, such as GS Bank USA, to serve the credit needs of its local community ("NYCRA"). Such obligations are substantially similar to those imposed by the CRA. The NYCRA requires the NYDFS to make a periodic written assessment of an institution's compliance with the NYCRA, and to make such assessment available to the public. The NYCRA also requires the NYDFS to consider the NYCRA rating when reviewing an application to engage in certain transactions, including mergers, asset purchases and the establishment of domestic branch offices, and provides that such assessment may serve as a basis for the denial of any such application.

Broker-Dealer and Securities Regulation

Our broker-dealer subsidiaries, including GSCO, are subject to regulations that cover all aspects of the securities business, including sales methods, trade practices, the use and safekeeping of clients' funds and securities, capital structure, record-keeping, the financing of clients' purchases, and the conduct of directors, officers and employees. In the U.S., the SEC is the federal agency responsible for the administration of the federal securities laws.

U.S. state securities and other U.S. regulators also have regulatory or oversight authority over GSCO.

The SEC requires lenders of securities to provide the material terms of securities lending transactions to FINRA and for FINRA to make certain terms publicly available. Reporting under this requirement will begin in January 2026.

The SEC requires broker-dealers to act in the best interest of their retail customers. SEC rules require broker-dealers to provide a standardized, short-form disclosure highlighting services offered, applicable standards of conduct, fees and costs, the differences between brokerage and advisory services, and any conflicts of interest. In addition, several states have adopted or proposed adopting uniform fiduciary duty standards applicable to broker-dealers.

The SEC has proposed four rules to reform the U.S. equity market structure, two of which have been adopted. In 2024, the SEC adopted a rule, effective December 2025, to revise and expand reporting and disclosure requirements relating to execution quality. In 2024, the SEC also adopted a rule to update the minimum pricing increments, with variable price increments based on the trading characteristics of stocks. In December 2024, the SEC stayed the implementation of this rule, which would apply starting in November 2025, pending the outcome of litigation challenging the rule.

The SEC, FINRA and regulators in various non-U.S. jurisdictions have imposed both conduct-based and disclosure-based requirements with respect to research reports and research analysts and may impose additional regulations.

The SEC prohibits participants involved in the creation of asset-backed securities, including any underwriter, placement agent, initial purchaser or sponsor of an asset-backed security (or any affiliate or subsidiary), from engaging in any transaction that involves or results in a material conflict of interest between the securitization participant and an investor in an asset-backed security, including reducing its exposure to the asset-backed securities, subject to certain exceptions.

The SEC requires that SEC-registered clearing agencies set up policies and procedures that would, among other things, require many market participants to clear cash and repurchase transactions involving U.S. Treasury securities through such a clearing agency by December 2025 for cash transactions and by June 2026 for repurchase transactions.

GSCO and other U.S. subsidiaries are also subject to rules adopted by U.S. federal agencies pursuant to the Dodd-Frank Act that require any person who organizes or initiates certain asset-backed securities transactions to retain a portion (generally, at least five percent) of any credit risk that the person conveys to a third-party. For certain securitization transactions, retention by third-party purchasers may satisfy this requirement.

In Europe, we provide broker-dealer services, including through GSBE, GSPIC and GSI, that are subject to oversight by European and national regulators. These services are regulated in accordance with E.U., U.K. and other national laws and regulations. These laws require, among other things, compliance with certain capital adequacy and liquidity standards, customer protection requirements and market conduct and trade reporting rules. Certain of our European subsidiaries are also regulated by the securities, derivatives and commodities exchanges of which they are members.

