Resolution Plan

PUBLIC SECTION • JULY 1, 2019

BNY MELLON

* * *

Our 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 this public section constitute "forward-looking statements" within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Words such as "estimate," "forecast," "project," "anticipate," "target," "expect," "intend," "commit," "believe," "plan," "goal," "could," "should," "may," "will," "ensure," "assure," "strategy," "opportunities," "trends" and words of similar meaning signify forward-looking statements, as do statements that relate to our future plans, objectives and strategies and to the objectives and effectiveness of our risk management, capital and liquidity policies. These statements are based on the current beliefs and expectations of our management and are subject to significant risks and uncertainties that are subject to change based on various important factors (some of which are beyond our control). Actual outcomes may differ materially from those set forth in the forward-looking statements as a result of numerous factors, including those described under "Forward-Looking Statements" and "Risk Factors" in Parent's 2018 Annual Report and Form 10-Q for the period ended March 31, 2019, and in other filings with the SEC, which we make available on the Investor Relations section of our corporate website at www.bnymellon.com.

Our Resolution Plan is not binding on a bankruptcy court, our regulators or any other resolution authority, and in the event of the resolution of our firm, the strategies implemented by us, our regulators or any other resolution authority could differ, possibly materially, from the strategies we have described. In addition, our expectations and projections regarding the implementation of our resolution strategies are based on scenarios that are hypothetical, and may not reflect events to which we are or may become subject. Our Resolution Plan is also based on many significant assumptions, including with respect to the effects of the events that could lead to our failure, the actions of clients, financial market utilities, agent banks and regulators, Parent's financial resources and its ability to provide financial resources to its material entities prior to its filing for bankruptcy proceedings, the ability to sell, wind down or transfer objects of sale, and the ability to effect a disposition of RemainCo. None of these assumptions may prove to be correct in an actual resolution scenario. As a result, our resolution strategies in an actual resolution scenario, or the outcomes of our resolution strategies, could differ, possibly materially, from those we have described.

We have included information about actions we have undertaken in connection with resolution planning. The statements with respect to these actions and their impact and effectiveness are forward-looking statements, based on our current expectations regarding our ability to complete and effect those actions and any actions that third parties must take, or refrain from taking, to permit us to complete those actions. As a result, the timing of those actions may change, possibly materially, from what is currently expected. All forward-looking statements speak only as of the date on which such statements are made and we do not undertake to update the forward-looking statements to reflect the impact of circumstances or events that may arise after the date of the forward-looking statements.

The information contained in our Resolution Plan, including the designation of "material entities" and "core business lines," has been prepared in accordance with applicable regulatory requirements and guidance. Differences in the presentation of information concerning our businesses and operations contained in this public section, relative to how we present such information for other purposes, are solely due to our efforts to comply with the rules governing the submission of resolution plans and do not reflect changes to our organizational structure, business practices or strategy.

Financial information presented herein is as of December 31, 2018, unless noted otherwise.

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1. INTRODUCTION TO RESOLUTION PLANNING AT BNY MELLON

What is a resolution plan?

In the aftermath of the 2008 financial crisis, regulatory authorities started requiring large "systemically important" financial institutions, or SIFIs, to submit resolution plans. Also known as a living will, a resolution plan describes the institution's strategy for how it could safely fail and maintain the key functions that it provides to the market, without causing financial instability or requiring taxpayer funds.

Resolution planning is important given our role as a global financial intermediary. We play a vital role in global markets and economies, enabling them to function and prosper. Among other services that we provide, we are a global custodian and financial intermediary supporting broker-dealer, asset manager, banking, corporate and government clients across a wide range of financial services activities.

With a rich history of maintaining our financial strength and stability through all business cycles, we remain confident in our ability to withstand the impact of a wide range of severe stress scenarios while continuing to provide services to clients and markets. Unlike a typical retail, commercial or investment bank, our businesses are largely fee-based, and the vast majority of these fees are recurring. This helps us maintain a strong, highly liquid balance sheet with a solid capital position, enhancing our resiliency.

Although the risk of our failure is extremely low, we understand the importance of having an effective resolution plan.

Resolvability and resiliency

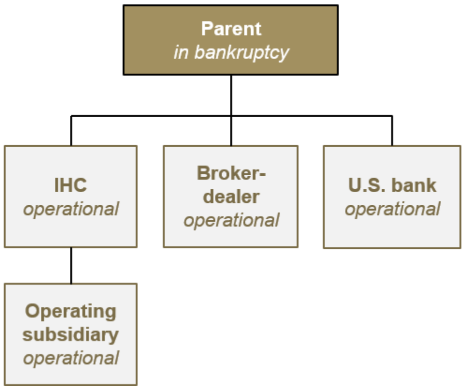
Resolvability: Resolution planning is designed to ensure that SIFIs are resolvable—meaning they could fail in an orderly manner under the Bankruptcy Code, without causing financial instability and without relying on taxpayer funds.

Resiliency: Other regulatory changes since the financial crisis, such as increased capital and liquidity requirements, are designed to make SIFIs more resilient, meaning they would be less likely to fail in the first place.

We take our resolution planning efforts seriously. We believe no firm should be "too big to fail" and that, regardless of size, financial institutions should be able to be resolved without taxpayer or U.S. government support. We endorse the concept of resolution planning as a key element of risk management to protect the soundness of the global financial system. Through our comprehensive governance processes, resolution planning considerations are embedded into our business-as-usual operations.

What is an SPOE strategy?

Under an SPOE strategy, only the parent financial holding company fails, while other subsidiary entities remain open for business and do not themselves enter bankruptcy proceedings.



Critical operations, core business lines and material entities

Critical operations are a SIFI's operations, the failure or discontinuance of which could threaten U.S. financial stability.

Core business lines are a SIFI's businesses that upon failure would result in a material loss of firm revenue, profit or franchise value.

Material entities are entities that are important to the activities of a SIFI's critical operations or core business lines.

We have an effective resolution strategy. Our Single Point of Entry, or SPOE, strategy provides for continuity of the key activities we perform and avoids the possibility of multiple, competing insolvency proceedings, thereby minimizing the risk that failure could damage the broader financial system.

Under our strategy, only our Parent would enter bankruptcy proceedings and only Parent shareholders and creditors would be expected to sustain losses. Prior to filing for bankruptcy, substantially all of Parent's remaining assets would be transferred to our intermediate holding company—the IHC—which would provide capital and liquidity to the other material entities, as and when needed, to help ensure their financial health and ongoing operations. Our material entities would remain well capitalized and sufficiently liquid, and our firm would be streamlined as we sell certain businesses. Following these sales, we anticipate that a smaller organization would exit resolution through sale or IPO of our remaining business, including our custody business.

Our resolution strategy is comprehensive, actionable and flexible.

Comprehensive: Our resolution strategy covers all of the systemically important activities in which we engage, across core business lines, critical operations and material entities, and addresses all of the key issues essential to the successful execution of our strategy. For example, we identify and address potential risks to the continuity of key interconnections across our firm to ensure the ongoing operation of our systemically important activities.

Actionable: Our corporate and capital structure makes our SPOE strategy executable in a real-world crisis. We maintain substantial long-term loss absorbing debt to allow for the recapitalization of the firm if Parent were to file for bankruptcy. We also have an intermediate holding company—the IHC—to facilitate the provision of capital and liquidity resources to our material entities. In addition, we have a governance structure that would enable us to take appropriate and timely actions to facilitate the execution of our strategy, underpinned by approximately 70 action-oriented playbooks and plans.

Flexible: We believe our resolution strategy would be effective under a wide range of market and firm-specific stresses. We have financial forecasting capabilities that enable us to manage financial resources across all stress levels and in various market conditions. We also have detailed plans to support the divestiture of discrete businesses following Parent's bankruptcy filing, providing optionality to support financial strength and operational continuity.

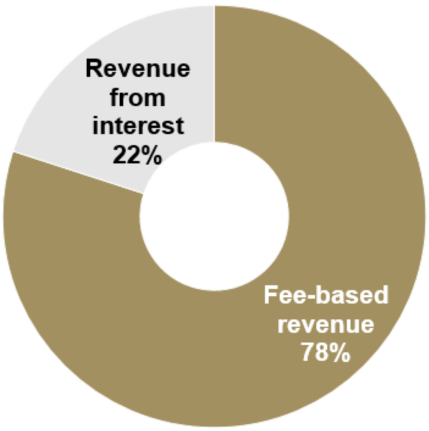
The remainder of this public section continues in the following manner:

- **Section 2** describes our role as a global financial intermediary, the reduced risks posed by our business model and information about our core business lines and material entities.
- **Section 3** explains our resolution strategy in more detail, linking it to our framework for monitoring and actively managing stress—our Crisis Continuum Framework.
- **Section 4** describes key topics relevant for resolution planning and our various resolution-related capabilities, including:
    - **Capital and Liquidity**: Capabilities to support our financial viability in extreme stress and ensure that we have sufficient capital and liquidity to support our strategy;
    - **Governance Mechanisms**: Mechanisms that enable us to respond effectively to stress and operationalize our strategy;
    - **Operational**: Capabilities to ensure that we have the ability to execute our strategy, including: maintaining our payment, clearing and settlement activities; managing, identifying and valuing collateral; providing necessary data and reports through our management information systems; and maintaining continuity of shared services that support critical operations;
    - **Legal Entity Rationalization**: Criteria and governance to help ensure we maintain a rational legal entity structure that supports resolvability; and
    - **Separability**: Optionality in our strategy to divest businesses under a variety of market conditions.
- **Section 5** describes our governance process supporting the development of our Resolution Plan.

Additional background information required by the Title I Rule is included in **Section 6**.

2. OVERVIEW OF BNY MELLON

Our fee-based business model
(numbers are approximate)



Strong, safe, trusted counterparty

Our reputation as a strong, safe, trusted counterparty reflects our success in building a solid balance sheet and robust risk culture. Our strategy is one of not incurring outsized risk to reach for returns.

Our Business

BNY Mellon is a global investments company dedicated to helping its clients manage and service their financial assets throughout the investment lifecycle. Whether providing financial services for institutions, corporations or individual investors, BNY Mellon delivers informed investment management and investment services globally.

Our Business Model Supports Resolvability

Unlike a typical retail, commercial or investment bank, our business model is characterized by fee-based businesses. We do not provide traditional banking services to retail clients, other than to high-net-worth clients, nor do we lend to consumers in any significant way or operate any consumer bank branches. We do not engage in material derivatives market-making, and our low value-at-risk foreign exchange trading business is comparatively small and is conducted for clients.

We generate 78% of our revenues from fees, the vast majority of which are recurring. This business model helps us maintain a strong balance sheet with highly liquid assets and a strong capital position. Net interest revenue is a significantly smaller part of our revenues than for most U.S. G-SIBs.

The composition of our balance sheet differs from that of most retail and commercial banks, which typically have a larger proportion of retail or commercial loans, or investment banks, which typically have trading portfolios. Loans comprise only 16% of our total assets. The majority of the securities we hold are of high quality and short-term duration, with 95% of our investment securities portfolio rated AAA/AA-. Our liabilities, primarily deposits, are largely tied to operational services and invested in liquid assets.

2.1 CORE BUSINESS LINES AND MATERIAL ENTITIES

Designation of our Core Business Lines and Material Entities for Resolution Planning

For resolution planning purposes, we designate certain of our business lines as core business lines and certain of our entities as material entities. These designations focus our resolution planning efforts on the business lines that are important to our revenue, profitability and franchise value as well as the entities that are important to these business lines and to our critical operations. We make these determinations following a well-defined process.

Our Core Business Lines

We have two business segments: Investment Services and Investment Management. To determine which of our business lines within those segments are "core," we analyze all of our businesses to determine which, if they were to fail, would result in a material loss of revenue, profit or franchise value to our firm. Our four core business lines are described below.

Core Business Lines

Investment Management

Our Investment Management business encompasses a number of investment specialists that deliver a highly diversified portfolio of investment strategies independently, and through our global distribution network, to institutional and retail clients globally. Each investment specialist follows its own investment approach to innovate and develop investment solutions designed to deliver performance returns and outcomes that meet the investing goals of an increasingly sophisticated client base.

Corporate Trust

Our Corporate Trust business delivers a full range of issuer and related investor services, including trustee, paying agency, fiduciary, escrow and other financial services. We are a leading provider to the debt capital markets, providing customized and market driven solutions to investors, bondholders and lenders.

Asset Servicing

Our Asset Servicing business provides a comprehensive suite of solutions. As one of the largest global custody and fund accounting providers and a trusted partner, we offer services for the safekeeping of assets in capital markets globally as well as alternative investment and structured product strategies. We provide custody and foreign exchange services, support exchange-traded funds and unit investment trusts and provide our clients outsourcing capabilities. We deliver securities lending and financing solutions on both an agency and principal basis. Our market leading liquidity services portal enables cash investments for institutional clients and includes fund research and analytics.

Pershing

Pershing provides global financial solutions to advisors, asset managers, broker-dealers, family offices, fund managers, registered investment advisor firms and wealth managers. Our businesses and technical solutions include custody, global clearing and settlement in equities, fixed income, annuities and other securities, delivering dependable operational support, robust trading services, flexible technology, an expansive array of investment and retirement solutions, and practice management support.

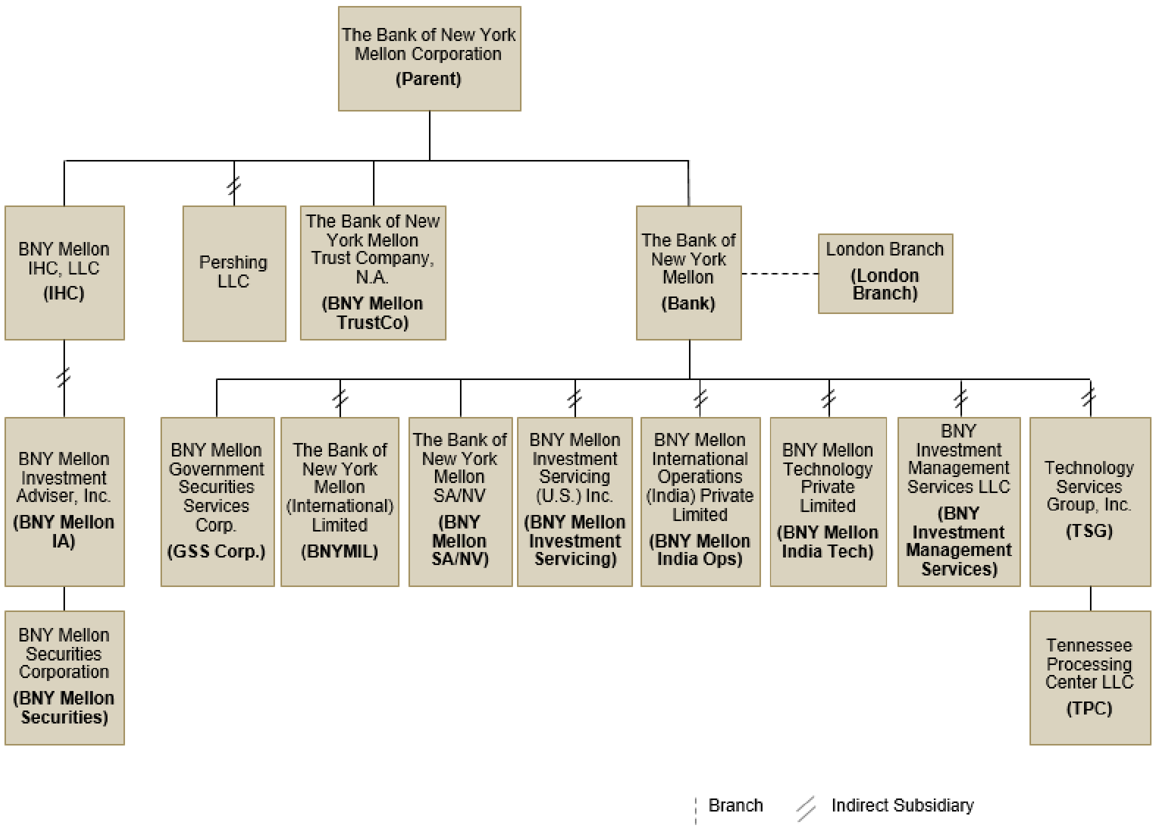
Additional information related to our businesses is contained in our reports filed with the SEC, including the 2018 Annual Report, the Quarterly Reports on Form 10-Q and the Current Reports on Form 8-K, available at www.bnymellon.com.

Our Material Entities

To determine which of our entities are "material," we examine all of our subsidiaries, including foreign offices and branches, and use various quantitative and qualitative criteria to determine which are significant to the activities of our core business lines or critical operations.

Quantitative criteria we assess include an entity's contribution of revenues, assets and liabilities, deposits, employees, real estate, and key FMI memberships. Qualitative criteria we assess include, for example, assessments of the kind of support (e.g., operational or financial) provided by an entity to a core business line or to a critical operation. We consider whether an entity has been part of a recent significant structural change to our organization and may therefore be more important than previously considered. We assess the importance of the entity in the context of our firm's failure. We also consider whether it would be operationally feasible for an entity's activities to be stopped, substituted or shifted to another of our entities and whether doing so would impact the successful execution of our resolution strategy.

The figure below illustrates the material entities within our corporate hierarchy, and a brief overview of each material entity is provided on the following page. Please refer to Section 6.1 for more detailed information about each of our material entities, including our rationale for designating each material entity.



The Bank and its material entity branch and subsidiaries

The Bank of New York Mellon

The Bank is a New York state-chartered bank and an FDIC-insured depository institution. The Bank has various non-U.S. branches.

London Branch of The Bank of New York Mellon

London Branch is a branch of the Bank located in London that supports Asset Servicing and Corporate Trust, among other businesses and shared services.

The Bank of New York Mellon SA/NV

BNY Mellon SA/NV is a bank licensed in Belgium and headquartered in Brussels. It supports Asset Servicing, among other businesses.

BNY Mellon Technology Private Limited

BNY Mellon India Tech is an India-based service entity that provides IT services to our firm, including network monitoring of IT infrastructure, IT call center and help desk support and software development.

Technology Services Group, Inc.; Tennessee Processing Center LLC

TSG and its subsidiary **TPC** are both U.S.-based service entities that own and operate a majority of our technology infrastructure.

BNY Investment Management Services LLC

BNY Investment Management Services is a U.S.-based service entity that provides operational support for multiple business units including Asset Servicing.

BNY Mellon Investment Servicing (US) Inc.

BNY Mellon Investment Servicing is a U.S.-based service entity that provides operational support for certain functions of Asset Servicing.

The Bank of New York Mellon (International) Limited

BNYMIL is a U.K.-based bank that provides services to Asset Servicing clients, particularly custody and depositary services. BNYMIL also provides fund accounting and transfer agency services.

BNY Mellon Government Securities Services Corp.

GSS Corp. is a U.S.-based operating subsidiary that houses the operations and technology supporting our U.S. government securities clearing and settlement and U.S. tri-party repo clearing and settlement services.

BNY Mellon International Operations (India) Private Limited

BNY Mellon India Ops is an India-based service entity that provides middle and back-office operational support to our firm.

Material entities outside the Bank chain (all located in the United States)

The Bank of New York Mellon Corporation

Parent is a bank holding company and a financial holding company headquartered in New York. Parent is subject to supervision by the Federal Reserve.

Pershing LLC

Pershing LLC is an SEC-registered broker-dealer that is the main operating entity for our Pershing business. Pershing LLC serves a broad array of clients including broker-dealers, independent registered investment advisors, hedge funds, '40 Act Funds and other financial intermediaries who conduct investment activities on behalf of their clients or their firm accounts.

BNY Mellon IHC, LLC

IHC is a wholly-owned subsidiary of Parent. Pursuant to the Support Agreement, Parent transferred its intercompany loans and most of its cash to the IHC. Accordingly, the IHC is responsible for providing resources to other entities of our firm in BAU as needed. Before Parent's bankruptcy filing, Parent would contribute substantially all of its remaining assets to the IHC, and the IHC would continue to provide resources to other entities after Parent's bankruptcy filing, allowing for financial resources to be flexibly allocated on an ongoing basis to material entities in need after Parent files for bankruptcy.

BNY Mellon Investment Adviser, Inc.

BNY Mellon IA serves as adviser and administrator to the Dreyfus money market funds. It is registered with the SEC as an investment adviser and is regulated under the Investment Advisers Act of 1940.

The Bank of New York Mellon Trust Company, N.A.

BNY Mellon TrustCo is a national banking association that performs front office administrative activities principally for fiduciary, agency and custody accounts related to our Corporate Trust business.

BNY Mellon Securities Corporation

BNY Mellon Securities is a SEC-registered broker-dealer and member of FINRA that provides underwriting, distribution and shareholder services to support the Dreyfus money market funds and various other types of funds managed by BNY Mellon IA. BNY Mellon Securities also provides shareholder services to retail and institutional money market mutual fund investors and to the funds' intermediary partners.