In the E.U. and the U.K., the Markets in Financial Instruments Directives ("MiFID II") and the Markets in Financial Instruments Regulations ("MiFIR") (as amended from time to time, including the proposed amendments to MiFID II and MiFIR), have established trading venue categories for the purposes of discharging the obligation to trade OTC derivatives on a trading platform, established enhanced pre- and post-trade transparency covering a wide range of financial instruments, placed volume caps on non-transparent liquidity trading for equities trading venues, limited the use of broker-dealer equities crossing networks and created a regime for systematic internalizers in certain financial instruments (which are investment firms that execute transactions outside a trading venue). Additional control requirements apply to algorithmic trading, high frequency trading and direct electronic access. Commodities trading firms are required to calculate their positions and adhere to specific position limits. MiFID II and MiFIR also require transaction reporting, transparency on costs and charges to clients for portfolio management and investment advice services, restrictions on the way investment managers can pay for the receipt of investment research, rules limiting the payment and receipt of soft commissions and other forms of inducements, and rules addressing bundling for broker-dealers between execution and other major services. Certain of our non-U.S. subsidiaries, including GSBE, GSI and GSIB, are subject to E.U. and U.K. regulation applicable to securitization activities, which will require them to conduct upfront due diligence and ongoing monitoring in connection with their investment in securitization positions and may impose ongoing risk retention and transparency requirements where they are acting as a sponsor, original lender or originator in respect of any E.U. or U.K. securitizations.

GSJCL, our regulated Japanese broker-dealer, is subject to capital requirements imposed by Japan’s Financial Services Agency. GSJCL is also regulated by the Tokyo Stock Exchange, the Bank of Japan and the Ministry of Finance, among others.

The Securities and Futures Commission in Hong Kong, the China Securities Regulatory Commission, the Reserve Bank of India, the Securities and Exchange Board of India, the Australian Securities and Investments Commission, the Australian Securities Exchange, the Monetary Authority of Singapore, the Korean Financial Supervisory Service and the Central Bank of Brazil, among others, regulate various of our subsidiaries and also have capital standards and other requirements comparable to the rules of the U.S. regulators.

Our exchange-based market-making activities are subject to extensive regulation by a number of securities exchanges. As a market maker on exchanges, we are required to maintain orderly markets in the securities to which we are assigned.

Swaps, Derivatives and Commodities Regulation

The commodity futures, commodity options and swaps industry in the U.S. is subject to regulation under the U.S. Commodity Exchange Act ("CEA"). The CFTC is the U.S. federal agency charged with the administration of the CEA. In addition, the SEC is the U.S. federal agency charged with the regulation of security-based swaps. The rules and regulations of various self-regulatory organizations, such as the Chicago Mercantile Exchange, other futures exchanges and the National Futures Association ("NFA"), also govern commodity futures, commodity options and swaps activities.

The terms “swaps” and “security-based swaps” include a wide variety of derivative instruments in addition to those conventionally referred to as swaps (including certain forward contracts and options), and relate to a wide variety of underlying assets or obligations, including currencies, commodities, interest or other monetary rates, yields, indices, securities, credit events, loans and other financial obligations.

CFTC rules require registration of swap dealers, mandatory clearing and execution of interest rate and credit default swaps and real-time public reporting and adherence to business conduct standards for all in-scope swaps. A number of these requirements, particularly those regarding recordkeeping and reporting, also apply to transactions that do not involve a registered swap dealer. GSCO and other subsidiaries, including GS Bank USA, GSBE, GSI and JANY, are registered with the CFTC as swap dealers. The CFTC has rules establishing capital requirements for swap dealers that are not subject to the capital rules of a prudential regulator, such as the FRB. The CFTC also has financial reporting requirements for covered swap entities and capital rules for CFTC-registered futures commission merchants that provide explicit capital requirements for proprietary positions in swaps and security-based swaps that are not cleared by a clearing organization. Certain of our registered swap dealers, including JANY, are subject to the CFTC’s capital requirements.

Our affiliates registered as swap dealers are subject to the margin rules issued by the CFTC (in the case of our non-bank swap dealers) and the FRB (in the case of GS Bank USA and GSBE). Inter-affiliate transactions under the CFTC and FRB margin rules are generally exempt from initial margin requirements.

Our affiliates registered as swap dealers are also subject to NFA regulation, including requirements pertaining to cybersecurity and supervision, and the NFA examines them for compliance with these requirements, as well as compliance with CFTC rules.

SEC rules govern the registration and regulation of security-based swap dealers. Security-based swaps are defined as swaps on single securities, single loans or narrow-based baskets or indices of securities. The SEC has adopted a number of rules for security-based swap dealers, including (i) capital, margin and segregation requirements; (ii) record-keeping, financial reporting and notification requirements; (iii) business conduct standards; (iv) regulatory and public trade reporting; and (v) the application of risk mitigation techniques to uncleared portfolios of security-based swaps. GSCO, GS Bank USA, GSI, GSBE and Goldman Sachs Financial Markets, L.P. ("GSFM") are registered with the SEC as security-based swap dealers and subject to the SEC's regulations regarding security-based swaps. The SEC has proposed additional regulations regarding security-based swaps that would, among other things, require public reporting of large positions in security-based swaps.

GS Bank USA and GSBE are also subject to the FRB's swaps margin rules. These rules require the exchange of initial and variation margin in connection with transactions in swaps and security-based swaps that are not cleared through a registered or exempt clearinghouse. GS Bank USA and GSBE are required to post and collect margin in connection with transactions with swap dealers, security-based swap dealers, major swap participants and major security-based swap participants, or financial end users.

The CFTC and the SEC have adopted rules relating to cross-border regulation of swaps and security-based swaps, and business conduct and registration requirements. The CFTC and the SEC have entered into agreements with certain non-U.S. regulators regarding the cross-border regulation of derivatives and the mutual recognition of cross-border execution facilities and clearinghouses, and have approved substituted compliance with certain non-U.S. regulations related to certain business conduct requirements and margin rules, among other requirements. The U.S. prudential regulators have not yet made a determination with respect to substituted compliance for transactions subject to non-U.S. margin rules.

Similar types of regulation have been proposed or adopted in jurisdictions outside the U.S., including in the E.U. and Japan. Under the European Market Infrastructure Regulation ("EMIR"), for example, the E.U. and the U.K. have established regulatory requirements relating to portfolio reconciliation and reporting, clearing certain OTC derivatives and margining for uncleared derivatives activities. In addition, under the European Markets in Financial Instruments Directive and Regulation, transactions in certain types of derivatives are required to be executed on regulated platforms or exchanges.

The CFTC has adopted rules that limit the size of positions in physical commodity derivatives that can be held by any entity, or any group of affiliates or other parties trading under common ownership or control. The CFTC position limits apply to futures on physical commodities and options on such futures, apply to both physically and cash settled positions and to swaps that are economically equivalent to such futures and options. The position limit rules initially impose limits in the spot month only (i.e., during the delivery period for the physical commodities, which is typically a period of several days).

JANY is authorized by the U.S. Federal Energy Regulatory Commission ("FERC") to sell wholesale physical power at market-based rates. As a FERC-authorized power marketer, JANY is subject to regulation under the U.S. Federal Power Act and FERC regulations and to the oversight of FERC. As a result of our investing activities, Group Inc. is also an “exempt holding company” under the U.S. Public Utility Holding Company Act of 2005 and applicable FERC rules.

In addition, as a result of our power-related and commodities activities, we are subject to energy, environmental and other governmental laws and regulations, as described in “Risk Factors — Legal and Regulatory — Our commodities activities, particularly our physical commodities activities, subject us to extensive regulation and involve certain potential risks, including environmental, reputational and other risks that may expose us to significant liabilities and costs” in Part I, Item 1A of our 2024 Form 10-K.

GSCO is registered with the CFTC as a futures commission merchant, and several of our subsidiaries, including GSCO, are registered with the CFTC and act as commodity pool operators and commodity trading advisors. GSFM is registered with the SEC as an OTC derivatives dealer.

Asset Management and Wealth Management Regulation

Our asset management and wealth management businesses are subject to extensive oversight by regulators around the world relating to, among other things, the fair treatment of clients, safeguarding of client assets, offerings of funds, marketing activities, transactions among affiliates and our management of client funds.