3. OVERVIEW OF OUR RESOLUTION STRATEGY

Our strategy provides for the continuity of the key activities we perform and avoids the need for separate resolution proceedings for our subsidiaries. If we were to fail, only our Parent would enter bankruptcy proceedings, absorbing losses of the firm. Our other material entities would remain adequately funded and operational and continue to support our core business lines and critical operations.

Going Concern	No Competing Resolution Proceedings
Under the SPOE strategy, our material entity subsidiaries would remain going concerns, which would preserve their value for the benefit of Parent's creditors and reduce the risk of market disruption. Because our material entities would be sufficiently funded despite Parent's bankruptcy, our core business lines and critical operations would continue to operate without our clients experiencing disruption in the services we provide.	Our SPOE strategy involves only one resolution proceeding—the bankruptcy proceeding of Parent under Chapter 11 of the Bankruptcy Code. A single resolution proceeding removes the possibility of multiple, competing resolution proceedings and reduces the risk that regulators in different jurisdictions do not cooperate or that contractual counterparties of our material entities could exercise termination rights.

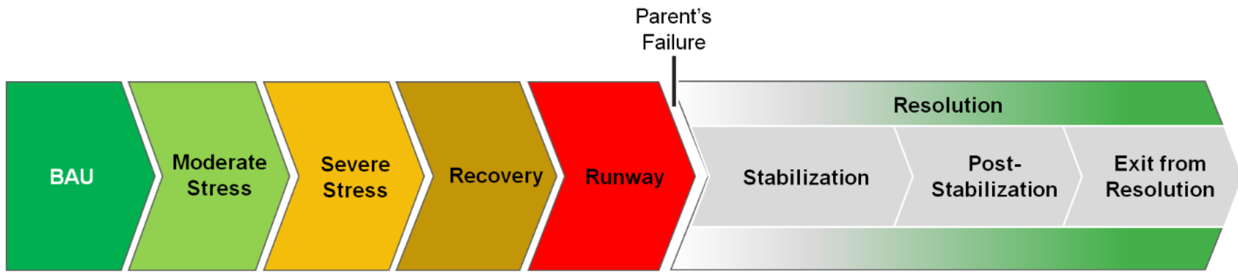
Continuity		
Continuity of Critical Services	**Continuity of Custodial Arrangements**	**Continuity of Access to Financial Market Utilities and Agent Banks**
Our material entities would remain solvent and operational, minimizing the possibility of disruptions to critical services that are important to the continuity of our core business lines and critical operations.	As a global custody bank, ensuring continuity of our custodial arrangements would help provide for our orderly resolution. Under our strategy, the Bank—which holds the majority of our clients' custodial accounts—would remain solvent and well-capitalized even after Parent files for bankruptcy, reducing clients' incentive to transfer their custodial accounts to a third party.	By providing for our material entities to remain operational after Parent's bankruptcy, the strategy facilitates continuity of access to financial market utilities and agent banks within the framework of our existing membership arrangements and contractual relationships. Actions to ensure continued access to financial market utilities and agent banks are described in more detail in Section 4.4.1.

To identify and facilitate the management of a material financial stress, we have a Crisis Continuum Framework. The Crisis Continuum Framework would govern our decision-making in stress and throughout the Resolution period after Parent fails. Our Crisis Continuum Framework has the following components:

- A **Crisis Continuum** of increasing, defined levels of stress, beginning in BAU and ending with a Resolution period;
- A series of **triggers**, tied to financial and operational metrics, that determine when we have entered each successive stress level in the Crisis Continuum;
- A set of **playbooks and plans** that detail actions to be taken at each successive stress level; and
- A **governance structure**, including a Crisis Management Coordinator, to oversee the resolution process.

Figure 3-1 illustrates our resolution strategy across the periods of our Crisis Continuum. The remainder of this section explains how we would transition through our Crisis Continuum while dealing with certain key issues associated with each period. Our Crisis Continuum Framework and other key issues are described in more detail in Section 4.

Figure 3-1: SPOE Strategy Overview



BAU Through Runway	Parent's Failure	Resolution Period
How do we ensure that we take timely, appropriate action when we experience stress? • We have a **Crisis Continuum Framework** that governs our approach for identifying and responding to stress that could lead to our failure and escalating key strategic decisions to our senior management and Board of Directors as appropriate. • We have approximately 70 **playbooks and plans with triggers**, implemented along a "**Crisis Continuum**," to ensure that information is escalated appropriately and management and our Board of Directors take timely actions.	**How do we ensure that we can flexibly and appropriately support our operating entities before and after Parent's failure?** • We have a **Support Agreement** for the provision of capital and liquidity support to our material entities to help ensure they could operate as going concerns. • We have a pre-funded **intermediate holding company** to hold financial resources and to allocate those resources to entities as and when needed.	**How do we stabilize our firm and exit resolution?** • We have a road map for how our material entities, core business lines and critical operations would stabilize, restructure and exit resolution. • The road map is flexible and provides different divestiture options that can be executed depending on market conditions and other factors.

BAU Through the Runway Period

During this time period, our focus would be to see that our Board of Directors, management and employees take the appropriate actions at the right times as we begin to face stress that could potentially lead to our failure.

Our Crisis Continuum Framework would be particularly important in BAU through the Runway period as a stress event would be developing. During this time period, decision-making would need to be escalated as appropriate to ensure a timely response to developing conditions and to help increase the effectiveness of any potential measures taken to recover the firm. From BAU through the end of the Runway period, we anticipate that our strategy would be implemented as follows:

- **BAU, Moderate Stress, Severe Stress and Recovery Periods**: Our transition from BAU could result from systemic or idiosyncratic stress events. For example, stress could stem from our depositors withdrawing their funds from our firm, requiring us to sell assets, potentially at a loss, in order to generate cash to provide to those depositors. Initially, if our early warning indicators were breached, our senior leadership would be put on alert to watch for risks of a developing stress event.

Should the stress increase in magnitude, we would enter into increasing levels of stress, represented by the Moderate Stress, Severe Stress and Recovery periods in our Crisis Continuum Framework. As we progress through these increased levels of stress, we would take appropriate actions in response to the circumstances that exist at such time. As we experience increasing levels of stress, we would increase the frequency with which we monitor our financial resources to project when we would expect to enter resolution.

Figure 3-2 illustrates representative actions we may take during the Moderate Stress, Severe Stress and Recovery periods.

Runway period: A period before Parent's failure during which we would take key actions to prepare for a bankruptcy filing. It starts when our forecasts predict the PNV Trigger will be breached within a specified time period.

PNV Trigger: The PNV Trigger is based on a ratio that measures available resources held at Parent and the IHC against the projected resource needs of the material entities after Parent's failure. Under the Support Agreement, breach of the PNV Trigger requires Parent to transfer substantially all of its remaining assets to the IHC.

Figure 3-2: Representative Actions During the Moderate Stress, Severe Stress and Recovery Periods

Moderate Stress	Severe Stress	Recovery
• Increase monitoring of internal and broader market metrics and take actions to slow the deterioration of material entities' financial health • Activate formal crisis management governance structures to further engage senior leadership in addressing the evolving stress event	• Take contingency actions to bolster our capital and liquidity position	• Execute more substantial contingency actions such as consideration of business sales

- **Runway Period**: Once our financial forecasts predict that we would breach our resolution trigger (*i.e.*, our PNV Trigger) within a specified time period, we would enter the Runway period.

  During the Runway period, our management and staff would continue to undertake actions in an effort to avoid failure while simultaneously preparing for possible bankruptcy proceedings.

Parent's Failure

Upon breach of our resolution trigger, the Support Agreement requires Parent to make a final contribution to the IHC of substantially all of its remaining assets. At that time, Parent would be restricted from further access to the firm's resources to help ensure that the firm and our operating subsidiaries would still have adequate financial resources after Parent's failure to carry out the resolution strategy. Shortly thereafter, Parent would be expected to file for bankruptcy. Parent would simultaneously seek court authorization to transfer all of its subsidiaries to a new holding company—New HoldCo—held and overseen by a Trust for the benefit of Parent's bankruptcy estate. Figure 3-3 illustrates key actions that we expect would occur as Parent files for bankruptcy.

The IHC's assets, including those provided by Parent shortly before its bankruptcy, can be flexibly distributed to material entities as needed throughout the remainder of our resolution process, thereby preserving the value of our material entities for the ultimate benefit of Parent's creditors and reducing the risk of market disruption.

The Support Agreement and Security Agreement

Parent, the IHC and all other material entities are party to a Support Agreement designed to facilitate the provision of capital and liquidity resources to material entities in the event of failure. Pursuant to the Support Agreement, Parent transferred its intercompany loans and most of its cash to the IHC, and the Support Agreement requires Parent to continue to transfer cash and other liquid financial assets to the IHC from time to time. Upon breach of the PNV Trigger, the Support Agreement requires Parent to transfer to the IHC substantially all of its remaining assets (other than stock in subsidiaries and a cash reserve to fund bankruptcy expenses) prior to filing for bankruptcy. It also contractually obligates the IHC to provide financial resources to material entities during BAU and through the resolution process to ensure their financial health and uninterrupted operation.

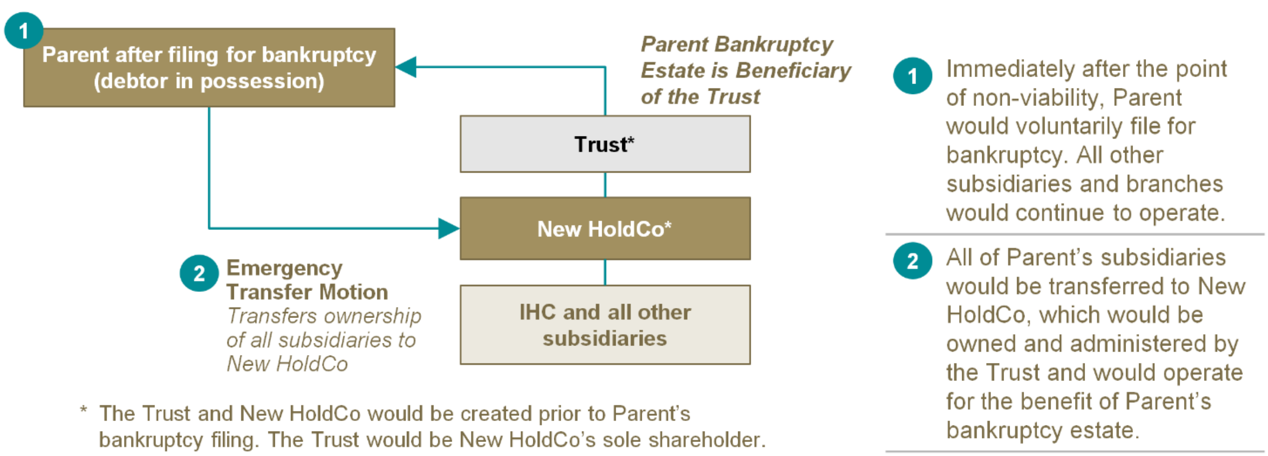
All obligations of Parent and the IHC under the Support Agreement are secured by a Security Agreement.

The benefits of these agreements are twofold:

First, the fact that the Support Agreement obligations are secured means that the beneficiaries could recover the value of any unpaid support were Parent or the IHC to fail to perform their obligations, eliminating the incentive of Parent or the IHC to fail to provide these resources when needed.

Second, Parent's secured contractual promise to provide resources in the Support Agreement protects against legal challenges that Parent's creditors could attempt to assert to try to prevent such support from being provided in the first place or undo these resource transfers after Parent files for bankruptcy.

Figure 3-3: Key Activities as Parent Files for Bankruptcy and Organizational Structure of New HoldCo



Resolution Period

The Resolution period of the Crisis Continuum begins after Parent files for bankruptcy, during which our focus would shift from preparing for failure to stabilizing and restructuring our firm. We divide Resolution into several stages:

- **Stabilization**: Over the course of the stabilization stage, outflows (such as payments to depositors) would be expected to subside as the market and clients begin to regain confidence in the ability of our businesses to remain going concerns.
- **Post-Stabilization**: During the post-stabilization stage (or earlier, if feasible), New HoldCo would have the option to dispose of our objects of sale, which are discrete businesses that we could sell, transfer or wind

down during resolution. If appropriate, the Trust could distribute proceeds of these sales to Parent's stakeholders in Parent's bankruptcy estate, under the supervision of the bankruptcy court.

- **Exit from Resolution**: We anticipate that a core group of synergistic businesses, what we refer to as RemainCo, would continue to operate out of New HoldCo. We anticipate that RemainCo would be a primarily fee-based, operational services-oriented firm, consisting of businesses built around our custody business. We expect that RemainCo would be materially smaller than our firm is today upon completion of the resolution process.

New HoldCo: A new holding company to be created in connection with our strategy that would hold the stock of Parent's subsidiaries and would be administered by a Trust for the benefit of Parent's creditors.

Trust: A trust to be established in connection with our strategy to manage the entities of our firm under New Holdco for the benefit of Parent's bankruptcy estate.

Among other possibilities, we anticipate that RemainCo could be spun off by selling the shares of New HoldCo through an IPO and follow-on offerings. The Trust would have discretion to do with the shares of New HoldCo whatever would best maximize their value and recovery by Parent's creditors. If follow-on offerings are not feasible, any residual shares of New HoldCo following the IPO could be registered and transferred to Parent's bankruptcy estate via the Trust for distribution to Parent's creditors.

Ultimately, the Trust would be dissolved, and the proceeds of the IPO and other follow-on offerings would be distributed to the claimants in Parent's Chapter 11 bankruptcy.

Our assessment of RemainCo's financial viability as a standalone entity and the feasibility of a successful exit from resolution reflects the following considerations:

- **Strong and Stable Client Base**: We believe RemainCo would have a client base that includes large global institutions with multiple product holdings receiving services across multiple businesses.
- **Operational Synergies**: We anticipate that businesses within RemainCo would provide complementary services, creating franchise value through business and operational synergies.
- **Economies of Scale**: We believe that RemainCo would be more valuable as a whole than as the sum of its parts, retaining value and benefitting from economies of scale.

4. KEY RESOLUTION PLANNING TOPICS

We continually focus on the key areas of resolution planning preparedness, including our:

- **Capital and liquidity** positions as well as our capabilities and systems to help ensure our financial resources, including **intraday liquidity**, are sufficient to support the SPOE strategy, backed by a detailed understanding of our financial interconnectedness, as described in Sections 4.1 and 4.2;
- **Governance mechanisms**, which support a timely and coordinated response to increasing levels of stress, as described in Section 4.3;
- **Operational** capabilities necessary to execute our SPOE strategy, including our:
    - governance, financial resources and reporting capabilities to provide for continued operation of our **payment, clearing and settlement activities**, as described in Section 4.4.1;
    - capabilities to **manage, identify and value collateral** to help ensure our collateral activities would support our SPOE strategy, as described in Section 4.4.2;
    - **management information systems** that would produce the data necessary to support our business and execute our SPOE strategy, as described in Section 4.4.3;
    - actions to ensure continuity of **shared and outsourced services** in support of our core business lines and critical operations, as described in Section 4.4.4;
- Criteria and governance that help ensure we maintain a **rational legal entity structure** that supports our resolvability on an ongoing basis, as described in Section 4.5;
- Flexibility and optionality in executing our SPOE strategy in a range of conditions by identifying **discrete businesses that could be divested** in resolution and to make these options actionable, as described in Section 4.6; and
- Analysis and preparedness to help ensure that **global cooperation** with our SPOE strategy would remain in the interest of local regulatory authorities in the event we experience stress, as described in Section 4.7.

The following sections describe the key topics relevant for resolution planning discussed above.

4.1 CAPITAL AND LIQUIDITY

The successful execution of our strategy requires us to maintain sufficient capital and liquidity resources and requires analytical capabilities to measure and forecast resources. We maintain a strong balance sheet with substantial long-term loss absorbing debt. We have TLAC in the form of tangible common equity, preferred stock and subordinated and senior debt.

To facilitate the transfer of capital and liquidity, we have an intermediate holding company and have carefully balanced our financial resources between the IHC and our other material entities. The IHC provides added flexibility to deliver resources to the material entities that require support in a resolution scenario, as described in more detail in Section 3.

We have capital and liquidity management capabilities to support our resilience and resolvability. We have a sophisticated set of methodologies for purposes of regular monitoring. We use one set to assess and ensure the adequacy of the capital and liquidity resources that we hold, and to optimize the positioning of these resources across our material entities. We use another to project the resources that we estimate would be required by each of our material entities to remain going concerns if our Parent were to fail. This projection is used to assess the time at which Parent should transfer substantially all of its remaining assets to the IHC to help ensure that the firm and our operating subsidiaries would still have adequate financial resources after Parent's failure.

We use these methodologies to define key triggers within our Crisis Continuum Framework, including to calculate our PNV Trigger.

The remainder of this Capital and Liquidity section discusses our methodologies and how they are incorporated into our ongoing financial resource management processes, including into the Crisis Continuum Framework. They are grouped into two categories, which are described in more detail in this section:

- **Resource Adequacy and Positioning**: Capabilities to measure the adequacy and optimize the positioning of our resources in BAU to support an orderly resolution of the firm; and
- **Resource Needs After Failure**: Calculations to estimate resource needs of each of our material entities to remain going concerns after Parent fails.

What capital and liquidity metrics do we use to support our resolution strategy?

To help ensure that our material entities would have sufficient capital and liquidity to stay operational before and after Parent's failure, we have a suite of metrics to evaluate our financial resources against resolution needs.

Resource Adequacy and Positioning: We have the following capabilities to determine our resource needs on an ongoing basis:

- Resolution Liquidity Adequacy and Positioning, or **RLAP**, estimates the amount of liquidity our material entities would need to stay operational during a 30-day stress scenario.
- Resolution Capital Adequacy and Positioning, or **RCAP**, estimates the amount of capital our material entities would need to cover losses experienced in stress and still have enough capital after Parent fails as estimated per RCEN, discussed below.

Resource Needs After Failure: We have the following capabilities to determine our resource needs *after* Parent's failure:

- Resolution Liquidity Execution Need, or **RLEN**, estimates the amount of liquidity we predict our material entities would need to stabilize and operate after Parent fails, based on a projection of the liquidity we believe would be needed to meet both operating needs and resource outflows.
- Resolution Capital Execution Need, or **RCEN**, estimates the amount of capital we predict our material entities would need to operate in an orderly manner after Parent fails, based on projections of the capital we believe would be needed to meet local regulatory requirements and internally-defined buffers as well as cumulative losses incurred after Parent's failure.

We continually test our methodologies by running multiple hypothetical scenarios to further understand what factors drive our financial forecasts.

Resource Adequacy and Positioning

We have capabilities to ensure the adequacy and positioning of resources to support the capital and liquidity needs of each material entity. Using this set of capabilities, we ensure the adequacy of our financial resources on an ongoing basis and the appropriate positioning of these resources across our material entities. In particular, we:

- can measure the daily liquidity needs of each material entity through a severe 30-day stress scenario, thereby helping to ensure that there would be sufficient resources for our material entities to address needs in a resolution scenario; and

- can quantify capital adequacy for each material entity to absorb losses through a resolution scenario, while maintaining a capital level sufficient to meet regulatory requirements and reestablish market confidence after a failure event.

We also have a pre-positioning methodology that helps us to determine the optimal allocation of resources between Parent or the IHC and the other material entities for resolution purposes.

RLAP

We use a conservative approach to estimate RLAP. We measure the daily liquidity needs of each material entity using a 30-day stress scenario that is more severe than our most severe pre-existing internal liquidity stress test. Our liquidity stress testing tool sources data from a single comprehensive platform that provides information for every entity and is reconciled with the general ledger on a daily basis.

Our RLAP assessment confirms our belief that we maintain adequate liquidity resources. Our liquidity stress testing tool informs our understanding of how material entities would manage their liquidity sources if we experience stress, including liquidity held locally or liquidity placed with affiliates. Using our RLAP tool to run a variety of assessments of our liquidity position, we believe that we maintain a level of liquid resources sufficient to meet anticipated funding needs in stress. As part of our BAU financial resource management processes, we monitor and adjust our liquidity resources and allocations in order to adhere to RLAP requirements on an ongoing basis.

How do we estimate RLAP?

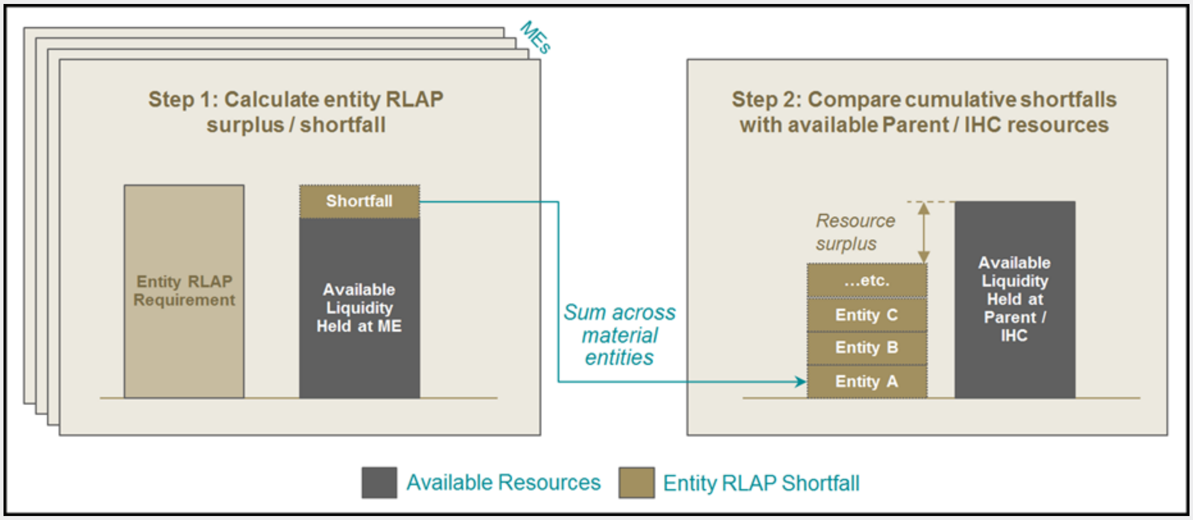
Our RLAP liquidity stress testing tool measures the liquidity needs of each material entity in a 30-day stress scenario. RLAP is driven by four key factors:

- **Outflows** due to third-party obligations;
- **Intraday liquidity requirements** to meet contractual obligations and maintain access to critical FMI;
- Flows due to **inter-affiliate transactions**, considering frictions between entities and across jurisdictions; and
- Compliance with **local liquidity requirements** for foreign-regulated entities.

How do we use RLAP to manage liquidity?

The RLAP requirement ensures that the liquidity needs of each material entity in a stress environment can be met by available resources held at the entity or at Parent/the IHC. We assess this using a two-step process:

1. Projection of material entity RLAP surplus/shortfall: We compare each material entity's liquidity needs in stress to the resources the entity holds. If the liquidity needs are greater than the available resources, then the entity has an RLAP shortfall. If liquidity needs are less than available resources, the entity has a surplus.
2. Comparison of cumulative shortfalls with available Parent/IHC resources: We aggregate all entity-level RLAP shortfalls and compare this amount to the available resources held at Parent or the IHC. The RLAP requirement mandates that the available resources held at Parent meet or exceed these cumulative shortfalls. Note that an RLAP surplus at one of our material entities other than Parent or the IHC cannot be used to offset a shortfall at another material entity.



RCAP

We have an RCAP methodology to project the required level of loss-absorbing capacity of each material entity. The RCAP methodology uses a severe stress scenario that, by design, must lead to our resolution. The output from this methodology represents the capital resources required to absorb all expected losses in the projected failure scenario.

We maintain adequate capital resources to support our resolution strategy using RCAP. Following targeted capital generating and optimization actions, we hold sufficient external TLAC to cover all identified RCAP needs and our resources are deployed internally in a manner that would appropriately address the needs of our material entities if we were to fail.

How do we estimate RCAP?

The RCAP methodology estimates projected losses leading to our firm's failure and is the sum of two components:

- **Estimated capital depletion** from events leading to Parent's failure; and
- **Capital needs to execute our resolution strategy** as defined by RCEN.

Additionally, we incorporate RLAP and RCAP, which act as resource constraints in our management of financial resources, into our ongoing financial resource management processes.

Pre-Positioning Framework Underlying RLAP and RCAP

We have a pre-positioning methodology to determine the target allocation of financial resources between Parent, the IHC and the other material entities. Using this methodology, we assess the target allocation of financial resources, both capital and liquidity, which should be pre-positioned at each material entity. The framework balances the certainty provided by pre-positioning resources at the material entities with the flexibility of holding resources at the IHC to meet unanticipated needs at any material entity. We maintain our positioning of resources, both capital and liquidity, within or above the estimated target ranges for all material entities as defined by our criteria.

Resource Needs After Failure

We have the capability to estimate the liquidity and capital needed by each of our material entities to execute our resolution strategy. We monitor these measures—RLEN and RCEN—in the normal course of business and have incorporated them into our Crisis Continuum Framework, including into our PNV Trigger.

As an input into our RLEN and RCEN forecasts, we assess each material entity's balance sheet profile, client behavior and role to inform our understanding of potential resource needs in a potential failure event.

Using the entity-level assessment, our Resolution Forecasting Tool quantifies projected liquidity and capital needs at material entities during a time period following Parent's failure and throughout an orderly resolution. The Resolution Forecasting Tool provides granular projections of each material entity's capital and liquidity positions throughout a hypothetical resolution.

We incorporate RLEN and RCEN into a trigger that defines entry into the Resolution period in our Crisis Continuum Framework. As discussed in Section 3, the PNV Trigger signals when Parent should transfer substantially all of its remaining assets to the IHC. At that time, Parent would be restricted from further access to the firm's resources to help ensure that the firm and our operating subsidiaries would still have adequate financial resources after Parent's failure to carry out the SPOE strategy. Shortly thereafter, Parent would be expected to file for bankruptcy. The Support Agreement mandates these actions to preserve the firm's capital and liquidity for the benefit of the material entities when the PNV Trigger is breached. This helps motivate Parent's timely bankruptcy filing and other actions to enable the material entities to maintain sufficient capital and liquidity resources to execute an orderly resolution.

How do we estimate RLEN?

RLEN projects the liquidity that would be required by our firm's operating subsidiaries after Parent's failure to continue to operate throughout completion of the SPOE strategy. RLEN has two underlying components:

- **Minimum Operating Liquidity**, the minimum liquidity required to operate each material entity subsequent to Parent's failure; and
- **Peak Funding Need**, the peak cumulative outflows, net of inflows, at each material entity subsequent to Parent's failure.

How do we estimate RCEN?

RCEN projects the capital that would be required after Parent's failure to recapitalize the material entities to a level that allows them to remain operational through the execution of the SPOE strategy. RCEN considers two underlying components:

- **Minimum Capital Required in Resolution**, the projected minimum capital requirement which incorporates local regulatory requirements and internally-defined buffers; and
- **Post-Bankruptcy Cumulative Losses**, the capital required to absorb cumulative losses expected to be incurred in connection with a failure event.

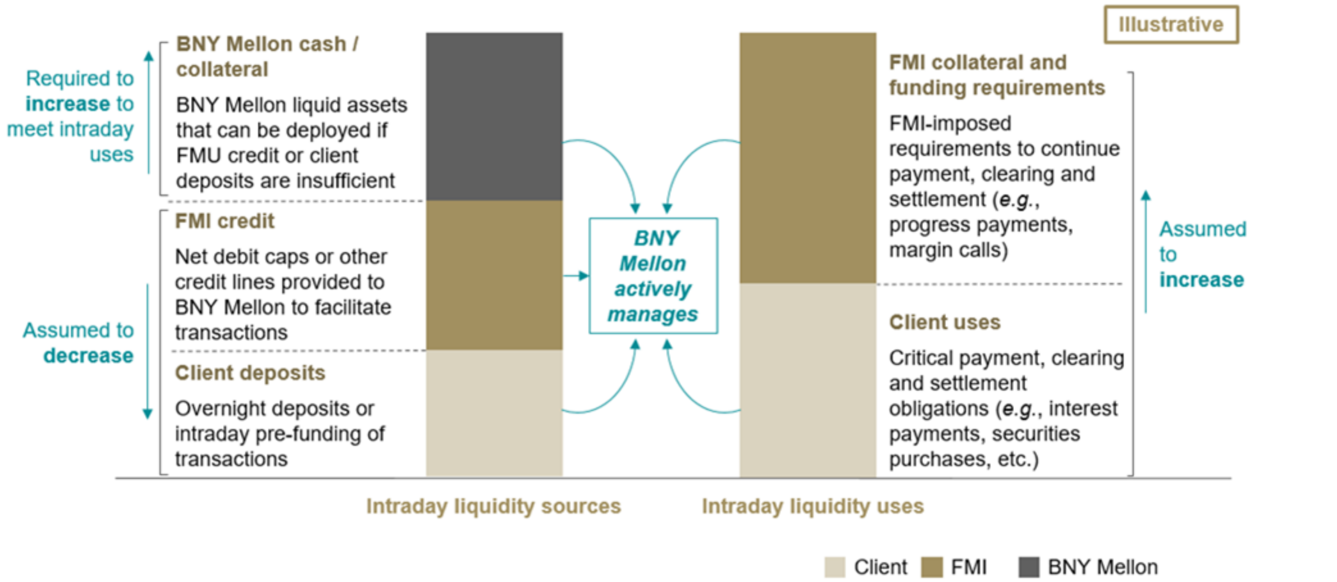
4.2 INTRADAY LIQUIDITY

We monitor intraday liquidity uses and have transparency into the activities that drive our intraday liquidity sources and uses. Intraday liquidity activities at our firm are largely driven by our role as an intermediary between clients and FMI, primarily facilitating payment, clearing and settlement transactions during the business day. We recognize that our intraday liquidity management is important for continuity of access with FMI, and we assess what we expect these intraday needs would be if we were to experience stress. These estimates are built into our RLAP and RLEN projections. Figure 4.2-1 illustrates our key intraday liquidity sources and uses.

Intraday liquidity

Intraday liquidity refers to the liquidity resources that we use in connection with transactions that take place during the course of the business day.

Figure 4.2-1: Intraday Liquidity Sources and Uses



We carefully account for and optimize our financial resources to help maintain the continuity of our intraday liquidity activities.

- **Continuity with FMI**. We conservatively assess and quantify intraday liquidity needs for maintaining access to and processing payment, clearing and settlement activities through FMI in a failure scenario. If we were to experience stress, we expect that the nature of our sources and uses of intraday liquidity may change, leading us to experience increased intraday liquidity requirements. We anticipate that FMI may increase the financial requirements they impose on us, such as increasing collateral requirements or requiring us to pre-fund certain transactions to a greater degree as a way to limit their credit exposure to our firm. Similarly, clients may hold fewer resources with us. We quantify these funding needs for different tiers of stress and incorporate these incremental liquidity requirements into the financial projections underlying our plan. This incremental funding need is a key driver of our RLAP and RLEN metrics for managing liquidity, which are described in Section 4.1.

FMI and intraday liquidity

As discussed in more detail in Section 4.4.1, financial market infrastructure, or FMI, include central securities depositories (*e.g.*, DTC), central counterparties (*e.g.*, NSCC), securities settlement systems (*e.g.*, Fedwire Securities) and payment systems (*e.g.*, CHIPS). Payment, clearing and settlement activities are performed through FMI.

If we were to experience stress or fail, it is expected that FMI would increase the financial requirements they impose when dealing with us, such as increasing their collateral requirements or requiring us to pre-fund certain transactions to a greater degree, as a way to limit their credit exposure to our firm. These increased requirements would affect our intraday liquidity resources. We analyze and appropriately plan for this possibility in our Resolution Plan.

- **Intraday Liquidity Optimization**. We carefully allocate and manage liquidity throughout the day, optimizing intraday liquidity in all environments, from BAU to stress.

Further, given the importance of intraday liquidity to our business and the potential impact disruption of our intraday liquidity sources and uses could have on the market, we have robust intraday liquidity management capabilities, including:

- a suite of applications that provide real-time granular information about our intraday activities, allowing us to effectively monitor and manage intraday liquidity risk exposures;

- rigorous intraday liquidity stress testing processes, allowing us to assess the impact of adverse scenarios on intraday liquidity; and

- a dedicated team within Corporate Treasury tasked with intraday liquidity management, supported by various global operational groups and businesses.

We believe our firm is well positioned as an effective manager of intraday liquidity risk and we are confident in our ability to appropriately manage intraday liquidity activities if we were to experience stress or fail.

4.3 GOVERNANCE MECHANISMS

We have governance mechanisms to support a timely and coordinated response to increasing levels of stress. These mechanisms are embedded into our BAU practices. Among the most important of these mechanisms is our Support Agreement.

Our Crisis Continuum Framework includes the following key aspects, each of which is described in more detail in this section:

- A **crisis management governance structure** that provides a framework for engaging senior teams in charge of decision-making covering all key aspects of our resolution strategy execution, with support from subject matter experts;
- Defined **crisis levels** underpinned by a **trigger framework** to support appropriate escalation and a timely response to increasing stress; and
- A **comprehensive set of playbooks**, including a Master Playbook that serves as an overarching guide for senior management to manage and coordinate all firm-wide actions and the execution of other multidisciplinary, resolution-related playbooks.

Regulatory expectations for our governance mechanisms

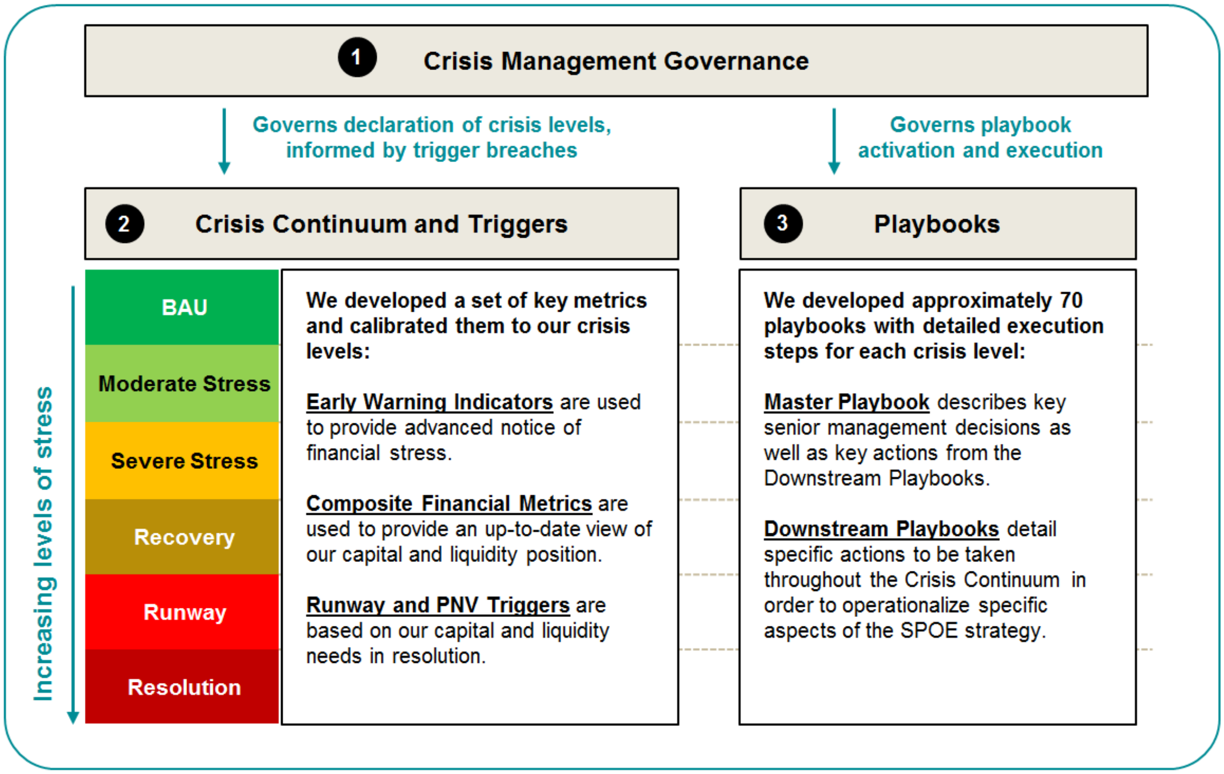
Agency guidance requires that we:

- Identify the governance mechanisms that would ensure execution of required actions by our Board of Directors at the appropriate time;
- Establish clearly identified triggers linked to specific actions to demonstrate that key actions will be taken at the appropriate time in order to address financial, operational, legal and regulatory issues;
- Develop governance playbooks detailing board and senior management actions necessary to facilitate our SPOE strategy and address issues as they arise, incorporating our triggers; and
- Analyze potential challenges and mitigants to planned provision of capital and liquidity support to subsidiaries prior to Parent's bankruptcy filing.

Together, these governance arrangements constitute our Crisis Continuum Framework—a governance structure with triggers capable of identifying the onset and escalation of financial stress events in sufficient time to allow for preparation for resolution if recovery actions are unsuccessful. The Crisis Continuum Framework is our overarching guide that facilitates key decision-making by the right people using the right processes and technology in response to a crisis and provides a framework for ensuring that key actions are taken at appropriate times in support of our resolution strategy.

Figure 4.3-1 illustrates our integrated crisis management governance, Crisis Continuum and triggers, and playbook architecture.

Figure 4.3-1 Crisis Management Governance Framework



Crisis Management Governance

Our crisis management governance structure defines specific responsibilities for each of our crisis management governance bodies, including responsibility for covering key decisions and actions if we were to experience stress. As part of this governance structure, we have a Crisis Management Coordinator with responsibility for coordinating the company's response to a crisis.

Illustrated in Figure 4.3-2, our crisis management governance structure consists of the following clearly defined layers:

- Our **Board of Directors** provides ultimate oversight of the crisis management efforts and activities carried out by senior management throughout the Crisis Continuum.
- The **Crisis Management Board**, led by our Chief Executive Officer and comprising members of our Executive Committee and our Treasurer, is the most senior management body responsible for making key decisions and escalating issues to the Board of Directors as necessary in response to stress.
- The **Crisis Management Team** is the group responsible for coordinating the response to a stress event. In BAU, the CMT is chaired by the Crisis Coordinator and built situationally from a core group of subject matter experts across the organization. From Moderate Stress onwards, an expanded CMT broadened to include representation from all major functional areas, lines of business and geographies and co-chaired by the Chief Financial Officer and Chief Risk Officer, manages our response to any escalating financial stress. The Crisis Management Team provides relevant background as needed to the Crisis Management Board and cascades decisions to functional implementation teams and playbook execution owners.

- Within the Crisis Management Team, we have various **functional implementation teams** which directly manage the implementation of actions in certain functional areas (*i.e.*, the activities performed by playbook execution owners). The lead member of each functional implementation team is also a member of the Crisis Management Team to support direct and timely feedback between both teams.

Figure 4.3-2: Our Crisis Management Governance Structure

The systems and communication channels in our crisis management structure are consistent with our enterprise resiliency program, which helps ensure that we have consistent approaches to managing crises of any kind, whether financial or non-financial. In particular, we leverage the call tree systems, email distribution lists and surveys to activate playbooks, convene crisis teams, and disseminate and receive information from across the organization in the event of resolution.

Crisis Continuum and Triggers

Our Crisis Continuum, including the crisis levels and objectives, is aligned with our SPOE strategy. Our trigger framework is based on capital, liquidity, non-financial and market indicators, which, when breached, are tied to corresponding escalation procedures to ensure a timely response to increasing levels of stress. The trigger framework contains different indicators and metrics including:

- **Early Warning Indicators** are capital, liquidity and market-based metrics that we closely monitor against defined thresholds and calibrate to provide advance notice of potential stress. We monitor these metrics and others on a daily basis using a detailed dashboard that is broadly distributed across the organization. The breach of defined combinations of early warning indicators compels the calculation of composite financial metrics and a full assessment of our financial condition. We also monitor corporate-level operational key risk indicators against defined thresholds, which compel a similar response to the early warning indicators. These operational key risk indicators provide a firm-wide measure of operational risk and are another source of advance notice of potential stress.

- **Composite Financial Metrics** are capital and liquidity metrics that provide an accurate, current and holistic view of the capital or liquidity position of our firm. Within our Crisis Continuum Framework, composite financial metrics are used as triggers for the Moderate Stress, Severe Stress and Recovery crisis levels.

- **Runway Trigger and PNV Trigger** are metrics based on resolution-specific capital and liquidity needs of our material entities. The Runway Trigger signals when our internal financial forecasts predict the PNV Trigger would be breached within a specified time period. The PNV Trigger signals when Parent should transfer substantially all of its remaining assets to the IHC. Shortly thereafter, Parent would be expected to file for bankruptcy. Within our Crisis Continuum Framework, entry into the Runway and Resolution periods is determined based on the Runway Trigger and PNV Trigger, respectively, as described in more detail in Section 3.

We calibrate the trigger thresholds to enable sufficient time for the execution of associated actions and Parent's timely filing for bankruptcy. As a crisis escalates, the Crisis Continuum Framework requires more frequent monitoring and assessment of the stress and escalation of critical information at more frequent intervals.

Playbooks

We have a comprehensive set of playbooks that detail the key actions required to ensure an effective response to increasing levels of stress. An integral component of our playbook architecture is our Master Playbook. The Master Playbook governs the execution of all other resolution-related playbooks, which we refer to as our Downstream Playbooks, and serves as an overarching guide to ensure a coordinated response in crisis.