The federal securities laws impose fiduciary duties on investment advisers, including GSCO, Goldman Sachs Asset Management, L.P. and our other U.S. registered investment adviser subsidiaries, and SEC rules prescribe mandatory disclosures.

The SEC requires certain institutional investment managers that meet or exceed certain specified reporting thresholds to report on a monthly basis specific short position data and short activity data for equity securities. Reporting under this rule was required beginning in January 2025.

In 2024, the SEC issued guidance addressing the rules governing liquidity risk management of open-end management investment companies, such as mutual funds, and adopted amendments to the reporting requirements for certain registered investment companies, requiring such investment companies to, among other things, file reports about their portfolios and each of their portfolio holdings on a monthly basis within 30 days of the end of each month (compared to 60 days of the end of the fiscal quarter under the previous rule) and, for open-end management investment companies such as mutual funds, to identify and provide certain information about the service providers used to fulfill the rules governing liquidity risk management. Compliance with these amendments is required by November 17, 2025. Timely compliance with these accelerated or new reporting requirements will require us to enhance systems and disclosure controls and procedures.

Certain of our European subsidiaries, including GSBE in the E.U. and GSAMI in the U.K., are subject to MiFID II and/or related regulations (including the U.K. legislation making such regulations part of U.K. law), which govern the approval, organizational, marketing and reporting requirements of E.U. or U.K.-based investment managers and the ability of investment fund managers located outside the E.U. or the U.K. to access those markets. Goldman Sachs Asset Management BV is subject to similar requirements as a management company licensed under the E.U. Undertakings for Collective Investment in Transferable Securities ("UCITS") Directive and the E.U. Alternative Investment Fund Managers ("AIFM") Directive with additional authorizations for certain activities regulated under MiFID II. Our asset management business in the E.U. and the U.K. significantly depends on our ability to delegate parts of our activities to other affiliates.

GSAMI is also subject to the prudential regime for U.K. investment firms, the Investment Firms Prudential Regime, which governs the prudential requirements for U.K. investment firms prudentially regulated by the FCA.

Consumer Regulation

Our U.S. consumer-oriented activities are subject to supervision and regulation by the CFPB with respect to federal consumer protection laws, including laws relating to fair lending and the prohibition of unfair, deceptive or abusive acts or practices in connection with the offer, sale or provision of consumer financial products and services. Our consumer-oriented activities are also subject to various state and local consumer protection laws, rules and regulations, which, among other things, impose obligations relating to marketing, origination, servicing and collections activities in our consumer businesses. In addition, our U.K. consumer deposit-taking activities are subject to U.K. consumer protection laws and regulations.

Compensation Practices

Our compensation practices are subject to oversight by the FRB and, with respect to some of our subsidiaries and employees, by other regulatory bodies worldwide.

The FSB has released standards for implementation by local regulators that are designed to encourage sound compensation practices at banks and other financial companies. The U.S. federal bank regulatory agencies have also provided guidance designed to ensure that incentive compensation arrangements at banking organizations take into account risk and are consistent with safe and sound practices. The guidance sets forth the following three key principles with respect to incentive compensation arrangements: (i) the arrangements should provide employees with incentives that appropriately balance risk and financial results in a manner that does not encourage employees to expose their organizations to imprudent risk; (ii) the arrangements should be compatible with effective controls and risk management; and (iii) the arrangements should be supported by strong corporate governance. The guidance provides that supervisory findings with respect to incentive compensation will be incorporated, as appropriate, into the organization's supervisory ratings, which can affect its ability to make acquisitions or perform other actions. The guidance also notes that enforcement actions may be taken against a banking organization if its incentive compensation arrangements or related risk management, control or governance processes pose a risk to the organization's safety and soundness.