The activation of the Downstream Playbooks is linked to the levels of stress along the Crisis Continuum. In event of crisis, the Crisis Management Coordinator would convene the Crisis Management Team to assess conditions and consider activating certain playbooks as appropriate. If a decision were made that activation would be appropriate, the Crisis Management Coordinator would subsequently communicate the decision to relevant functional implementation teams and playbook execution owners using status calls, email distribution lists and call trees. The Crisis Management Coordinator and Crisis Management Team have discretion to activate the playbooks earlier based on circumstances that exist at the time.

Our playbook architecture

Our playbooks detail the key actions we would take in response to stress. These documents contain our analysis of how and why we should or could act in certain ways at certain times—enabling us to fully prepare for a variety of stress scenarios and react appropriately to increasing levels of stress.

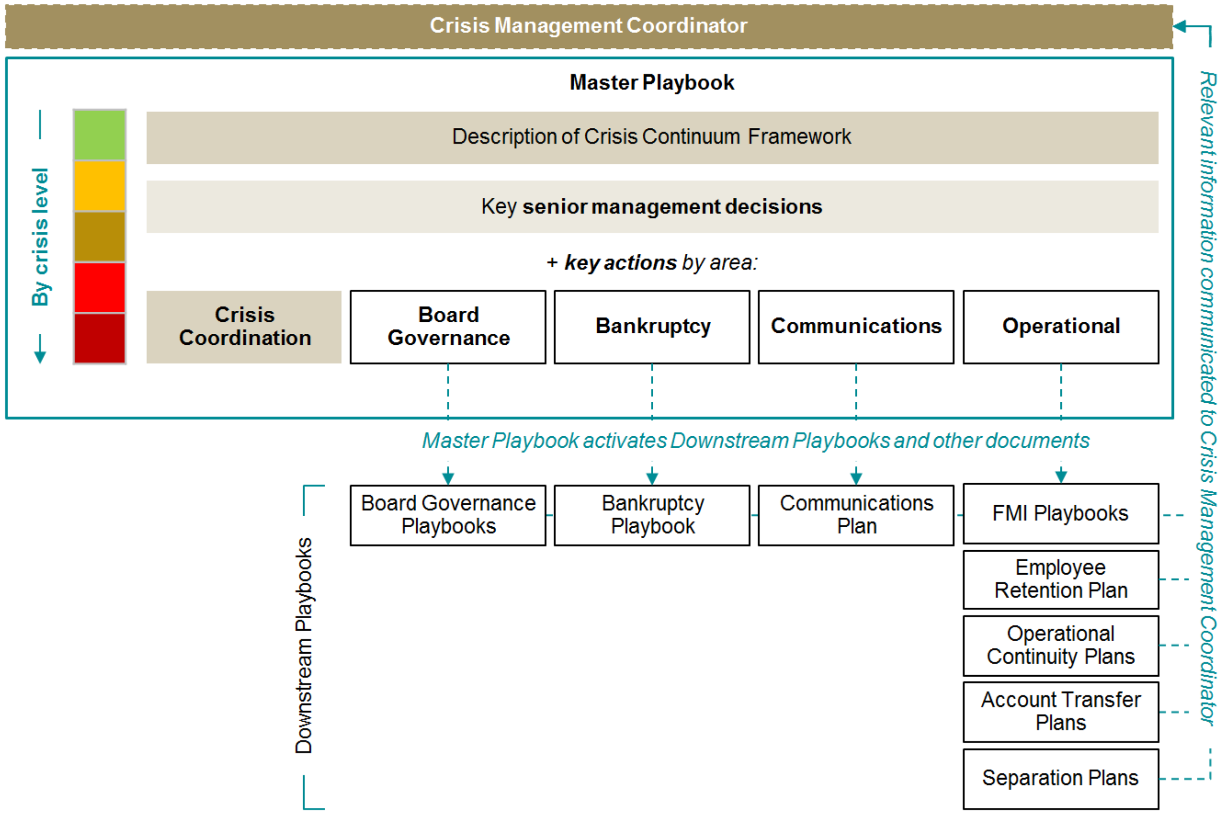
Our Master Playbook sits above the rest of our playbooks, which we collectively refer to as our Downstream Playbooks, and serves as an overarching guide to ensure a coordinated response in crisis.

Our Downstream Playbooks are a collection of resolution-related playbooks that detail specific actions to be taken throughout the Crisis Continuum in order to operationalize specific aspects of the resolution strategy. Some of our playbooks are limited to actions that specific material entities would take (such as our board governance playbooks) while others describe specific categories of firm-wide actions we would take to address specific aspects of our strategy, such as bankruptcy, communications and operational actions.

To ensure that senior management has a holistic and timely view of relevant actions and information to direct an appropriate response, we have processes and methods to provide appropriate communication across the crisis management framework. In the event of a crisis, the Crisis Management Team would manage feedback received and would prioritize and disseminate any key information to relevant parties to see that appropriate actions would be taken at the right times. Additionally, the Crisis Management Coordinator would distribute a proprietary survey to Downstream Playbook owners to capture information and updates during a crisis related to actions and decisions captured in the Master Playbook. This survey can be customized based on an actual stress event as needed. The Crisis Management Coordinator would aggregate, filter and prioritize survey results to facilitate discussion with the crisis management governance bodies.

A high-level illustration of our playbook architecture is provided in Figure 4.3-3.

Figure 4.3-3: Playbook Architecture



Examples of our playbooks include:

- The **board governance playbooks** provide a framework for actions to be taken by the Board of Directors and other material entity boards of directors during a crisis. The playbooks guide the boards of directors through the resolution process by describing the major considerations the boards would need to evaluate and the major actions the boards would need to consider to implement our strategy.
- The **bankruptcy playbook** serves as a framework to guide the bankruptcy preparatory process that we could undertake if we were to experience material financial stress that might lead to failure.
- The **communications playbook** describes the overarching strategy to manage communications with internal and external stakeholders if we were to experience material financial stress.
- The **FMI playbooks** are detailed, action-oriented playbooks for each of our key FMI that provide a framework for steps we could take to maintain access to these FMI when we experience stress. Our FMI playbooks also detail contingency plans in the event our primary actions are unsuccessful. More information about our FMI playbooks can be found in Section 4.4.1.
- The **employee retention plan** is our plan for retaining key employees in the event of stress.

- The **operational continuity plans** are our plans for each of our core business lines and critical operations that provide a framework for operational continuity in the event of resolution. Certain of our operational continuity plans also contain **account transfer plans**, which cover key considerations related to the transfer of client accounts in the event of resolution.

- The **separation plans** are our comprehensive guides for each object of sale that analyze the relevant considerations related to a divestiture. More information about our separation plans can be found in Section 4.6.

Taken together, these governance mechanisms provide a comprehensive framework to identify and manage increasingly severe levels of stress through resolution.

4.4 OPERATIONAL

The following four categories of operational issues are important to the successful execution of our SPOE strategy:

- Payment, clearing and settlement activities;
- Managing, identifying and valuing collateral;
- Management information systems; and
- Shared and outsourced services.

The following sections describe how our Resolution Plan addresses each of these categories of issues.

4.4.1 PAYMENT, CLEARING AND SETTLEMENT ACTIVITIES

As a global financial intermediary, payment, clearing and settlement, or PCS, activities are core to our business. PCS activities include all of the "behind the scenes" work that ensures that payments and other transactions mechanically work—*e.g.*, that money is actually sent from one account to another or that money is actually exchanged for securities. Much of this activity is facilitated through financial market infrastructure, or FMI. We recognize the importance of maintaining the continuity of our PCS activities. To enhance our ability to maintain these services to our clients and other market participants in the event of stress or failure, we have:

- **Robust governance of PCS activities** to plan for and coordinate our FMI and client-related actions in the event of stress or failure;
- **FMI playbooks** to ensure that there are robust, action-oriented plans to maintain access to key FMI;
- **Appropriate resources to meet projected needs** demonstrated by our incorporation of intraday liquidity needs across each FMI into our financial projections, as described in Section 4.2; and
- **PCS reporting capabilities** to produce key information relevant to managing PCS activities in a timely manner if we were to experience stress or fail.

Robust Governance of PCS Activities

We have robust governance over our PCS activities and clearly defined roles and responsibilities for key stakeholders. The centerpiece of our governance is our FMI Oversight Advisory Group, which is responsible for developing and maintaining our FMI playbooks. In the event of stress or failure, the FMI Oversight Advisory Group would manage the activation and execution our FMI playbooks to ensure efficient and effective management of PCS relationships with the goal of continued access. The FMI Oversight Advisory Group contains representatives from our operational, client facing, credit risk and Treasury groups and interacts with FMI on a regular basis.

Regulatory expectations for our PCS activities

Agency guidance requires that we demonstrate capabilities to facilitate continued access to key FMI through a framework that includes:

- Identification of key clients and key FMI;
- Mapping our material entities, critical operations, core business lines and key clients to FMI; and
- Developing a playbook for each key FMI reflecting our role as a user and/or provider of PCS services

What is FMI and why is continuity important?

FMI refers to financial market infrastructure and consists of financial market utilities, including central securities depositories, central counterparties, securities settlement systems and payment systems, and agent banks, which we use for payment, settlement and custody, or PCS, activities. PCS activities are performed through FMI.

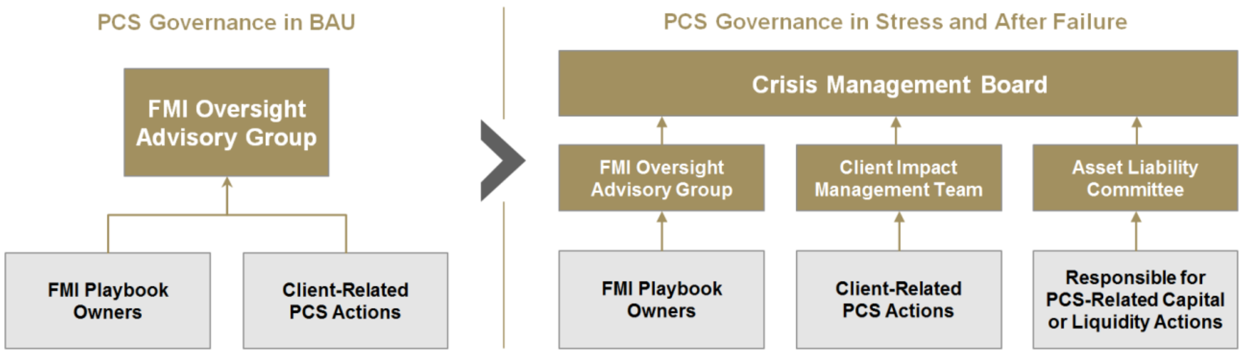
We are a direct member or participant in a number of financial market utilities and depend on relationships with a network of agent banks. See Figure 4.4.1-2 for our key FMI.

Continuity of our PCS activities through FMI is important. As a global custodian and financial intermediary, we support a range of financial institutions, including financial services companies, corporations, central banks, governments and others. These entities rely on us for the smooth and efficient operation of numerous cash and securities markets under all economic conditions. If we were to fail, we recognize that it is important that we provide for continuity of these activities so as to avoid potential systemic disruption.

We also have a Client Impact Management Team which serves as the central coordination body for all client-related actions, including those related to PCS activities. If we were to experience stress, the FMI Oversight Advisory Group and the Client Impact Management Team would act in concert with our Asset Liability Committee, which is responsible for, among other things, monitoring the capital and liquidity position of the firm and overseeing the execution of related contingency actions. In the event of stress or failure, the Asset Liability Committee would communicate with the FMI Oversight Advisory Group and Client Impact Management Team to manage the collateral and funding requirements at FMI and provide input related to implementation of certain responsive actions. The Crisis Management Board would oversee the activities of these three groups.

Figure 4.4.1-1 illustrates the PCS governance structure in BAU and how it would transition if we were to experience stress or failure.

Figure 4.4.1-1: PCS Governance Structure



One of the FMI Oversight Advisory Group's key responsibilities is to identify key FMI and key clients using methodologies that combines quantitative and qualitative factors. Quantitative and qualitative factors we evaluate include, but are not limited to:

- Volumes and value of transactions;
- Assets under custody held by our agent banks;
- Reliance of a core business line or critical operation;
- Substitutability of FMI; and
- Risk from loss of access to FMI.

Our key FMI for our Resolution Plan are listed in Figure 4.4.1-2.

Figure 4.4.1-2: Key FMI

Central Counterparty	
Fixed Income Clearing Corporation – GS	National Securities Clearing Corporation
Fixed Income Clearing Corporation – MBSD	Options Clearing Corporation
LCH Clearnet Limited	
Central Securities Depository	
Clearstream Banking Frankfurt	Euroclear France
Clearstream Banking Luxembourg	Euroclear Nederlands
Depository Trust Company	Euroclear U.K. & Ireland
Euroclear Bank SA/NV	Monte Titoli
Euroclear Belgium	
Payment	
Clearing House Automated Payment System	Fedwire Funds Service
Clearing House Interbank Payments System	Trans-European Automated Real-Time Gross Settlement Express Transfer System
CLS Bank International	
Electronic Payments Network	
Securities Settlement System	**Vendor**
Fedwire Securities	Society for Worldwide Interbank Financial Telecommunication (SWIFT)
Agent Bank	
Citigroup	Mizuho Corporation Bank Ltd.
Deutsche Bank	Skandinaviska Enskilda Banken
HSBC	The Bank of Tokyo – Mitsubishi UFG Ltd

FMI Playbooks

Our FMI playbooks are detailed, action-oriented playbooks that provide a framework for the steps we could take to maintain continued access to our key FMI if we were to experience stress. Our FMI playbooks also describe contingency arrangements we could take if our primary actions are unsuccessful. The playbooks identify the range of potential actions that FMI could take if we were to experience stress and how we would anticipate responding to such actions. We continually refine and enhance these playbooks to reflect our current understanding of what may happen in stress and measures we can take to reduce systemic risk. Our FMI playbooks address the following:

- **Credit, Collateral and Funding Arrangements**: If we were to experience stress, we anticipate that funding and collateral requirements related to FMI access may increase as FMI seek to minimize their own risk. Our playbooks include an assessment of credit extended by each FMI and the related incremental funding and collateral that may be required in stress.

- **Contractual Arrangements**: Each playbook describes the legal framework governing the relationship and anticipated rights of the parties in a stress event.
- **Communication Steps**: Communication with key FMI is important during stress as we would look to maintain continued access. The playbooks identify the content of key communications, anticipated timing and stakeholders that may be involved in communications throughout a stress event.
- **Operational Handbook**: Each playbook has an appendix, which is the operational handbook in stress. It includes a detailed, action-oriented inventory of steps that we could take to provide for continuity of access, including the responsible parties and the expected timing of actions.

Assessment of Liquidity Needs

As described in Section 4.2, we conservatively quantify funding needs for each FMI across different tiers of stress and incorporate the aggregate funding need into the financial projections underlying our Resolution Plan.

PCS Reporting Capabilities

We have reporting capabilities that provide a comprehensive and granular view of our PCS-related exposures and obligations on a daily basis. Our PCS reporting platform synthesizes data from dozens of data systems across our firm into a centralized data repository. The PCS reporting platform uses this data to create PCS reports reflecting values and volumes of payment, clearing, settlement and counterparty activities and exposures by legal entity, financial market utility exposures, sub-custodial exposures and Nostro account exposures.

These capabilities provide a holistic view of all PCS activity at the firm and provide senior management with the relevant information necessary to manage and maintain continuity of PCS activities in resolution.

BNY Mellon as a User and Provider of PCS Services

As a financial intermediary, BNY Mellon is one of the largest users and providers of PCS services globally. We are a direct member or participant in a number of financial market utilities and also depend on relationships with a network of agent banks. We use these memberships and relationships to provide onward services to our clients through our core business lines and critical operations.

GSS Services

Agency guidance requires firms to assess PCS services in their resolution plans both from the perspective as a *user* of PCS services and *provider* of PCS services. We are the leading provider of U.S. government securities clearing and settlement and U.S. tri-party repo clearing and settlement services, which we refer to collectively as GSS Services. We recognize the systemic impact that could result from a disruption of these services and have taken significant steps to enhance the resilience of GSS Services.

- **Capabilities and Resilience of GSS Services**: Given our role in the market, we are committed to continuously enhancing the resilience of our GSS Services activities. Our firm has a history of reducing risk and complexity in our financial intermediation activities and of optimizing the use of intraday liquidity, as exemplified in our leadership in the area of tri-party repo reform. We also continue to make significant investments in the technology and operations that support the GSS Services market. For example, we:

- Deployed MY360 to enhance our ability to continuously monitor transactions for the purposes of minimizing our exposure to potential and evolving vulnerabilities and threats. MY360 utilizes distributed ledger architecture and allows for continuous access to transactions, messages and positions;

- Established "active-active" recovery—whereby application engines run simultaneously on primary and secondary data centers that replicate data in real time such that the failure of one application engine does not affect the availability of data through another engine—and reduced our critical system recovery time to two hours;

- Established a GSS control room to act as the central command center for crisis management for GSS Services, enabling coordinated management analysis, communication, response and resolution of incidents; and

- Developed an Incident Management Playbook to guide stakeholders during technology and business incidents.

- **Governance and Transparency of GSS Services**: We maintain a wholly-owned subsidiary, GSS Corp., to house the technology, processes and personnel involved in GSS Services. We also maintain a mission statement for GSS Corp. to demonstrate transparency, accountability and our commitment to balancing the needs of our stakeholders. Our mission statement prioritizes the provision of a leading platform that helps ensure operational continuity and a suite of services for the efficient delivery of GSS Services. The board of directors of GSS Corp. provides oversight of business affairs, operational risk and performance, as well as direction on strategic initiatives to drive industry-leading practices and processes. We have also engaged distinguished professionals in the industry to participate in a non-fiduciary Client Advisory Council to further interact with our clients and facilitate collaborative discussions. The Client Advisory Council provides industry insight related to GSS Services such as future strategic initiatives and investments and strategic themes related to product strategy and service delivery.

4.4.2 MANAGING, IDENTIFYING AND VALUING COLLATERAL

We have capabilities to manage, identify and value collateral in BAU and stress. Collateral management activities for the purposes of our resolution planning are collateralized financial transactions where we act as principal. We have governance and operational capabilities to support these activities across material entities, counterparties and jurisdictions. We have transparency into our activities and an ability to flexibly query collateral data across the firm. We also analyze the anticipated behavior of collateral pledged to and by us if we were to experience stress, informing our capital and liquidity forecasting.

Regulatory expectations for our collateral management capabilities

Agency guidance requires that we have:

- The capability to manage, identify and value the collateral we receive from and post to external parties and affiliates; and
- A comprehensive collateral management policy that outlines how we approach collateral and that services as a single source for governance.

Activities in which we manage risk through the receipt or posting of collateral include securities financing, margin loans, derivatives, FX transactions and securities lending where the firm indemnifies clients for loss or return of securities.

We have collateral management capabilities to address risks associated with managing collateral in all market and firm-specific stress conditions. If we were to face stress, we could encounter certain risks associated with our collateral activities, including increased collateral requirements from our counterparties in recognition of our elevated credit risk, challenges managing increased volumes as counterparties work to unwind positions, margin shortfall or increased challenges in valuing margin requirements in a stressed market environment, and funding risk. Accordingly, we have an enterprise-wide policy serving as a single framework for how we manage collateral. Additionally, we have enterprise-wide collateral repositories and reporting platforms, providing transparency into our collateral management position in BAU and in a time of stress.

Governance and Policies

We have an internal collateral management governance framework, which ensures that all of our activities to manage collateral are governed by a single set of policies and operate under unified oversight. Oversight of collateral management activities is provided by our senior governance bodies, including the Senior Risk and Control Committee as well as the Counterparty Credit Methodology and Infrastructure Advisory Group, the Markets Counterparty Risk Portfolio Review Forum, and the Collateral Margin Review Committee. This robust governance framework helps ensure that we take a consistent approach regarding collateral related activities such as the management and establishment of margin requirements, the posting of collateral to financial market utilities and re-hypothecation, and that we respond in a coordinated way to new or changing legal, regulatory or business circumstances.

Operational Efficiency and Risk Management

We have robust enterprise-wide operational processes underpinned by system infrastructure that effectively support and manage the risks related to collateral. Our data and reporting capabilities enable us to manage, identify and value collateral that we receive from and post to external parties and affiliates. Notable capabilities related to operational efficiency and risk management include:

- **Enterprise Risk Data and Reporting**, a robust data sourcing and enterprise-wide reporting platform that provides a holistic centralized view of collateral across the organization;
- **Legal Agreement Repository**, a comprehensive legal agreement repository that catalogs key contracts, netting and re-hypothecation rights, described in Section 4.4.3; and
- **Counterparty Potential Future Exposure**, a robust simulation engine that, for our securities finance activities, quantifies net potential future exposures relating to certain transactions by simulating decreases in loan and collateral values at a variety of confidence levels, providing insight into potential risks in different firm and market conditions.

Analysis of Collateral Behavior in Stress

As part of our capital and liquidity analysis, we analyze how we anticipate collateral pledged to and by us would behave in stress. This analysis includes how this collateral might be unwound and returned, as well as any potential friction, change in thresholds and potential impact to the execution of our resolution strategy. Specifically, we assess the operational capabilities to generate liquidity from collateral received from clients. We also identify scenarios where early termination could be triggered if Parent files for bankruptcy. The findings of these analyses are utilized in our capital and liquidity forecasts, which we describe in more detail in Section 4.1.

In sum, we believe we have the required operational capabilities and financial resources to maintain continuity of collateral management activities in resolution.

4.4.3 MANAGEMENT INFORMATION SYSTEMS

We have an enterprise-wide governance and infrastructure for our MIS and applications that provide a broad set of control processes and reporting capabilities on the financial health, risks and operations of the firm. We have processes and reporting capabilities to facilitate efficient crisis response and that would support the orderly resolution of the firm.

The firm's MIS strategy centers on data governance, robust MIS infrastructure, comprehensive reporting capabilities, and clearly defined MIS needs in resolution.

Regulatory expectations for our management information systems

Agency guidance requires that we:

- Perform a detailed analysis of the specific types of financial and risk data that would be required to execute our SPOE strategy and how frequently we would need to produce the information at the appropriate level of granularity; and
- Have the capabilities to readily produce this data on a legal entity basis and have controls to ensure data integrity and reliability.

Data Governance

We utilize a data governance framework to maintain standards for data integrity, transparency and reliability. This framework underpins the reporting capabilities that support our strategy and provides confidence that the relevant data used for decision-making during financial stress is sound.

MIS Infrastructure

Our MIS infrastructure is composed of a set of disciplines, technologies, applications and procedures used to manage, harmonize and govern data acquired from core business systems. The infrastructure supports our MIS reporting activities on a daily basis. Our MIS infrastructure includes:

- The **Enterprise Data Service** is a centralized, scalable data hub that distributes data in a cleansed, normalized and validated form to multiple down-stream consumers. The Enterprise Data Service standardizes the sourced data with enterprise standard definitions so that transactional data can be linked to the company's master reference data. As a result, users are able to consistently describe, aggregate and merge, and calculate information consumed from the Enterprise Data Service.
- The **Reference Data Hub** is a centralized data management capability that serves as the authoritative source of reference, master, market and structural data to provide consumers with consistent, validated and well-governed data. Two of the capabilities within the Reference Data Hub have an important role with respect to resolvability:

Our enterprise-wide management information systems

- Our MIS refer to the systems we use to collect and maintain information that our management uses to monitor our firm's financial health, risks and operations and to inform strategic decision-making. Our MIS also produce information that we report to satisfy regulatory requirements. Our core business lines and critical operations use this information to perform functions necessary to run these businesses and operations.
- Our MIS infrastructure consists of various platform and mainframe technologies that capture, validate, standardize, merge, store and distribute data, to help ensure that reliable information is available on a timely basis at the appropriate level of granularity to support our SPOE strategy.

- The **Legal Agreement Repository** provides an enterprise view of significant client contracts as well as a clean, efficient method of ingesting, maintaining and obtaining legal agreement information via a single enhanced search and catalog solution. The Legal Agreement Repository can filter through and report on multiple contractual dimensions across various provisions (e.g., cross defaults, change of control, and re-hypothecation language).
- The **Netting Flag Utility** is a central repository of netting rulesets used to determine net exposure to counterparties.

- The **Enterprise Data Warehouse** is the firm's data lake, a linear scalable platform that supports structured and unstructured data and serves as the primary component of the big data ecosystem. The Enterprise Data Warehouse provides users with multiple connectivity options for maximum flexibility and supports an open source analytics platform.

MIS Reporting Capabilities

We have an MIS data catalog to document the MIS reports needed to execute our resolution strategy and link them to our reporting capabilities to facilitate a more effective and efficient decision-making process if we were to experience stress or fail.

In sum, we have the MIS capabilities to produce the data that may be required in connection with our resolution strategy, on a timely and sufficiently granular basis, and have appropriate controls to ensure data integrity and reliability.

4.4.4 SHARED AND OUTSOURCED SERVICES

Successful execution of our resolution strategy requires that our core business lines and critical operations remain operational and continue to provide services to the broader financial markets without disruption. To allow these core business lines and critical operations to continue operating if we were to experience stress, we ensure that the critical services upon which these business lines and operations rely would themselves remain available in stress and after failure. For these purposes, we define critical services broadly to include services provided by shared corporate functions (*e.g.*, Human Resources or Finance) and business lines, key assets and key third parties.

To provide for the continuity of our critical services:

Regulatory expectations for addressing our shared and outsourced services

Agency guidance requires that we:

- Identify all critical services;
- Map how and where these services support our core business lines and critical operations;
- Incorporate this mapping into our LER Criteria and implementation efforts, which is also described in Section 4.5; and
- Mitigate operational continuity risks identified by the mapping, in part through establishing service-level agreements for all critical shared services.

- We have strong governance related to our shared and outsourced services;
- We have a taxonomy to describe our critical shared services and map interconnections throughout the firm;
- We assess the mapping of our interconnections to identify and mitigate potential risks to operational continuity and, with respect to the divestiture of our objects of sale, separability; and
- We pre-position working capital within key internal service providing entities to bolster their financial strength and reduce their financial dependency on other entities within our firm.

Strong Governance

We have an enterprise-wide strategic team that is responsible for shared and outsourced services governance, which we refer to as our Office of Third-Party Governance. The Office of Third-Party Governance maintains a global third party risk management framework and employs a range of methods to ensure adherence to that framework. The Third Party Governance Steering Group is the primary corporate governance and oversight body for the third party governance program, and is chaired by the Head of Global Resiliency with membership including the Chief Administrative Officer, the Chief Compliance Officer, and the Chief Operational Risk Officer.

Mapping of Our Critical Services and Interconnections

We maintain a detailed taxonomy in a proprietary data-driven application, which we use to identify and map our critical services.

What are critical services?

Critical services are the shared and outsourced services that must be maintained to ensure the operational continuity of our core businesses and critical operations in resolution. We define critical services broadly to include key assets and key third parties, as well as services.

Corporate Staff

Services provided by our corporate staff groups such as Finance and Human Resources

Business Lines

Services provided by one business to a core business line or critical operation—*e.g.*, a broker-dealer executing the trades ordered by the investment management business

Key Assets

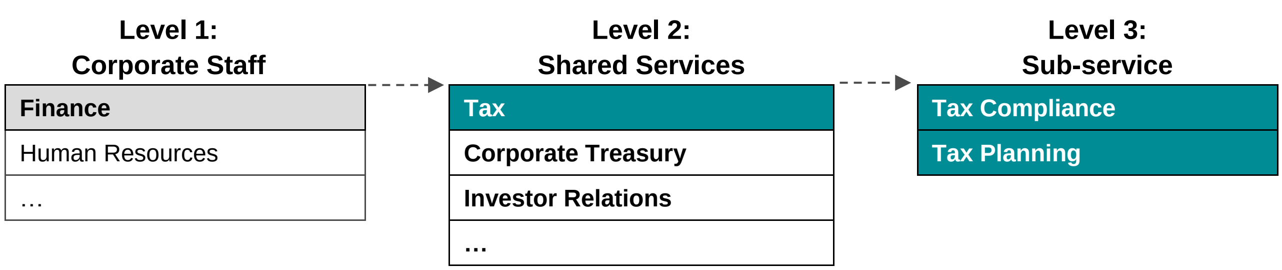
Key assets, including systems, personnel, real estate and intellectual property

Key Third Parties

Key third-party services, including external vendors, financial market utilities and agent banks

We map interconnections between (1) our core business lines, critical operations and objects of sale and (2) the parts of our business that provide critical services to these businesses, operations and objects. Our mapping utilizes a three-level taxonomy, which breaks down the structure of our operations in a granular, clear and consistent manner. This taxonomy helps us to categorize and understand which parts of our firm use and provide critical services and which activities depend on these services. An example of our mapping is illustrated in Figure 4.4.4-1 below.

Figure 4.4.4-1: Illustrative Example of How We Classify Our Services



Our mapping identifies the key interconnections at the firm relevant for maintaining the continuity of our core business lines and critical operations, as well as interconnections relevant for the separability of our objects of sale. We maintain an up-to-date understanding of our interconnections through our proprietary application, which allows us to refresh our interconnectedness mapping as needed to maintain a current understanding of the main interconnections across our firm.

How do we address potential risks associated with operational interconnectedness?

We mitigate potential risks to the continuity of operational interconnections in a real-world crisis (*e.g.*, service dependencies between our legal entities, core business lines and critical operations) by identifying key interconnections across our firm and potential risks to continuity related to these interconnections. Where necessary, we mitigate these potential risks to ensure the interconnections would be appropriately addressed in a real-world crisis to support operational continuity.

Analysis and Mitigation of Potential Risks

We maintain a comprehensive risk identification framework to identify and mitigate potential risks to orderly resolution that may arise from interconnections at our firm. The framework builds on applicable regulatory guidance (including from the Financial Stability Board), industry best practices for recovery and resolution-related risks, and elements of our LER Criteria that address operational continuity and separability (our LER Criteria are discussed in more detail in Section 4.5). Our framework uses the results of our critical services mapping and classifies interconnections into types of dependencies that potentially could be disrupted if we were to experience stress, including:

Resolution-friendly language

We maintain resolution-friendly language in key vendor contracts and in our inter-affiliate contractual framework, which, subject to certain conditions being met, prohibits the service-providing counterparty from terminating the contract or refusing to renew the contract following resolution, including in the event that a business is sold

- **Corporate staff service continuity**, including services provided by our corporate staff groups (*e.g.*, Human Resources or Finance);
- **Business line service continuity**, including services provided by one line of business to another (*e.g.*, custody services);
- **Access to key third parties**, including services provided by vendors, financial market utilities and agent banks; and
- **Access to key assets**, including systems, intellectual property (including patents, trademarks and software), personnel and real estate facilities.

We also identify and assess scenarios that potentially could lead to disruptions of critical services, such as:

- **Separation of objects of sale** (*e.g.*, membership in a financial market utility held by an object of sale that potentially could be needed by RemainCo);
- **Actions taken by third parties** (*i.e.*, actions taken by a third party that potentially could disrupt the provision of services); and
- **Actions taken by affiliates** (*i.e.*, actions taken by an affiliate that could potentially disrupt the provision of services).

For each potential risk, we identify a corresponding mitigant, including, for example, the existence of resolution-friendly language in a particular contractual arrangement.

Our capabilities to maintain continuity of shared and outsourced services is broad-based and comprehensive, and includes the following:

- **Management of our third-party vendor and affiliate relationships, including**:
    - A global Third-Party Governance policy that provides a central governance framework to oversee engagements and manage risk with third-party vendors and between our affiliates.
    - A resolution-friendly contractual framework that governs inter-affiliate services and our contracts with key third parties.
    - A central repository that stores our inter-affiliate agreements and key vendor contracts.
- **Retention of Key Employees**: We maintain an employee retention plan which is our plan for retaining key employees during a crisis. This plan provides a framework for identifying and retaining key personnel, including actions to be taken to retain key employees during periods of material stress. Our financial forecasts incorporate the costs associated with our employee retention plan.
- **Operational Continuity Plans**: We maintain operational continuity plans that provide a framework for the operational continuity of our core business lines and critical operations in the event of resolution. These plans describe key operational continuity considerations, the expected impact of Parent’s failure and how operations could be maintained after Parent’s failure.
- **Account Transfer Plans**: We maintain client account transfer plans for certain of our core business lines and critical operations, which cover key considerations related to the transfer of client accounts after Parent’s failure.
- **Financial Resources of Service Providers**: We pre-position at least six months of working capital within key internal service providing entities to bolster their financial strength and reduce their financial dependency on other entities within our firm.

4.5 LEGAL ENTITY RATIONALIZATION

We recognize the importance of maintaining a rational legal entity structure that facilitates the successful, rapid and orderly execution of our resolution strategy. Therefore, we continually ensure that our legal entity structure, including any changes to our structure, supports our resolvability on an ongoing basis.

Our LER Criteria, comprised of four overarching goals and supporting principles, are central to the rationalization of our structure. We have designed our LER Criteria to align with our resolution strategy and to ensure that our criteria support our resolvability under different market conditions and minimize the risk to financial stability in the event of our failure. We have embedded resolvability considerations in the processes and policies governing the structure and activities of legal entities to ensure that our legal entity structure continues to align and adhere to our LER Criteria under changing market and business conditions. These actions are supported on an ongoing basis through a comprehensive legal entity rationalization governance structure.

What is legal entity rationalization?

Legal entity rationalization refers to our efforts to rationalize our legal entity structure to support resolvability.

Regulatory expectations for our legal entity rationalization

Agency guidance requires that we:

- Develop and implement LER Criteria that support our resolution strategy, improve our resolvability under different market conditions and over time, and minimize risk to U.S. financial stability in the event of our failure; and
- Build our LER Criteria into our ongoing process for creating, maintaining and optimizing our structure and operations on a continuous basis.

Legal Entity Rationalization Governance Framework

We maintain a comprehensive legal entity rationalization governance structure that embeds legal entity rationalization considerations into our ongoing business processes, ensuring that our legal entity structure and activities are aligned with the LER Criteria on an ongoing basis. Our comprehensive legal entity rationalization governance is built around our LER Criteria, Entity Governance Committee, Entity Governance Policy, and the incorporation of resolvability considerations into our business processes and legal entity-related policies.

- **LER Criteria**: Our LER Criteria provide the framework for ensuring that our legal entity structure remains resolvable and aligned with our SPOE strategy. The four goals of our LER Criteria are to:
  - Facilitate the recapitalization and liquidity support of material entities;
  - Facilitate the sale, transfer or wind down of certain discrete operations and support the operational continuity of critical operations and critical services;
  - Protect our bank subsidiaries from risks arising from non-bank activities; and
  - Minimize complexity that could impede an orderly resolution and minimize redundant and dormant entities.
- **Entity Governance Committee**: Our Entity Governance Committee oversees our legal entity structure and its adherence to the LER Criteria. The seniority and breadth of Entity Governance Committee membership, and the frequency with which it meets, ensures that BAU proposals that impact the structure or activities of legal entities align with our LER Criteria and facilitate the successful execution of our resolution strategy. Its composition and clear mandate empower the Entity Governance Committee to pursue these goals effectively.
  - The Entity Governance Committee has the authority to comprehensively assess the resolvability of our legal entity structure. Its responsibilities include, among others:

- Providing strategic direction to achieve the most efficient structure for legal entities, branches and representative offices of our firm to support resolvability;
- Designing and maintaining the LER Criteria;
- Overseeing the application of the LER Criteria; and
- Ensuring that documented policies and procedures regarding legal entities incorporate resolvability considerations into change initiatives within the organization.

- **Entity Governance Policy**: We maintain a firm-wide Entity Governance Policy that defines the scope of activities overseen by the Entity Governance Committee and established a procedure for escalating certain business proposals for Entity Governance Committee review and approval. The policy establishes the process for applying the LER Criteria to all proposed changes to our legal entity structure as well as any changes to activities conducted in a legal entity that may impact resolvability. The policy also outlines the escalation process for business proposals that may impact resolvability as a result of these changes. The scope of activities defined in the Entity Governance Policy includes changes to our legal entity structure and any significant modifications to activities in legal entities that may impact resolvability or that are otherwise important. The scope of changes subject to review and approval includes, but is not limited to, the following:
  - Changes to legal entities, including entity formation, dissolution, reorganization, changes to ownership, acquisitions, divestitures and joint ventures;
  - Requests for new regulatory licenses or permissions, or material changes to existing licenses or permissions;
  - Changes to business activities, including, for example, a new product offering that is dissimilar to other products offered by that entity, or changes to an entity's booking models;
  - Changes to operations that involve the transfer of servicing capabilities to another entity within our firm, the establishment of new service delivery locations operated by one of our entities, the establishment of intra-group servicing relationships, or the expansion or reduction in size or responsibilities of one of our entities that may impact another of the entities within our firm; and
  - Capital contributions and similar funding requests, such as guarantees and intra-company loans.
- **Incorporation of Resolvability Considerations into Business Processes**: To ensure that resolvability considerations are embedded in our firm-wide decision-making processes, we incorporate business-level committees into our legal entity rationalization governance structure and include resolvability concerns in our business proposal procedures.

4.6 SEPARABILITY

We recognize the need for flexibility and optionality in our resolution strategy so that it will facilitate our resolution in an orderly manner regardless of the market conditions that exist at the time of failure. To create meaningful flexibility and optionality in a range of conditions, we identify a number of our discrete businesses that could be sold, wound down or transferred after the firm reaches a stable financial condition. We call these our objects of sale. For each object of sale, we identify a range of specific divestiture strategies that describe the manner in which we anticipate each object could be divested in resolution.

We maintain comprehensive separation plans for each object of sale that provide a framework for guiding the execution of separation options in resolution. Each separation plan, which contains detailed business, financial, operational and legal analyses, is a detailed, end-to-end execution guide that can be used to manage the range of divestiture options. As part of our analysis, we identify potential frictions to the timely separation of each object of sale and associated mitigants. Each separation plan also contains a walk-through of the step-by-step process for executing a transaction with respect to the relevant object of sale, including key preparatory actions that would facilitate rapid divestiture.

Regulatory expectations for separability

Agency guidance requires that we:

- Identify discrete operations that could be sold or transferred in resolution under different market conditions;
- Analyze the feasibility of selling or transferring these options; and
- Have the capability to populate in a timely manner a data room containing carve-out financial statements, valuation analyses and legal risk assessments that facilitate buyer due diligence as well as other information pertinent to a potential divestiture.

We also maintain the capability to populate in a timely manner data rooms to enable prompt commencement of a sale process for each object of sale, containing key information that would be expected to be made available to facilitate buyer due diligence in a traditional sales process.

Meaningful Optionality. Our objects of sale have the following characteristics that would provide the firm with meaningful optionality in stress:

- **Diversity of Business Models.** Our objects of sale represent a cross-section of the firm's unique and diversified business model, which has a global presence and serves a multitude of different markets. This diversity allows disposal of the options, if needed, along different product and geographic lines, allowing for flexibility under various market conditions.
- **Lower Sensitivity to Adverse Market.** Certain objects of sale are fee-based operational services with annuity-like revenue streams that are less sensitive to fluctuating market conditions. They are less volatile and more attractive in poor market conditions.
- **Attractiveness to a Range of Potential Buyers.** Our objects of sale are attractive to a range of potential buyers, including new market entrants and existing competitors. Key potential acquirers include asset managers, private equity firms and financial institutions, among others.
- **Relative Ease of Separation.** Most of our objects of sale operate with relative independence from the remainder of the firm and are well suited for rapid divestiture in stress.
- **Variability in Size.** Our objects of sale range from small to large businesses providing variability with respect to their ability to be absorbed by potential acquirers.

Separation Plans

We maintain a separation plan for each object of sale that analyzes the relevant considerations related to its divestiture, and provides a road map for effectuating a transaction, including key preparatory steps. The analysis includes a detailed mapping of all the key touchpoints between the object of sale and the remainder of the firm, and identifies potential frictions to the successful separation of the object of sale as well as associated mitigants. Among other things, separation analyses contained in each separation plan include:

- **Business Impact Analysis**: An analysis of the business impact of separation of the object of sale from RemainCo, including an assessment of potential impacts on the client franchise of RemainCo and of expected reputational impacts.

- **Financial Impact Analysis**: An analysis of the financial impact of separation of the object of sale on the capital and liquidity position of RemainCo.

- **Operational Impact Analysis**: An analysis of the key operational interconnections between the object of sale and RemainCo, including a mapping of key touchpoints between the object of sale and the remainder of the firm. Through this exercise, we identified potential risks to the successful separation of the object of sale and developed associated mitigants.

- **Legal Impact Analysis**: An analysis of legal considerations related to the separation of the object of sale, including regulatory notifications, contracts, employees, intellectual property and other topics.

Data Rooms and Transaction Preparedness

To ensure that we are prepared to divest businesses in resolution, we maintain the capability to populate in a timely manner data rooms for each of our objects of sale with materials that would be expected to be made available in a traditional sale process to facilitate buyer due diligence. Further, we incorporate separability-related governance into our crisis management governance structure, and have the ability to constitute option-specific "Divestiture Task Forces" to execute on the respective separation plans.

In short, we have the ability to launch a sale process for any of our objects of sale at the appropriate time if we ever were to fail.

What is a data room and what purpose does it serve?

Data rooms are often used in merger, acquisition and other potential business combination transactions to facilitate the provision of information about a "target company" to a potential acquirer. Data room information is typically hosted electronically in a virtual forum. Often times, there are multiple interested parties in a particular target business. An electronic data room is an efficient and secure mechanism to collect, store and provide the same set of materials to all of these parties at the same time. In a typical acquisition transaction, there is usually lead time involved in setting up a data room.