The Dodd-Frank Act requires U.S. financial regulators, including the FRB and SEC, to adopt rules on incentive-based payment arrangements at specified regulated entities having at least $1 billion in total assets. The U.S. financial regulators proposed revised rules in 2016, which have not been finalized. In accordance with an SEC rule, securities exchanges have adopted rules mandating, in the case of a restatement, the recovery or "clawback" of excess incentive-based compensation paid to current or former executive officers and requiring listed issuers to disclose any recovery analysis where recovery is triggered by a restatement.

The NYDFS' guidance emphasizes that any incentive compensation arrangements tied to employee performance indicators at banking institutions regulated by the NYDFS, including GS Bank USA, must be subject to effective risk management, oversight and control.

In the E.U., certain provisions in the CRR and CRD are designed to meet the FSB's compensation standards. These provisions limit the ratio of variable to fixed compensation of all employees at GSBE and of certain employees at our other operating subsidiaries in the E.U., including those employees identified as having a material impact on the risk profile of regulated entities. CRR II and CRD V amended certain aspects of these rules, including, by increasing minimum variable compensation deferral periods.

The E.U. and the U.K. have each also introduced investment firm regimes, including rules regulating compensation for certain persons providing services to certain investment funds.

Anti-Money Laundering and Anti-Bribery Rules and Regulations

The U.S. Bank Secrecy Act, as amended ("BSA"), including by the USA PATRIOT Act of 2001 and the Anti-Money Laundering Act of 2020 ("AMLA"), contains anti-money laundering and financial transparency laws and authorizes or mandates the promulgation of various regulations applicable to financial institutions, including standards for verifying client identification at account opening, and obligations to monitor client transactions and report suspicious activities. Through these and other provisions, the BSA seeks, among other things, to promote the identification of parties that may be involved in terrorism, money laundering or other suspicious activities.

The AMLA was intended to comprehensively reform and modernize U.S. anti-money laundering laws. Among other things, the AMLA codifies a risk-based approach to anti-money laundering compliance for financial institutions; requires the U.S. Department of the Treasury to periodically promulgate priorities for anti-money laundering and countering the financing of terrorism; requires the development of standards by the U.S. Department of the Treasury for testing technology and internal processes for BSA compliance; expands enforcement- and investigation-related authority, including a significant expansion in the available sanctions for certain BSA violations; and expands BSA whistleblower incentives and protections. Certain statutory provisions in the AMLA require rulemakings beyond those that have already been finalized, reports and other measures. The impact of the AMLA will depend on, among other things, these additional rulemakings and implementation guidance. The Financial Crimes Enforcement Network (FinCEN), a bureau of the U.S. Department of Treasury, has issued the priorities for anti-money laundering and countering the financing of terrorism, as required under the AMLA. The priorities include: corruption, cybercrime, terrorist financing, fraud, transnational crime, drug trafficking organization activity, human trafficking and proliferation financing.

We are subject to other laws and regulations worldwide relating to anti-money laundering and financial transparency, including the E.U. Anti-Money Laundering Directives. In addition, we are subject to the U.S. Foreign Corrupt Practices Act ("FCPA"), the U.K. Bribery Act and other laws and regulations worldwide regarding corrupt and illegal payments, or providing anything of value, for the benefit of government officials and others. The scope of the types of payments or other benefits covered by these laws is very broad. These laws and regulations include requirements relating to the identification of clients, monitoring for and reporting suspicious transactions, monitoring direct and indirect payments to politically exposed persons, providing information to regulatory authorities and law enforcement agencies, and sharing information with other financial institutions.