Sample Data Room Categories of Information	
• Business Background	• Sales and Marketing
• Human Resources	• Corporate
• Financials	• Risk
• Technology	• Operations
• Clients	• Insurance
• Legal, Regulatory and Compliance	• Intellectual Property
• Real Estate	• Contracts

4.7 GLOBAL COOPERATION

As a financial institution with a global footprint, we recognize the importance of global cooperation to the successful execution of our resolution strategy. If we were to experience stress, we anticipate that local authorities of our non-U.S. material entities would act in the interests of their local financial system and local stakeholders. Our Resolution Plan analyzes the potential actions that could be taken and provides a basis for global cooperation to remain in the national interest of each non-U.S. authority. Specifically, we:

- Analyze the potential actions that local authorities in each key jurisdiction could take during a failure scenario and the potential impacts of these actions;
- Pre-position capital and liquidity at our non-U.S. material entities, using local capital and liquidity requirements as a baseline and adding buffer amounts to help ensure that our non-U.S. material entities would be sufficiently capitalized and would have sufficient liquidity throughout resolution;
- Provide for the operational continuity of our non-U.S. material entities by, among other things, inserting resolution-friendly language into inter-affiliate and third-party service agreements, and addressing our non-U.S. activities in our FMI playbooks and operational continuity plans; and
- Maintain a crisis management governance structure and communication strategy to help ensure productive and appropriately frequent communication with regulators and other external stakeholders.

We are confident that key characteristics of our strategy, including those summarized above, would minimize the risk of market disruption and cross-border contagion, and thereby support effective cooperation of host country authorities in the event of our resolution.

Regulatory expectations for global cooperation

Agency guidance requires that we:

- Identify the actions we and local regulatory authorities could take to support the successful execution of the SPOE strategy on a cross-border basis;
- Describe the consequences to our strategy if these specific actions were not taken at the appropriate time; and
- Explain how we would ensure continuity of our critical operations even if these actions were not taken at the appropriate time.

5. RESOLUTION PLANNING GOVERNANCE

Figure 5-1 displays certain key elements of our resolution planning governance structure, which leverages established roles and responsibilities and committee charters for the global management of risk, integrating resolution considerations into the management and oversight of all of our operations.

Figure 5-1: Resolution Planning Governance Structure

The Resolvability Steering Committee drives our resolution planning governance, with our Board of Directors having ultimate oversight over resolution planning at the firm. Our resolution planning governance structure consists of:

- **Board of Directors**: The Board of Directors has ultimate responsibility for resolution planning at BNY Mellon, including approving our Resolution Plan.
- **Senior Risk and Control Committee**: The Senior Risk and Control Committee is the most senior management body responsible for evaluating and providing strategic direction on emerging risk issues, including issues that pertain to resolvability.
- **Resolvability Steering Committee**: Composed of various members of our senior leadership, the Resolvability Steering Committee provides program governance, strategic direction, oversight and coordination for our resolution planning efforts, and escalates topics as appropriate to other governing bodies, as shown above in Figure 5-1.
- **Entity Governance Committee**: As discussed in Section 4.5, our Entity Governance Committee oversees our legal entity structure and its adherence to the LER Criteria in support of resolvability.

Controls

We maintain strong program oversight and rigorous project management controls to ensure adherence to our Recovery and Resolution Planning Policy, which outlines governance roles and responsibilities for recovery and resolution planning.

6. OTHER BACKGROUND INFORMATION

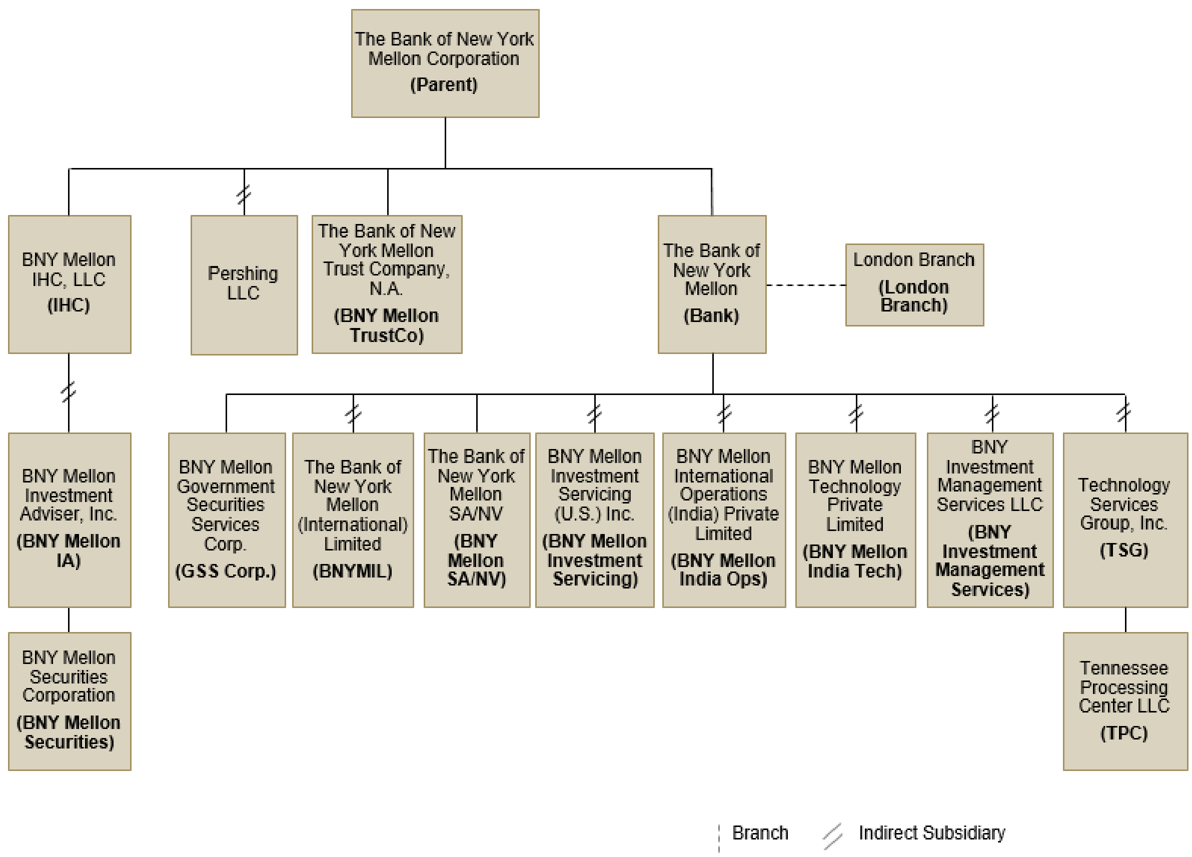
As required by the Title I Rule, this section contains the following background information on our firm and our resolution planning:

- **Section 6.1**: Our material entities;
- **Section 6.2**: A summary of financial information regarding our assets, liabilities, capital and major funding sources;
- **Section 6.3**: Our derivatives and trading activities;
- **Section 6.4**: A description of our foreign operations;
- **Section 6.5**: Our material supervisory authorities; and
- **Section 6.6**: Our principal officers.

6.1 ADDITIONAL INFORMATION REGARDING OUR MATERIAL ENTITIES

The entities described below are our material entities for purposes of the Resolution Plan. Figure 6.1-1 below is a pictorial representation of the organizational structure of our material entities.

Figure 6.1-1: High-Level Organizational Structure of Material Entities



Parent

The Bank of New York Mellon Corporation

Parent, a Delaware corporation headquartered in New York, New York, is registered as a bank holding company and a financial holding company under the Bank Holding Company Act of 1956, as amended by the Gramm-Leach-Bliley Act and by the Dodd-Frank Act. Parent is subject to supervision by the Federal Reserve.

On a stand-alone basis, the majority of Parent's assets are investments in and advances to subsidiaries and associated companies. Parent's liabilities primarily consist of borrowed funds with a remaining maturity of more than one year, affiliate borrowings and other liabilities which are primarily accrued taxes and other expenses. For information regarding the consolidated balance sheet of Parent, please see Section 6.2 below. Parent had $40.8 billion in shareholder's equity as of December 31, 2018. For the 12 months ended December 31, 2018, we had total consolidated revenue of $4.29 billion and net income of $4.27 billion.

For its structural funding and ongoing liquidity needs, Parent's major sources of liquidity include cash on hand, dividends from subsidiaries and access to debt and equity markets. Following the pre-funding of the IHC in the second quarter of 2017, the IHC has also provided Parent with a committed line of credit that allows Parent to draw funds necessary to service near-term obligations. Parent's major use of funds are payment of dividends, repurchases of common stock, principal and interest payments on borrowings and additional investments in, and loans to, its subsidiaries.

Our material entities generally do not have significant operational dependencies on Parent. However, Parent serves as a source of funding for the material entities, raising funds in public markets and providing those funds to the IHC and other material entities. As of December 31, 2018, there were no upstream guarantees provided to Parent.

Parent has been designated a material entity because it is the covered company under the Title I Rule and because of its BAU role as a source of funding for other material entities.

Additional information related to Parent is contained in reports filed with the SEC, including the 2018 Annual Report, the Quarterly Reports on Form 10-Q and the Current Reports on Form 8-K, available at www.bnymellon.com.

Banks, Broker-Dealers and Other Operating Entities

BNY Mellon IHC, LLC

The IHC, a Delaware limited liability company and a direct subsidiary of Parent, has been established to facilitate the provision of capital and liquidity resources to material entities in the event of material financial stress or failure. Pursuant to the Support Agreement, Parent transferred its intercompany loans and most of its cash to the IHC, and the Support Agreement requires Parent to continue to transfer cash and other liquid financial assets to the IHC from time to time, subject to certain amounts retained by Parent to meet its near-term cash needs. In connection with the initial transfer, the IHC issued unsecured subordinated funding notes to Parent. The IHC has also provided Parent with a committed line of credit that allows Parent to draw funds necessary to service near-term obligations. As a result, during BAU, Parent is expected to continue to have access to the funds necessary to pay dividends, repurchase common stock, service its debt, and satisfy its other obligations. If our projected liquidity resources deteriorate so severely that failure of Parent becomes imminent, the committed line of credit will automatically terminate, with all amounts outstanding becoming due and payable, and the Support Agreement will require Parent to transfer substantially all of its remaining assets (other than stock in subsidiaries and a cash reserve to fund bankruptcy expenses) to the IHC.

The IHC's primary assets are cash, intercompany receivables and equity investments in subsidiaries and its primary liabilities consist of funding notes.

Our material entities have financial dependencies on the IHC, as it is our key funding entity and is therefore significant to all core business lines and critical operations.

The IHC has been designated a material entity because of the important financial role it plays in resolution, in support of other material entities and hence our core business lines and critical operations. It is the key provider of financial resources during stress, which would keep our material entities operational.

Banks, Broker-Dealers and Other Operating Entities

The Bank of New York Mellon

The Bank, which is our largest banking subsidiary, is a New York state-chartered bank and a member of the Federal Reserve System and is subject to regulation, supervision and examination by the Federal Reserve, the FDIC and the New York State Department of Financial Services. The Bank has various foreign branches and subsidiaries, and it houses our Investment Services businesses, including Asset Servicing, issuer services and broker-dealer services, as well as the bank-advised business of Investment Management.

The Bank's material assets consist of cash, interest-bearing deposits, available-for-sale/held-to-maturity securities and loans. Its primary liabilities are deposits. For more information regarding the balance sheet of the Bank, please see Section 6.2 below. The Bank had $26.1 billion in total bank equity capital as of December 31, 2018. For the 12 months ended December 31, 2018, the Bank had net income of $2.88 billion. The Bank is largely self-funded through deposits received from its clients.

Our material entities have operational dependencies on the Bank, including the provision by the Bank of (1) services to Pershing LLC, such as securities lending and clearing and settlement of U.S. government securities, and (2) Asset Servicing and Corporate Trust services to clients of BNY Mellon TrustCo. The Bank has operational dependencies on our other material entities, including BNY Mellon SA/NV, BNY Mellon TrustCo and BNY Mellon IA, as more fully described in the applicable material entity descriptions provided below. The Bank also relies on information technology infrastructure and support from TSG, TPC and BNY Mellon India Tech, as well as operational support from BNY Mellon India Ops.

The Bank has been designated a material entity because it is the key banking entity supporting our Investment Services business, including our Asset Servicing and Corporate Trust core business lines. Additionally, the Bank and its subsidiaries provide most of our shared services.

Additional information related to the financial condition of the Bank is contained in its Report of Condition and Income (Call Report) available at the Federal Financial Institutions Examination Council website at www.ffiec.gov.

Banks, Broker-Dealers and Other Operating Entities

The Bank of New York Mellon – London Branch

The London Branch is a branch of the Bank that extends the geographical reach of the Bank by providing services to its local and international client base. The London Branch is subject to regulation by the Prudential Regulation Authority and Financial Conduct Authority, as well as the Federal Reserve. The London Branch is engaged in the Corporate Trust, Asset Servicing, Depositary Receipts, Investment Management and Treasury Services businesses.

The London Branch's primary assets are interest bearing placements with banks, securities and balances due from affiliates. Material liabilities of the London Branch primarily consist of deposits associated with its Asset Servicing and Corporate Trust activities. The London Branch also has a material due to affiliates balance that reflects the London Branch's role in facilitating the flow of funds throughout our firm, acting as the EMEA regional hub for Sterling liquidity.

The London Branch retains a sufficient inventory of unencumbered liquid assets to meet its liquidity obligations, including intraday obligations. The London Branch's excess funds are maintained on deposit with the Bank for corporate treasury centralized management, with the amounts being repayable on demand should funds be required at short notice.

Other material entities have operational dependencies on the London Branch, including the provision by the London Branch of (1) securities lending services and global corporate trust services to the Bank's clients, and (2) securities lending services for BNY Mellon SA/NV. The London Branch has operational dependencies on our other material entities, including BNY Mellon SA/NV, as more fully described in the BNY Mellon SA/NV material entity description provided below. The London Branch also relies on information technology infrastructure and support from TSG, TPC and BNY Mellon India Tech, as well as operational support from BNY Mellon India Ops.

The London Branch has been designated a material entity because it is significant to the activities of our Investment Services business, including our Asset Servicing and Corporate Trust core business lines.

Banks, Broker-Dealers and Other Operating Entities

The Bank of New York Mellon SA/NV

BNY Mellon SA/NV is the main banking subsidiary of the Bank in continental Europe. It is authorized and regulated as a credit institution by the National Bank of Belgium and is also supervised by the European Central Bank. BNY Mellon SA/NV has its principal office in Brussels and branches in Amsterdam, Dublin, Frankfurt, London, the City of Luxembourg, Paris and Milan.

BNY Mellon SA/NV's activities primarily consist of providing Asset Servicing products focused on global custody, transfer agency and fund accounting. In addition, it provides Corporate Trust services through its branch in Dublin, and provides services to Markets, including collateral management and segregation services and FX services.

BNY Mellon SA/NV plays an important part in facilitating the movement of funds and securities settlement throughout our firm and receives significant cash balances from our other entities. Accordingly, its balance sheet reflects significant due to affiliate liabilities as well as deposit liabilities primarily related to asset servicing activities. Consistent with the characteristics of its underlying liabilities, BNY Mellon SA/NV's assets are primarily balances due from affiliates, available-for-sale securities, and placements through which excess funds received are invested. BNY Mellon SA/NV retains a sufficient inventory of unencumbered liquid assets to meet its liquidity obligations, including intraday obligations.

Our material entities have operational dependencies on BNY Mellon SA/NV, including the provision by BNY Mellon SA/NV of operational services related to global collateral management and global securities operations services for our clients, including support to the London Branch's clients.

BNY Mellon SA/NV has operational dependencies on our other material entities, namely the Bank and its material entity subsidiaries, including information technology infrastructure and support from TSG, TPC and BNY Mellon India Tech, as well as operational support from BNY Mellon India Ops.

BNY Mellon SA/NV has been designated a material entity because it is a key banking entity supporting our Investment Services business, including our Asset Servicing and Corporate Trust core business lines.

Additional information related to BNY Mellon SA/NV is contained in its 2018 Pillar 3 Disclosure published in accordance with the requirements of the National Bank of Belgium, available at www.bnymellon.com.

Banks, Broker-Dealers and Other Operating Entities

The Bank of New York Mellon Trust Company, National Association

BNY Mellon TrustCo is chartered as a national banking association subject to primary regulation, supervision and examination by the Office of the Comptroller of the Currency. BNY Mellon TrustCo primarily performs front office administrative activities for fiduciary, agency and custody accounts related to the Corporate Trust business and, to a lesser extent, Asset Servicing. In addition, BNY Mellon TrustCo provides support to the Markets business, performing collateral operations. BNY Mellon TrustCo's principal office is located in Los Angeles, California.

BNY Mellon TrustCo's primary assets are available-for-sale securities and goodwill & intangibles. BNY Mellon TrustCo has de minimis deposits, and its primary liabilities include accrued taxes and other expenses. As of December 31, 2018, BNY Mellon TrustCo had $1.3 billion in total assets, $227.5 million in total liabilities and $1.1 billion in total bank equity capital. For the 12 months ended December 31, 2018, BNY Mellon TrustCo had net interest income of $19.2 million, total non-interest income of $482.6 million, and net income of $180.1 million. BNY Mellon TrustCo does not require significant funding in the normal course of business. As BNY Mellon TrustCo operates with excess liquidity, it invests excess funds in its Federal Reserve Bank ABA on a regular basis.

Our material entities have some operational dependencies on BNY Mellon TrustCo, including BNY Mellon TrustCo providing Corporate Trust document custody and some sales and administrative support services to the Bank. BNY Mellon TrustCo has operational dependencies on our other material entities, including the Bank, as more fully described in the Bank material entity description provided above. BNY Mellon TrustCo also relies on information technology infrastructure and support from TSG, TPC and BNY Mellon India Tech, as well as operational support from BNY Mellon India Ops.

BNY Mellon TrustCo has been designated a material entity because it is significant to the activities of our Investment Services business, including our Corporate Trust core business line, performing front office administrative activities.

Additional information related to the financial condition of BNY Mellon TrustCo is contained in its Report of Condition and Income (Call Report) available at the Federal Financial Institutions Examination Council website at www.ffiec.gov.

Banks, Broker-Dealers and Other Operating Entities

The Bank of New York Mellon (International) Limited

BNYMIL, a U.K.-based indirect subsidiary of the Bank, provides custody, depository, transfer agency and fund accounting services in support of our Asset Servicing business. BNYMIL's business is headquartered in London, England.

BNYMIL's primary material assets are interest-bearing deposits with banks. This includes deposits placed with the Bank of England, a small number of highly rated external financial institutions and placements with other affiliated entities. Material liabilities of BNYMIL are comprised primarily of client deposits. These deposits are a combination of deposits placed by asset servicing clients and intercompany deposits from other affiliated entities. BNYMIL does not require external funding and seeks to maintain a very liquid balance sheet at all times.

Our material entities have operational dependencies on BNYMIL, as it has significance to our Asset Servicing business. All operations of BNYMIL are undertaken by staff outsourced to other entities, predominantly the London Branch. Information technology infrastructure, development and support from TPG, TPC and BNY Mellon India Tech and operational support from BNY Mellon India Ops and BNY Mellon SA/NV are provided to BNYMIL via the London Branch.

BNYMIL has been designated a material entity because of its significance to the Investment Services business, including our Asset Servicing core business line.

Banks, Broker-Dealers and Other Operating Entities

Pershing LLC

Pershing LLC, a Delaware limited liability company and indirect, non-bank subsidiary of Parent, is an SEC-registered broker-dealer providing business solutions to financial organizations globally by delivering dependable operational support, order execution services, flexible technology, and an expansive array of investment solutions, practice management support and service excellence in support of the Pershing business. Pershing LLC is headquartered in Jersey City, New Jersey.

Pershing LLC's primary assets consist of receivables from customers, cash and securities segregated for regulatory purposes and securities borrowed. Pershing LLC's primary liabilities include customer payables, securities sold under repurchase agreements and broker-dealer and clearing organizations payables. As of December 31, 2018, Pershing LLC had total assets of $33.2 billion, total liabilities of $29.7 billion and $3.4 billion in total member's equity.

Pershing LLC has uncommitted lines of credit with non-affiliated banks for liquidity purposes which are guaranteed by the Parent, amounting to $750.0 million in aggregate. There were no borrowings against these lines of credit as of December 31, 2018. Pershing LLC also has two unsecured loan facilities with its parent company, Pershing Group LLC, amounting to $5.6 billion in aggregate. At December 31, 2018, there were borrowings against these facilities of $1.5 billion. Pershing LLC also has loan agreements with two affiliates. At December 31, 2018, there were borrowings against the loans of approximately $18.0 million.

Pershing LLC depends on the Bank for certain services, including securities lending and clearing and settlement of government securities, which are provided on the same basis as they are provided to other clients of the Bank. Pershing LLC also relies on information technology infrastructure and support from TSG, TPC and BNY Mellon India Tech.

Pershing LLC has been designated a material entity because it is the main operating entity for our Pershing core business line. Pershing LLC serves a broad array of clients including broker-dealers, independent registered investment advisors, hedge funds, '40 Act Funds and other financial intermediaries.

Additional information related to the financial condition of Pershing LLC is contained in its Statement of Financial Condition filed with the SEC and available at www.sec.gov.

Banks, Broker-Dealers and Other Operating Entities

BNY Mellon Investment Adviser, Inc.

BNY Mellon IA, a New York corporation, is an indirect subsidiary of Parent, with its principal place of business in New York, New York. BNY Mellon IA is registered with the SEC as an investment adviser and is regulated under the Investment Advisers Act of 1940. BNY Mellon IA is an investment management company, serving as adviser and administrator to mutual funds and other portfolios. BNY Mellon IA provides services to our Investment Management business.

As BNY Mellon IA's primary business is providing investment advisory and administrative services to the BNY Mellon family of funds, it does not need to fund significant assets in the normal course of business. BNY Mellon IA's primary assets are cash and cash equivalents, goodwill and intangibles. Deferred income taxes (primarily associated with goodwill and intangibles) account for most of its liabilities.

Our material entities have operational dependencies on BNY Mellon IA, including the provision by Dreyfus Cash Investment Strategies, a division of BNY Mellon IA, of credit risk-related services to our securities lending business. BNY Mellon IA has operational dependencies on our other material entities, including BNY Mellon Securities, as described in the BNY Mellon Securities material entity description provided below. BNY Mellon IA also relies on information technology infrastructure and support from TSG, TPC and BNY Mellon India Tech, as well as operational support from BNY Mellon India Ops.

BNY Mellon IA has been designated a material entity because of the support it provides to elements of our Investment Management core business line, providing services for specific products.

Banks, Broker-Dealers and Other Operating Entities

BNY Mellon Securities Corporation

BNY Mellon Securities, a New York corporation, is a subsidiary of BNY Mellon IA, with its principal place of business in New York, New York. BNY Mellon Securities is an SEC-registered broker-dealer and a member of FINRA. BNY Mellon Securities provides underwriting and distribution services for the BNY Mellon family of funds and shareholder services to retail and institutional/intermediary BNY Mellon fund investors. BNY Mellon Securities provides services to the Investment Management business.

BNY Mellon Securities' primary assets are available-for-sale securities and accounts receivable. BNY Mellon Securities' primary liabilities consist of accounts payable and accrued expenses. BNY Mellon Securities does not have significant balance sheet funding requirements.

Our material entities have operational dependencies on BNY Mellon Securities, including the provision by BNY Mellon Securities of distribution and sales of mutual funds sponsored and/or administered by BNY Mellon IA. BNY Mellon Securities has operational dependencies on our other material entities, including information technology infrastructure and support from TSG, TPC and BNY Mellon India Tech.

BNY Mellon Securities has been designated a material entity because of the support it provides to elements of our Investment Management core business line, providing services for specific products.

BNY Mellon Government Securities Services Corp.

GSS Corp., a Delaware corporation and a direct subsidiary of the Bank, houses personnel, processes and technology involved in U.S. government securities clearing and settlement and U.S. tri-party repo clearing and settlement services. GSS Corp. provides services to the Bank and other entities of our firm and has no external clients. GSS Corp. is headquartered in New York, New York. GSS Corp.'s primary assets are cash and cash equivalents and capitalized system software, and its primary liabilities consist of an intercompany loan from the Bank that represents approximately 50% of its total liabilities and deferred tax liabilities, which are related to systems transferred from the Bank, and are required to support the U.S. government securities clearing and settlement and U.S. tri-party repo clearing and settlement operational activities.

Revenue for GSS Corp. is earned through performing the processing activities necessary to complete transactions between the Bank and its clients related to U.S. government securities clearing and settlement and U.S. tri-party repo clearing and settlement.

Our material entities have operational dependencies on GSS Corp., as it houses key operations required to execute U.S. government securities clearing and settlement and U.S. tri-party repo clearing and settlement services. GSS Corp. is reliant on operational support from BNY Mellon India Ops, the London Branch, BNY Mellon SA/NV, comptroller support from Pershing LLC, information technology infrastructure and support from TSG, TPC and BNY Mellon India Tech, and the Bank for access to certain critical services and assets.

GSS Corp. has been designated a material entity because of its operational and technological significance to our company, for example to our GSS Services business.

Service Entities

BNY Mellon Investment Servicing (US) Inc.

BNY Mellon Investment Servicing, a Massachusetts corporation and indirect subsidiary of the Bank, offers transfer agency, document solutions and ClearSky services (mutual fund “blue sky” filing services) in support of our Asset Servicing business. BNY Mellon Investment Servicing operates primarily in Massachusetts, Pennsylvania and Delaware.

BNY Mellon Investment Servicing’s primary assets are cash and goodwill and intangibles, and its primary liabilities consist of accrued expenses and other current liabilities. It does not have significant balance sheet funding requirements. In order to ensure they are in a financial position to maintain continuity of operations, we have pre-funded our internal service providing material entities, including BNY Mellon Investment Servicing, with at least six months of working capital.

Our material entities have operational dependencies on BNY Mellon Investment Servicing, including the provision by BNY Mellon Investment Servicing of operational support services to our Asset Servicing business. BNY Mellon Investment Servicing has operational dependencies on our other material entities, including the Bank for various settlement and reconciliation services and Pershing LLC to clear and settle certain transactions through their clearing relationship with NSCC. BNY Mellon Investment Servicing also relies on information technology infrastructure and support from TSG, TPC and BNY Mellon India Tech, as well as operational support from BNY Mellon India Ops.

BNY Mellon Investment Servicing has been designated a material entity because of its operational significance to our Investment Servicing business, including the Asset Servicing core business line.

BNY Investment Management Services LLC

BNY Investment Management Services, a Delaware limited liability company and indirect subsidiary of the Bank, provides operational support to our Asset Servicing business, as well as to our payment operations. BNY Investment Management Services maintains a sizable presence in Lake Mary and Orlando, Florida.

BNY Investment Management Services’ primary assets are interest-bearing deposits with affiliated banks and accounts receivable and other assets. BNY Investment Management Services’ primary liabilities include accounts payable and accrued taxes and other expenses. BNY Investment Management Services does not have significant balance sheet funding requirements. In order to ensure they are in a financial position to maintain the continuity of their operations, we have pre-funded our internal service providing material entities, including BNY Mellon Investment Management Services, with at least six months of working capital.

Our material entities have operational dependencies on BNY Investment Management Services, including the provision by BNY Investment Management Services of operational support services to our Asset Servicing business, as well as to our funds transfer operations. BNY Investment Management Services has operational dependencies on our other material entities, including information technology infrastructure and support from TSG, TPC and BNY Mellon India Tech.

BNY Investment Management Services has been designated a material entity because of its operational significance to our Investment Servicing business, including our Asset Servicing core business line.

Service Entities

BNY Mellon International Operations (India) Private Limited

BNY Mellon India Ops, a private limited company organized in India and an indirect subsidiary of the Bank, is a service entity providing operational support, primarily middle and back-office support, to our businesses. BNY Mellon India Ops has locations in Chennai and Pune, India.

BNY Mellon India Ops' primary assets are cash, interest-bearing deposits, premises and equipment and accounts receivable. Other assets largely consist of prepaid expenses related to corporate taxes, deposits and advanced payments on employee medical insurance plans. BNY Mellon India Ops' primary liabilities include accounts payable and accrued taxes and other liabilities. BNY Mellon India Ops does not have external debt and is primarily equity funded. BNY Mellon India Ops generally relies on revenues generated from services performed for our affiliates for funding. In order to ensure they are in a financial position to maintain the continuity of their operations, we have pre-funded our internal service providing material entities, including BNY Mellon India Ops, with at least six months of working capital.

Our material entities and BNY Mellon India Ops have operational dependencies on each other, including information technology infrastructure and support to BNY Mellon India Ops from TSG, TPC and BNY Mellon India Tech and operational support from the London Branch and BNY Mellon Investment Servicing.

BNY Mellon India Ops has been designated a material entity because of its operational significance to several of our businesses.

BNY Mellon Technology Private Limited

BNY Mellon India Tech, a private limited company organized in India and an indirect subsidiary of the Bank, provides technology development, business and technology operations and remote infrastructure management services for our businesses. BNY Mellon India Tech also develops and delivers comprehensive technology solutions and software development products for our clients. BNY Mellon India Tech has locations in Chennai and Pune, India.

BNY Mellon India Tech's primary assets are interest-bearing deposits and other assets, primarily premises and equipment. BNY Mellon India Tech's liabilities include accounts payable and accrued taxes. BNY Mellon India Tech does not have external debt and is primarily equity funded. BNY Mellon India Tech generally relies on revenues generated from services performed for our affiliates for funding. In order to ensure they are in a financial position to maintain the continuity of their operations, we have pre-funded our internal service providing material entities, including BNY Mellon India Tech, with at least six months of working capital.

Our material entities have operational dependencies on BNY Mellon India Tech, as BNY Mellon India Tech is a service entity providing information technology infrastructure and support to our businesses. BNY Mellon India Tech has operational dependencies on our other material entities, including information technology infrastructure and support from TSG and TPC.

BNY Mellon India Tech has been designated a material entity because of its information technology servicing support to much of our firm.

Service Entities

Technology Services Group, Inc.

TSG, a New York corporation and indirect subsidiary of the Bank, owns and operates technology infrastructure that supports our businesses. TSG is headquartered in Jersey City, New Jersey.

TSG's primary assets are non-interest bearing assets, due from affiliates, and premises and equipment. Borrowed funds account for the majority of the entity's liabilities with the remainder being in accrued taxes and other liabilities. TSG generally relies on revenues generated from services performed for our affiliates for funding. In order to ensure they are in a financial position to maintain the continuity of their operations, we have pre-funded our internal service providing material entities, including TSG, with at least six months of working capital.

Our material entities have operational dependencies on TSG, as TSG is a service entity providing information technology infrastructure and support to our businesses. TSG has operational dependencies on our other material entities, including staff support from BNY Mellon India Tech, BNY Mellon India Ops and the London Branch, as well as staff and hardware support from TPC.

TSG has been designated a material entity because of its technology servicing support to much of our firm.

Tennessee Processing Center LLC

TPC, a Delaware limited liability company and wholly-owned subsidiary of TSG, owns and operates technology infrastructure that supports our businesses. TPC is headquartered in Nashville, Tennessee.

TPC's primary assets are investments in premises and equipment and its primary liabilities consist of borrowed funds. TPC generally relies on revenues generated from services performed for our affiliates for funding. In order to ensure they are in a financial position to maintain the continuity of their operations, we have pre-funded our internal service providing material entities, including TPC, with at least six months of working capital.

Our material entities have operational dependencies on TPC, as TPC is a service entity providing information technology infrastructure and support to our businesses. TPC has operational dependencies on our other material entities, including staff support from BNY Mellon India Tech and TSG and remote support from BNY Mellon India Ops and the London Branch.

TPC has been designated a material entity because of its ownership of technology that in turn supports much of our firm.

6.2 SUMMARY OF FINANCIAL INFORMATION REGARDING ASSETS, LIABILITIES, CAPITAL AND MAJOR FUNDING SOURCES

The table below provides a consolidated balance sheet for Parent as of December 31, 2018.

(dollar amounts in millions, except per share amounts)	
Assets	
Cash and due from:	
Banks	$5,864
Interest-bearing deposits with the Federal Reserve and other central banks	67,988
Interest-bearing deposits with banks ($2,394 is restricted)	14,148
Federal funds sold and securities purchased under resale agreements	46,795
Securities:	
Held to maturity (fair value of $33,302)	33,982
Available-for-sale	85,809
Total securities	119,791
Trading assets	7,035
Loans	56,564
Allowance for loan losses	(146)
Net loans	56,418
Premises and equipment	1,832
Accrued interest receivable	671
Goodwill	17,350
Intangible assets	3,220
Other assets (includes $742 at fair value)	21,298
Subtotal assets of operations	362,410
Assets of consolidated investment management funds, at fair value:	463
Total assets	$362,873
Liabilities	
Deposits:	
Noninterest-bearing (principally U.S. offices)	$70,783
Interest-bearing deposits in U.S. offices	74,904
Interest-bearing deposits in non-U.S. offices	93,091
Total deposits	238,778
Federal funds purchased and securities sold under repurchase agreements	14,243
Trading liabilities	3,479
Payables to customers and broker-dealers	19,731
Commercial paper	1,939
Other borrowed funds	3,227
Accrued taxes and other expenses	5,669
Other liabilities (including allowance for lending-related commitments of $106, also includes $88, at fair value)	5,774
Long-term debt (includes $371 at fair value)	29,163
Subtotal liabilities of operations	322,003
Liabilities of consolidated investment management funds, at fair value	2
Total liabilities	322,005

(dollar amounts in millions, except per share amounts)	
Temporary equity	
Redeemable noncontrolling interests	129
Permanent equity	
Preferred stock – par value $0.01 per share; authorized 100,000,000 shares; issued 35,826 shares	3,542
Common stock – par value $0.01 per share; authorized 3,500,000,000; issued 1,364,877,915 shares	14
Additional paid-in capital	27,118
Retained earnings	28,652
Accumulated other comprehensive loss, net of tax	(3,171)
Less: Treasury stock of 404,452,246 common shares, at cost	(15,517)
Total The Bank of New York Mellon Corporation shareholders' equity	40,638
Nonredeemable noncontrolling interests of consolidated investment management funds	101
Total permanent equity	40,739
Total liabilities, temporary equity and permanent equity	$362,873

Source: 2018 Annual Report.

The table below provides a consolidated balance sheet for the Bank as of December 31, 2018.

(dollar amounts in millions)	
Assets	
Cash and balances due from depository institutions:	
Noninterest-bearing balances and currency and coin	$5,260
Interest-bearing balances	79,008
Securities:	
Held-to-maturity securities	33,972
Available-for-sale securities	82,048
Equity securities with readily determinable fair values not held for trading	33,000
Federal funds sold and securities purchased under agreements to resell:	
Federal funds sold in domestic offices	2,000
Securities purchased under agreements to resell	33,289
Loans and lease financing receivables:	
Loans and leases held for sale	0
Loans and leases held for investment	26,158
Less: Allowance for loan and lease losses	119
Loans and leases held for investment, net of allowance	26,039
Trading assets	2,731
Premises and fixed assets (including capitalized leases)	1,586
Other real estate owned	2
Investments in unconsolidated subsidiaries and associated companies	1,765
Direct and indirect investments in real estate ventures	0
Intangible assets:	7,090
Other assets	13,586
Total assets	$286,411
Liabilities	
Deposits:	
In domestic offices	$139,207

(dollar amounts in millions)	
Noninterest bearing	65,812
Interest-bearing	73,395
In foreign offices, Edge and Agreement subsidiaries, and IBFs	104,092
Noninterest bearing	6,080
Interest-bearing	98,012
Federal funds purchased and securities sold under agreements to repurchase:	
Federal funds purchased in domestic offices	4,621
Securities sold under agreements to repurchase	163
Trading liabilities	2,254
Other borrowed money (includes mortgage indebtedness and obligations under capitalized leases)	3,624
Subordinated notes and debentures	515
Other liabilities	6,102
Total liabilities	260,578
Equity Capital	
Perpetual preferred stock and related surplus	0
Common stock	1,135
Surplus (excludes all surplus related to preferred stock)	10,964
Retained earnings	15,065
Accumulated other comprehensive income	(1,681)
Other equity capital components	0
Total bank equity capital	25,483
Non-controlling (minority) interests in consolidated subsidiaries	350
Total equity capital	25,833
Total liabilities and equity capital	$286,411

Source: Federal Financial Institutions Examination Council Call Report, December 2018.

6.2.1 OUR CAPITAL IN BAU

The table below provides regulatory capital ratios for Parent and the Bank, as of December 31, 2018. A description of how we expect we would manage our capital in a crisis is included in Section 4.1 above.

Consolidated and largest bank subsidiary regulatory capital ratios

	Well Capitalized	Minimum Required *(a)*	Capital Ratios
Consolidated regulatory capital ratios: *(b)(c)*			
Advanced Approach:			
CET1 ratio	N/A *(d)*	7.5%	**10.7%**
Tier 1 capital ratio	6%	9	**12.8**
Total capital ratio	10%	11	**13.6**
Standardized Approach:			
CET1 ratio	N/A *(d)*	7.5%	11.7%
Tier 1 capital ratio	6%	9	14.1
Total capital ratio	10%	11	15.1
Tier 1 leverage ratio	N/A *(d)*	4	6.6
SLR *(e)*	N/A *(d)*	5	6.0
The Bank of New York Mellon regulatory capital ratios: *(b)*			
Advanced Approach:			
CET1 ratio	6.5%	6.375%	**14.0%**
Tier 1 capital ratio	8	7.875	**14.3**
Total capital ratio	10	9.875	**14.7**
Tier 1 leverage ratio	5	4	**7.6**
SLR *(e)*	6	3	**6.8**

Source: 2018 Annual Report.

(a) *Minimum requirements for December 31, 2018 include minimum thresholds plus currently applicable buffers.*

(b) *For our CET1, Tier 1 capital and Total capital ratios, our effective capital ratios under U.S. capital rules are the lower of the ratios as calculated under the Standardized and Advanced Approaches. The Tier 1 leverage ratio is based on Tier 1 capital and quarterly average total assets.*

(c) *See page 48 of our 2018 Annual Report for the capital ratio requirements with the phase-in of the capital conservation buffer and the U.S. G-SIB surcharge, as well as the introduction of the SLR buffer.*

(d) *The Federal Reserve's regulations do not establish well capitalized thresholds for these measures for bank holding companies.*

(e) *SLR became a binding measure on January 1, 2018. The SLR is based on Tier 1 capital and total leverage exposure, which includes certain off-balance sheet exposures.*

The following table presents the amount of capital by which the Parent and the Bank exceeded the capital thresholds determined under U.S. capital rules at Dec. 31, 2018.

Capital above thresholds at Dec. 31, 2018 *(in millions)*	Consolidated *(a)*	The Bank of New York Mellon *(b)*
CET1	$5,217	$10,036
Tier 1 capital	6,224	8,372
Total capital	4,235	6,273
Tier 1 leverage capital	8,284	6,441
SLR *(c)*	3,647	2,336

Source: 2018 Annual Report.

(a) *Based on minimum required standards, with applicable buffers.*

(b) *Based on well capitalized standards.*

(c) *SLR became a binding measure on January 1, 2018*

Capital ratios vary depending on the size and composition of the balance sheet at year-end and level and types of investments in assets. The balance sheet size fluctuates from year to year based on levels of customer and market activity. In general, when servicing clients are more actively trading securities, deposit balances and the balance sheet as a whole are higher. In addition, when markets experience significant volatility or stress, our balance sheet size may increase considerably as client deposit levels increase.

6.2.2 OUR FUNDING AND LIQUIDITY IN BAU

This section discusses our funding and liquidity position as well as our ongoing efforts to manage liquidity risk in BAU. A description of how we expect we would manage liquidity risk in a crisis is included in Sections 4.1 (discussing liquidity generally) and 4.2 (discussing intraday liquidity specifically), above.

We fund ourselves in BAU primarily through deposits and, to a lesser extent, other short-term borrowings and long-term debt. Short-term borrowings consist of federal funds purchased and securities sold under repurchase agreements, payables to customers and broker-dealers, commercial paper and other borrowed funds. Certain other borrowings, for example, securities sold under repurchase agreements, require the delivery of securities as collateral.

We define liquidity as the ability of Parent and its subsidiaries to access funding or convert assets to cash quickly and efficiently, or to roll over or issue new debt, especially during periods of market stress, at a reasonable cost and in order to meet its short-term (up to one year) obligations. Funding liquidity risk is the risk that we cannot meet our cash and collateral obligations at a reasonable cost for both expected and unexpected cash flow and collateral needs without adversely affecting daily operations or our financial condition. Funding liquidity risk can arise from funding mismatches, market constraints from the inability to convert assets to cash, the inability to hold or raise cash, low overnight deposits, deposit run-off or contingent liquidity events.

We also manage liquidity risks on an intraday basis. Intraday liquidity risk is the risk that we cannot access funds during the business day to make payments or settle immediate obligations, usually in real time. Intraday liquidity risk can arise from timing mismatches, market constraints from the inability to convert assets to cash, the inability to raise cash intraday, low overnight deposits and/or adverse stress events.

Changes in economic conditions or exposure to credit, market, operational, legal and reputational risks also can affect our liquidity risk framework.

We monitor and control liquidity exposures and funding needs within and across significant legal entities, branches, currencies and business lines, taking into account, among other factors, any applicable restrictions on the transfer of liquidity among entities.