Privacy and Cybersecurity Regulation

Our businesses are subject to numerous laws and regulations relating to the privacy of information regarding clients, employees and others. These include, but are not limited to, the GLB Act, the California Consumer Privacy Act of 2018, as amended by the California Privacy Rights Act of 2020 ("CCPA"), the E.U.'s General Data Protection Regulation ("GDPR"), the U.K.'s Data Protection Act 2018 and U.K. GDPR, the Swiss Federal Data Protection Act, the Japanese Personal Information Protection Act, the Personal Information Protection Law of the People's Republic of China, the Australian Privacy Act 1988, and India's Digital Personal Data Protection Act. Generally, privacy laws impose obligations with regard to the collection, use and disclosure of personal information and require public disclosure of privacy practices. Some privacy laws offer individuals certain rights about how their personal information is processed, provide for significant penalties for non-compliance, and, under certain circumstances, impose requirements for transfers of personal data across national borders.

In 2023, the SEC proposed to amend Regulation Systems Compliance and Integrity ("SCI"). The proposed amendments to Regulation SCI would, among other things, expand the types of entities covered by the regulation, require additional policies and procedures to address cybersecurity risks, and require disclosure of additional types of cybersecurity events to the SEC.

In 2024, the SEC amended Regulation S-P that implements the GLB Act. The amendments to Regulation S-P require broker-dealers, investment companies and investment advisers registered with the SEC to adopt written policies and procedures for incident response programs to address unauthorized access to or use of customer information. The amended Regulation S-P requires covered entities to notify within 30 days individuals affected by an incident involving sensitive customer information and provide them with details about the incident and other information intended to help affected individuals respond appropriately. Larger covered entities, such as GSCO, will have until December 2025, and smaller covered entities will have until June 2026, to comply with the amended Regulation S-P. In 2024, the California Privacy Protection Agency proposed regulations under the CCPA relating to cybersecurity audits, risk assessments, and automated decision-making technology.

Our businesses are also subject to laws and regulations governing cybersecurity and related risks, and which require regulatory disclosures, and, in some instances, individual disclosures, of certain security incidents. These include, but are not limited to, the NYDFS Cybersecurity Requirements for Financial Services Companies. The NYDFS also requires financial institutions regulated by the NYDFS, including GS Bank USA, to, among other things, (i) establish and maintain a cybersecurity program designed to ensure the confidentiality, integrity and availability of their information systems; (ii) implement and maintain a written cybersecurity policy setting forth policies and procedures for the protection of their information systems and nonpublic information; and (iii) designate a Chief Information Security Officer. In 2023, the NYDFS adopted amendments to its cybersecurity regulations that will impose heightened or additional requirements with respect to cybersecurity incident notifications, risk management and governance. Most of these amendments became effective in 2024 although certain amendments have a longer transition period and become effective in 2025.

In 2023, the E.U. Digital Operational Resilience Act ("DORA") became effective and has applied from January 2025. DORA requires E.U. financial entities, such as GSBE, to have a comprehensive governance and control framework for the management of information and communications technology risk. In addition, in 2024, the E.U. Artificial Intelligence Act ("E.U. AI Act") became effective. Certain provisions of the E.U. AI Act have applied from February 2025, with other provisions applying between August 2025 and August 2027. The E.U. AI Act establishes rules for placing on the market, putting into service, and using artificial intelligence systems in the E.U.

In 2024, the CFPB adopted a rule regarding personal financial data rights that requires financial institutions that offer consumer deposit accounts and issue credit cards, such as GS Bank USA, to provide consumers electronic access to at least 24 months of transaction data and certain account information and are prohibited from imposing any fees or charges for maintaining or providing access to such data. The rule also imposes data accuracy, retention and other obligations, and data use limitations and other obligations on entities obtaining access to such personal financial data, such as GSCO. The current compliance deadline for large financial institutions, including GS Bank USA, is April 1, 2026. However, this timeline is potentially subject to change as a result of CFPB action or currently pending litigation.

SI.8. Principal Officers

Set forth below are the name, present title, principal occupation and certain biographical information for our executive officers, as of December 31, 2024. Our executive officers have been appointed by, and serve at the pleasure of, our Board.

- **Denis P. Coleman III.** Mr. Coleman has been Chief Financial Officer since January 2022. He had previously served as Deputy Chief Financial Officer from September 2021 and, prior to that, Co-Head of the Global Financing Group from June 2018 to September 2021. From 2016 to June 2018, he was Head of the EMEA Financing Group, and from 2009 to 2016 he was Head of EMEA Credit Finance in London.

- **Sheara J. Fredman.** Ms. Fredman has been Controller and Chief Accounting Officer since November 2019. She had previously served as Head of Regulatory Controllers from September 2017 and, prior to that, she had served as Global Product Controller.

- **Alex Golten.** Mr. Golten has been Chief Risk Officer since January 2025. He had previously served as Head of Finance Risk from July 2024 to December 2024, as Head of Enterprise Risk from June 2022 to July 2024 and as Chief Market Risk Officer from November 2020 to January 2025. Prior to that, he was Chief Credit Risk Officer from January 2018 to April 2021.

- **Carey Halio.** Ms. Halio has been Global Treasurer since May 2024. She had previously served as Chief Strategy Officer from October 2022 to June 2024, and as Global Head of Investor Relations from May 2021 to April 2024. Prior to that, she was Chief Executive Officer of GS Bank USA from October 2018 to May 2021, Deputy Treasurer from September 2019 to May 2021 and Chief Financial Officer of GS Bank USA from June 2014 to September 2018.

- **John F.W. Rogers.** Mr. Rogers has been an Executive Vice President since April 2011 and Secretary to the Board since December 2001. He also served as Chief of Staff from December 2001 to September 2023.

- **Kathryn H. Ruemmler.** Ms. Ruemmler has been the Chief Legal Officer, General Counsel and Secretary since March 2021, and was previously Global Head of Regulatory Affairs from April 2020. From June 2014 to April 2020, Ms. Ruemmler was a Litigation Partner at Latham & Watkins LLP, a global law firm, where she was Global Chair of the White Collar Defense and Investigations practice.

- **David Solomon.** Mr. Solomon has been Chairman of the Board since January 2019 and Chief Executive Officer and a director since October 2018. He had previously served as President and Chief or Co-Chief Operating Officer from January 2017 and Co-Head of the Investment Banking Division from July 2006 to December 2016.

- **John E. Waldron.** Mr. Waldron has been President and Chief Operating Officer since October 2018. He had previously served as Co-Head of the Investment Banking Division from December 2014. Prior to that he was Global Head of Investment Banking Services/Client

Coverage for the Investment Banking Division and had oversight of the Investment Banking Services Leadership Group, and from 2007 to 2009 was Global Co-Head of the Financial Sponsors Group.

SI.9. Description of Material Management Information Systems

Goldman Sachs has a long-standing history of investing in technology. Our MIS are designed to support and enable our core functions across all service and business units. As an integral component of the 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. For example, our broker-dealer subsidiary in Tokyo books its secured funding transactions (such as repos) into the same technology platform as our broker-dealer subsidiaries in London, New York or elsewhere. This results in a high degree of consistency in both functionality and reporting to enable key decision-making at all levels.

As a firm, 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 systems 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 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.