We also manage potential intraday liquidity risks. We monitor and manage intraday liquidity against existing and expected intraday liquid resources (such as cash balances, remaining intraday credit capacity, intraday contingency funding and available collateral) to enable us to meet our intraday obligations under normal and reasonably severe stressed conditions.

We seek to maintain an adequate liquidity cushion in both normal and stressed environments and seek to diversify funding sources by line of business, customer and market segment. Additionally, we seek to maintain liquidity ratios within approved limits and liquidity risk tolerance, maintain a liquid asset buffer that can be liquidated, financed and/or pledged as necessary, and control the levels and sources of wholesale funds.

When monitoring liquidity, we evaluate multiple metrics in order to have sufficient liquidity for expected and unexpected events. Metrics include cash flow mismatches, asset maturities, debt spreads, peer ratios, liquid assets, unencumbered collateral, funding sources and balance sheet liquidity ratios. We monitor the LCR, as well as various internal liquidity limits as part of our standard analysis to monitor depositor and market funding concentration, liability maturity profile and potential liquidity draws due to off-balance sheet exposure.

U.S. regulators have established an LCR that requires certain banking organizations, including us, to maintain a minimum amount of unencumbered HQLA sufficient to withstand the net cash outflow under a hypothetical standardized acute liquidity stress scenario for a 30-day time horizon.

The following table presents the consolidated HQLA at December 31, 2018, and the average HQLA and average LCR for the fourth quarter of 2018.

Consolidated HQLA and LCR ***(in billions)***	**Dec. 31, 2018**
Securities *(a)*	$121
Cash *(b)*	61
Total consolidated HQLA *(c)*	$182
Total consolidated HQLA – average *(c)*	$164
Average LCR	118%

(a) Primarily includes securities of U.S. government-sponsored enterprises, U.S. Treasury, sovereign securities, U.S. agency and investment-grade corporate debt.

(b) Primarily includes cash on deposit with central banks.

(c) Consolidated HQLA presented before adjustments. After haircuts and the impact of trapped liquidity, consolidated HQLA totaled $133 billion at December 31, 2018 and averaged $121 billion for the fourth quarter of 2018.

We also perform liquidity stress tests (LSTs) to evaluate whether BNY Mellon and certain domestic bank subsidiaries maintain sufficient liquidity resources under multiple stress scenarios. LSTs are based on scenarios that measure liquidity risks under unlikely but plausible conditions. We perform these tests under various time horizons ranging from one day to one year in a base case, as well as supplemental tests to determine whether BNY Mellon and certain domestic subsidiaries' liquidity is sufficient for severe market events and firm-specific events. Our LST framework includes the RLAP test. The RLAP test is designed to ensure that the liquidity needs of certain key subsidiaries in a stress environment can be met by available resources held directly within the entity itself or at the Parent or IHC, as applicable. Our results indicate that we have sufficient RLAP liquidity.

Additional information related to our assets, liabilities, capital and major funding sources is contained in our reports filed with the SEC, including the 2018 Form 10-K, the Quarterly Reports on Form 10-Q and the Current Reports on Form 8-K, available at www.bnymellon.com.

6.3 DERIVATIVES AND TRADING ACTIVITIES

Hedging derivatives

We utilize interest rate swap agreements to manage our exposure to interest rate fluctuations. We enter into fair value hedges as an interest rate risk management strategy to reduce fair value variability by converting certain fixed rate interest payments associated with available-for-sale securities and long-term debt to LIBOR.

The available-for-sale securities hedged consist of U.S. Treasury bonds, agency and non-agency commercial mortgage-backed securities, sovereign debt, corporate bonds and covered bonds that had original maturities of 30 years or less at initial purchase.

The fixed rate long-term debt instruments hedged generally have original maturities of five to 30 years. We issue both callable and non-callable debt. The debt is hedged with “receive fixed rate, pay variable rate” swaps.

In addition, we utilize forward foreign exchange contracts as hedges to mitigate foreign exchange exposures. We use forward foreign exchange contracts as cash flow hedges to convert certain forecasted non-U.S. dollar revenue and expenses into U.S. dollars. We use forward foreign exchange contracts with maturities of 15 months or less as cash flow hedges to hedge our foreign exchange exposure to Indian rupee, British pound, Hong Kong dollar, Singapore dollar and Polish zloty revenue and expense transactions in entities that have the U.S. dollar as their functional currency.

We also utilize forward foreign exchange contracts as fair value hedges of the foreign exchange risk associated with available-for-sale securities.

Forward foreign exchange contracts are also used to hedge the value of our net investments in foreign subsidiaries. These forward foreign exchange contracts have maturities of less than one year. The derivatives employed are designated as hedges of changes in value of our foreign investments due to exchange rates. Changes in the value of the forward foreign exchange contracts offset the changes in value of the foreign investments due to changes in foreign exchange rates.

Trading activities (including trading derivatives)

Our trading activities are focused on acting as a market-maker for our customers, facilitating customer trades and risk mitigating economic hedging in compliance with the Volcker Rule. We also use derivative financial instruments as risk mitigating economic hedges, which are not formally designated as accounting hedges. This includes hedging the foreign currency, interest rate or market risks inherent in some of our balance sheet exposures, such as seed capital investments and deposits, as well as certain investment management fee revenue streams. We also use total return swaps to economically hedge obligations arising from the company’s deferred compensation plan whereby the participants defer compensation and earn a return linked to the performance of investments they select.

We manage trading risk through a system of position limits, a VaR methodology based on historical simulation and other market sensitivity measures. Risk is monitored and reported to senior management by a separate unit, independent from trading, on a daily basis. Based on certain assumptions, the VaR methodology is designed to capture the potential overnight pre-tax dollar loss from adverse changes in fair values of all trading positions. The calculation assumes a one-day holding period, utilizes a 99% confidence level and incorporates non-linear product characteristics. The VaR model is one of several statistical models used to develop economic capital results, which are allocated to lines of business for computing risk-adjusted performance.

VaR methodology does not evaluate risk attributable to extraordinary financial, economic or other occurrences. As a result, the risk assessment process includes a number of stress scenarios based upon the risk factors in the portfolio and management's assessment of market conditions. Additional stress scenarios based upon historical market events are also performed. Stress tests may incorporate the impact of reduced market liquidity and the breakdown of historically observed correlations and extreme scenarios. VaR and other statistical measures, stress testing and sensitivity analysis are incorporated in other risk management materials.

Counterparty credit risk and collateral

We assess credit risk of our counterparties through regular examination of their financial statements, confidential communication with the management of those counterparties and regular monitoring of publicly available credit rating information. This and other information is used to develop proprietary credit rating metrics used to assess credit quality.

Collateral requirements are determined after a comprehensive review of the credit quality of each counterparty. Collateral is generally held or pledged in the form of cash and/or highly liquid government securities. Collateral requirements are monitored and adjusted daily.

Additional information related to our use of derivative instruments is contained in our reports filed with the SEC, including the 2018 Form 10-K, the Quarterly Reports on Form 10-Q and the Current Reports on Form 8-K, available at *www.bnymellon.com*.

6.4 DESCRIPTION OF FOREIGN OPERATIONS

Our primary international activities consist of asset servicing and global payment services in our Investment Services business and asset management in our Investment Management business.

At December 31, 2018, we had approximately 9,100 employees in Europe, the Middle East and Africa, approximately 14,500 employees in the Asia-Pacific region and approximately 700 employees in other global locations, primarily Brazil.

Additional information related to our international operations is contained in our reports filed with the SEC, including the 2018 Form 10-K, the Quarterly Reports on Form 10-Q and the Current Reports on Form 8-K, available at *www.bnymellon.com*.

6.5 MATERIAL SUPERVISORY AUTHORITIES

We are registered as a financial holding company under the Bank Holding Company Act of 1956, as amended by the Gramm-Leach-Bliley Act and by the Dodd-Frank Act. We are subject to supervision by the Federal Reserve.

The Bank, which is our largest banking subsidiary, is a New York state-chartered bank and a member of the Federal Reserve System and is subject to regulation, supervision and examination by the Federal Reserve, the FDIC and the New York State Department of Financial Services. Our national bank subsidiaries, BNY Mellon, N.A. and BNY Mellon TrustCo, are chartered as national banking associations and subject to primary regulation, supervision and examination by the Office of the Comptroller of the Currency.

We operate a number of broker-dealers that engage in securities underwriting and other broker-dealer activities in the United States. These companies are SEC-registered broker-dealers and members of FINRA. Our nonbank subsidiaries engaged in securities-related activities are regulated by supervisory agencies in the countries in which they conduct business.

Certain of our public finance and advisory activities are regulated by the Municipal Securities Rulemaking Board.

Certain of our subsidiaries are registered with the CFTC as commodity pool operators, introducing brokers and/or or commodity trading advisors and, as such, are subject to CFTC regulation. The Bank is provisionally registered as a Swap Dealer (as defined in the Dodd-Frank Act) with the CFTC, and is a member of the NFA in that same capacity. As a Swap Dealer, the Bank is subject to regulation, supervision and examination by the CFTC and the NFA.

Certain of our subsidiaries are registered investment advisors under the Investment Advisers Act of 1940, as amended, and as such are supervised by the SEC. They are also subject to various U.S. federal and state laws and regulations and to the laws and regulations of any countries in which they conduct business. Our subsidiaries advise both public investment companies, which are registered with the SEC under the Investment Company Act of 1940, including the BNY Mellon family of mutual funds, and private investment companies which are not registered under the Investment Company Act of 1940.

Certain of our investment management, trust and custody operations provide services to employee benefit plans that are subject to the Employee Retirement Income Security Act of 1974, as amended, administered by the U.S. Department of Labor.

In Europe, our branches are subject to regulation in the countries in which they are established, in addition to being subject to oversight by the U.S. regulators referred to above. BNY Mellon SA/NV is a public limited liability company incorporated under the laws of Belgium, holds a banking license issued by the National Bank of Belgium, and is authorized to carry out all banking and savings activities as a credit institution. The European Central Bank has responsibility for the direct supervision of significant banks and banking groups in the euro area, including BNY Mellon SA/NV. The European Central Bank's supervision is carried out in conjunction with the relevant national prudential regulator (the National Bank of Belgium, in BNY Mellon SA/NV's case), as part of the single supervisory mechanism.

Certain of our financial services operations in the United Kingdom are subject to regulation and supervision by the FCA and the PRA. The PRA is responsible for the authorization and prudential regulation of firms that carry on PRA-regulated activities, including banks. PRA-authorized firms are also subject to regulation by the FCA for conduct purposes. In contrast, FCA-authorized firms (such as investment management firms) have the FCA as their sole regulator for both prudential and conduct purposes. As a result, FCA-authorized firms must comply with FCA prudential and conduct rules and the FCA's Principles for Businesses, while dual-regulated firms must comply with the FCA conduct rules and FCA Principles, as well as the applicable PRA prudential rules and the PRA's Principles for Businesses.

The PRA regulates BNYMIL, our UK incorporated bank, as well as the London Branch. Certain of our UK incorporated subsidiaries are authorized to conduct investment business in the United Kingdom. Their investment management advisory activities and their sale and marketing of retail investment products are regulated by the FCA. Certain UK investment funds, including investment funds of BNY Mellon, are registered with the FCA and are offered for sale to retail investors in the United Kingdom.

The types of activities in which the foreign branches of our banking subsidiaries and our international subsidiaries may engage are subject to various restrictions imposed by the Federal Reserve. Those foreign branches and international subsidiaries are also subject to the laws and regulatory authorities of the countries in which they operate.

Additional information related to our supervision and regulation is contained in our reports filed with the SEC, including the 2018 Form 10-K, the Quarterly Reports on Form 10-Q and the Current Reports on Form 8-K, available at *www.bnymellon.com*.

6.6 PRINCIPAL OFFICERS

The Executive Committee and Other Executive Officers of Parent are:

Charles W. Scharf* Chairman and Chief Executive Officer	**Francis (Frank) La Salla*** Chief Executive Officer, Issuer Services
Paul Camp Chief Executive Officer, Treasury Services	**J. Kevin McCarthy*** General Counsel
Lisa Dolly[1] Chief Executive Officer, Pershing LLC	**Greg Nehro** Interim Head of Human Resources
Bridget E. Engle* Chief Information Officer	**Lester J. Owens*** Head of Operations
Thomas P. (Todd) Gibbons* Vice Chairman & Chief Executive Officer, BNY Mellon Clearing, Markets and Client Management	**Roman Regelman*** Head of Digital
Mitchell E. Harris* Chief Executive Officer, Investment Management	**Brian Ruane** Chief Executive Officer, BNY Mellon Government Securities Services Corp.
Hani A. Kablawi* Chief Executive Officer, Global Asset Servicing and Chairman, Europe, Middle East, and Africa	**Michael P. Santomassimo*** Chief Financial Officer
Catherine Keating* Chief Executive Officer, BNY Mellon Wealth Management	**Akash A. Shah*** Head of Strategy
Kurtis R. Kurimsky* Corporate Controller	**James S. Wiener***[2] Chief Risk Officer

*Designated as an Executive Officer

[1] James T. Crowley has been appointed as Chief Executive Officer of Pershing LLC effective July 1, 2019.

[2] Senthil Kumar will join the company in July 2019 as Chief Risk Officer.

7. CONCLUSION

We understand the role that we play for our clients and the markets in which we operate. We embrace our responsibility to manage risk every day and to ensure that, were a resolution of our firm ever necessary, it could be accomplished with minimal disruption to financial markets. Resolution planning is more than a compliance exercise for us. We maintain a thorough, carefully considered SPOE strategy with associated capabilities to make the strategy actionable. We continually test, refine and enhance our capabilities to ensure that, in the event of material financial stress or failure, we are prepared for a rapid and orderly resolution under the Bankruptcy Code.

8. KEY TERMS

The terms “we,” “us,” “our,” “BNY Mellon” and the “firm” refer to The Bank of New York Mellon Corporation and its consolidated subsidiaries—*i.e.*, the organization as a whole. The term “Parent” refers solely to The Bank of New York Mellon Corporation, the top-tier entity in our corporate hierarchy while the term “the Bank” refers to The Bank of New York Mellon, our key banking entity. Other terms used in this public section are defined below:

TERM	DEFINITION
2018 Annual Report	Parent’s Annual Report on Form 10-K for the year ended December 31, 2018
Agencies	The Federal Reserve and the FDIC
Agent banks	Correspondent banks and sub-custodians
Bank	The Bank of New York Mellon, a material entity
Bankruptcy Code	Title 11 of the United States Code
BAU	Business as usual, meaning a time which is normal business operation for our firm (*i.e.*, when the firm is not experiencing stress)
BNY Investment Management Services	BNY Investment Management Services LLC, a material entity
BNY Mellon IA	BNY Mellon Investment Adviser, Inc., a material entity
BNY Mellon India Ops	BNY Mellon International Operations (India) Private Limited, a material entity
BNY Mellon India Tech	BNY Mellon Technology Private Limited, a material entity
BNY Mellon Investment Servicing	BNY Mellon Investment Servicing (US) Inc., a material entity
BNY Mellon SA/NV	The Bank of New York Mellon SA/NV, a material entity
BNY Mellon Securities	BNY Mellon Securities Corporation, a material entity
BNY Mellon TrustCo	The Bank of New York Mellon Trust Company, N.A., a material entity
BNYMIL	The Bank of New York Mellon (International) Limited, a material entity
Board of Directors	Our Parent’s board of directors; generic references to other boards of directors (of a material entity, for example) are not capitalized
CFTC	U.S. Commodity Futures Trading Commission
Core business lines	Our business lines, including associated operations, services, functions and support, which upon failure would result in a material loss of revenue, profit, or franchise value. Additional information about our core business lines can be found in Section 2.

TERM	DEFINITION
Crisis Continuum	Our series of defined levels of stress from BAU through increasing levels of severity up to and including resolution. Primary monitoring tools for the Crisis Continuum levels include capital, liquidity and operational key risk indicator thresholds.
Crisis Continuum Framework	Our governance framework for identifying and managing defined crisis levels that may occur along the Crisis Continuum. Key components include crisis governance, measures and thresholds for monitoring and reporting crisis situations, internal and external escalation and communication plans, and potential responses at each crisis level.
Critical operations	Those operations of our firm, including associated services, functions and support, the failure or discontinuance of which, in our view or as jointly directed by the Agencies, would pose a threat to the financial stability of the United States
Critical services	The shared and outsourced services that must be maintained to ensure the operational continuity of our core businesses and critical operations in resolution. We define critical services broadly to include key assets and key third parties as well as services.
Dodd-Frank Act	Dodd-Frank Wall Street Reform and Consumer Protection Act
Downstream Playbooks	Resolution-related playbooks that detail specific actions to be taken throughout the Crisis Continuum in order to operationalize specific aspects of the SPOE strategy
EMEA	Europe, Middle East and Africa
Entity Governance Committee	Senior-level committee at our firm responsible for overseeing the firm's legal entity structure and providing strategic direction to enhance our overall resolvability in accordance with our LER Criteria
FCA	Financial Conduct Authority
FDIC	Federal Deposit Insurance Corporation
Federal Reserve	Board of Governors of the Federal Reserve System
Financial market utility	Systems that provide for the payment, clearing and settlement of cash and securities transactions between financial institutions, among other types of financial transactions. Financial market utilities include central securities depositories, central counterparties, securities settlement systems and payment systems.
FINRA	Financial Industry Regulatory Authority
FMI	Financial market infrastructure, which includes financial market utilities and agent banks

TERM	DEFINITION
G-SIB	Global Systemically Important Bank, a designation applicable to us that is reassessed periodically by the Financial Stability Board
GSS Corp.	BNY Mellon Government Securities Services Corp., a material entity
GSS Services	U.S. government security clearing and settlement services and U.S. tri-party repo clearing and settlement services provided by us
HQLA	High-quality liquid assets
IHC	BNY Mellon IHC, LLC, a material entity
IPO	Initial public offering
LCR	Liquidity coverage ratio
LER Criteria	Our legal entity rationalization criteria, comprised of four overarching goals and supporting principles, that provide the framework for ensuring that our legal entity structure supports resolvability and remains aligned with our SPOE strategy
LIBOR	London Interbank Offered Rate
London Branch	The Bank of New York Mellon – London Branch, a material entity
Master Playbook	Our top level resolution playbook that provides a clear, overarching framework for the sequencing and linkage of key information across our full suite of playbooks, including Downstream Playbooks, to support the Crisis Management Coordinator and coordinate timely execution of relevant actions necessary to implement the SPOE strategy
Material entity	An entity of our firm or foreign office that is significant to the activities of a critical operation or core business line. Additional information on our material entities can be found in Sections 2 and 6.1.
New HoldCo	Holding company that would be created under the SPOE strategy, to which Parent, following its bankruptcy filing, would transfer all of its subsidiaries and under which each subsidiary would continue as a going concern
NFA	National Futures Association
Objects of sale	Discrete businesses of our firm that could be sold or wound down if we were to fail
PNV Trigger	A trigger, based on a ratio that measures available resources held at Parent and the IHC against the projected resource needs of the material entities after Parent's failure, that signals when Parent should transfer substantially all of its remaining assets (other than stock in subsidiaries and a cash reserve to fund bankruptcy expenses) to the IHC, as described further in Sections 3 and 4.1.

TERM	DEFINITION
PRA	Prudential Regulation Authority
RCAP	Resolution Capital Adequacy and Positioning, as described further in Section 4.1
RCEN	Resolution Capital Execution Need, as described further in Section 4.1
RemainCo	Under the SPOE strategy, the remaining businesses and associated entities of our firm as described further in Sections 3 and 4.6
Resolution Plan	Our required resolution plan under Section 165(d) of the Dodd-Frank Act and the Title I Rule, containing this public section and the confidential information required by the Agencies
RLAP	Resolution Liquidity Adequacy and Positioning, as described further in Section 4.1
RLEN	Resolution Liquidity Execution Need, as described further in Section 4.1
SEC	U.S. Securities and Exchange Commission
Security Agreement	An agreement that secures obligations under the Support Agreement
SIFI	Systemically Important Financial Institution
Support Agreement	Agreement designed to assure that material entity subsidiaries of Parent remain liquid and solvent under the SPOE strategy
Title I Rule	The rule jointly adopted by the Agencies pursuant to Section 165(d) of Title I of the Dodd-Frank Act requiring certain large bank holding companies to periodically submit resolution plans, available here
TLAC	Total Loss-Absorbing Capacity, which includes capital and certain types of unsecured debt instruments, as defined in Federal Reserve regulations
TPC	Tennessee Processing Center LLC, a material entity
Trust	Under the SPOE strategy, the trust that would hold 100% of the equity of New HoldCo and would operate New HoldCo and subsidiaries for the benefit of the stakeholders in Parent's Chapter 11 bankruptcy case
TSG	Technology Services Group, Inc., a material entity
VaR	Value-at-risk

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