Appendix I: Definition of Key Terms

Definition of key terms:	
2023 Resolution Plan	Plan for the rapid and orderly resolution of Goldman Sachs under the Bankruptcy Code that we submitted to the Agencies on June 30, 2023.
2024 Feedback Letter	Letter to The Goldman Sachs Group, Inc. dated June 20, 2024, in which the Agencies set out their findings regarding our 2023 Resolution Plan.
2025 Plan	The Targeted Resolution Plan submitted to the Agencies on June 30, 2025.
The Plan	The Targeted Resolution Plan submitted to the Agencies on June 30, 2025 together with the plan for the rapid and orderly resolution of Goldman Sachs under the Bankruptcy Code that we submitted to the Agencies on June 30, 2023.
2019 Guidance	Final guidance for the 2019 and subsequent resolution plan submissions by the eight largest, complex U.S. banking organizations, published in the Federal Register on February 4, 2019.
Capabilities	The resolution-critical capabilities described in the 2019 Guidance that the Agencies expect us to have developed in order to demonstrate that we are able to mitigate any obstacles to the successful implementation of our preferred resolution strategy.
Core Business Lines	Those businesses, including their associated operations, services, functions and support, the failure of which would, in the firm's view, result in a material loss of revenue, profit or franchise value.
Critical Operations	Those operations, including their associated services functions and support, the failure or discontinuation of which would pose a threat to the financial stability of the United States, in the view of the firm or as jointly directed by the Agencies.
ISDA Resolution Stay Protocols	International Swaps and Derivatives Association Universal Resolution Stay Protocol ("ISDA Universal Protocol") and the International Swaps and Derivatives Association 2018 U.S. Resolution Stay Protocol ("U.S. ISDA Protocol").
Material Entity	An entity that is significant to the maintenance of a critical operation or core business line.
Material Operating Entity	A material entity that is an operating entity.
Material Service Entity	A material entity that is a service entity.
Our Board	The Board of Directors of The Goldman Sachs Group, Inc.
Participating Material Entity	A material entity, other than Group Inc. or Funding IHC, that is a party to the Capital and Liquidity Support Agreement.
Participating Material Operating Entity	A participating material entity that is an operating entity.
Participating Material Service Entity	A participating material entity that is a service entity.
Preferred Resolution Strategy	The strategy by which, at the end of the runway, Group Inc. and JANY enter Chapter 11 bankruptcy proceedings while other material entities continue outside proceedings and wind down over time.
Qualified Financial Contract	A financial contract that is exempt from the automatic bankruptcy stay that would otherwise prohibit creditors and counterparties from terminating, offsetting against collateral, or taking other mitigating action with respect to their contracts with a company that has entered bankruptcy, insolvency or similar proceedings.
Runway	The ten-day period immediately preceding Group Inc.'s bankruptcy filing.
Volcker Rule	The rules and regulations promulgated pursuant to Section 619 of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Appendix II: Acronym definitions

Acronym definitions:	
ASF	Available Stable Funding
AUM	Assets Under Management
BHC	Bank Holding Company
CCAR	Comprehensive Capital and Analysis Review
CECL	Current Expected Credit Losses
CET1	Common Equity Tier 1
CIEs	Consolidated Investment Entities
CLSA	Capital and Liquidity Support Agreement
CWS	Corporate Workplace Solution
DFAST	Dodd-Frank Act Stress Test
EMEA	Europe, Middle East and Africa
ERC	Enterprise Risk Committee
ETFs	Exchange-Traded Funds
FALCO	Firmwide Asset Liability Committee
FHC	Financial Holding Company
FICC	Fixed Income, Currency and Commodities
FMU	Financial Market Utility
G-SIB	Globally Systemically Important Bank
GCLA	Global Core Liquid Assets
HCM	Human Capital Management
HQLA	High-Quality Liquid Assets
IA	Internal Audit
IDI	Insured Depository Institution
ISDA	International Swaps and Derivatives Association
LCR	Liquidity Coverage Ratio
LER	Legal Entity Rationalization
LEWG	Legal Entity and Booking Model Working Group
LTST	Long-Term Stress Test
MIS	Management Information System
MLOi	Modeled Liquidity Outflow and Intraday
MREL	Minimum Requirement for Own Funds and Eligible Liabilities
NSFR	Net Stable Funding Ratio
OTC	Over-The-Counter
PCS	Payments, Clearing and Settlement
QFCs	Qualified Financial Contracts
RCAP	Resolution Capital Adequacy and Positioning
RCEN	Resolution Capital Execution Need
RLAP	Resolution Liquidity Adequacy and Positioning
RLEN	Resolution Liquidity Execution Need
RSF	Required Stable Funding
RWAs	Risk-Weighted Assets
SCB	Stress Capital Buffer

Acronym definitions:	
SLR	Supplementary Leverage Ratio
TLAC	Total Loss-Absorbing Capacity
VaR	Value-at-Risk