Morgan Stanley

2019 Resolution Plan

Public Section

Morgan Stanley

PUBLIC SECTION

1. Executive Summary

1.1. Introduction

Morgan Stanley (as a stand-alone parent holding company, "**MS Parent**," and on a consolidated basis, the "**Firm**") is a global financial services firm that, through its subsidiaries and affiliates, provides a wide variety of products and services to a large and diversified group of customers and counterparties. The Firm conducts its business from its headquarters in and around New York City, its regional offices and branches throughout the United States and its principal offices in London, Tokyo, Hong Kong and other world financial centers. The Firm is committed to managing its operations to promote the integrity of the financial system and fulfilling its responsibility to maintain the highest standards of excellence.

The Firm supports regulatory changes made since 2008 that mitigate systemic risk and improve global financial stability. One such regulatory change is the requirement for financial institutions to submit resolution plans. The Firm believes that resolution planning is a key element of systemic regulation to help protect the soundness of the global financial system. Accordingly, the Firm has prioritized resolution planning and made it an essential element of its risk management and strategic planning processes, integrating resolvability criteria into its business-as-usual ("**BAU**") conduct. The Firm has dedicated significant Firm resources to resolution planning, with the involvement of a substantial number of employees across the Firm, including the Firm's senior executive management. In its resolution planning, the Firm is guided by and committed to the key objectives of (i) operating in a manner and with a culture that contributes to the safety and soundness of the global financial system and (ii) enhancing its resilience and resolvability.

The Firm has developed a resolution plan in accordance with the requirements of Section 165(d) of Title I of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "**Dodd-Frank Act**") and its implementing regulations (the "**165(d) Rule**") adopted by the Board of Governors of the Federal Reserve System (the "**Federal Reserve Board**") and the Federal Deposit Insurance Corporation (the "**FDIC**") (together, the "**Agencies**" and such plan, the "**2019 Plan**" or the "**Resolution Plan**").[1] This "**Public Section**" of the 2019 Plan is submitted concurrently with the Confidential Section, which describes how MS Parent and its "**Material Entities**"[2] could be resolved in a rapid and orderly manner that substantially mitigates the risk that MS Parent's failure would have serious adverse effects on financial stability in the U.S.

The Firm's 2019 Plan articulates a preferred strategy for the resolution of MS Parent and the Material Entities (the "**Resolution Strategy**") detailing how the Firm would be resolved under a range of scenarios

[1] The 165(d) Rule requires the Firm to demonstrate how MS Parent could be resolved under the U.S Bankruptcy Code, without extraordinary government support and in a manner that substantially mitigates the risk that the failure of the Firm would have serious adverse effects on U.S. financial stability. The Resolution Plan is not binding on a court or resolution authority.

[2] Material Entity is defined in the 165(d) Rule as a subsidiary or foreign office of the Firm that is significant to the Firm's core businesses and critical activities. A description of the Firm's Material Entities is included as Appendix B to this Public Section.

and how potential vulnerabilities that might otherwise hinder or prevent a rapid, orderly and value-maximizing resolution would be addressed and overcome. This Resolution Strategy is supported by extensive resolution planning efforts that have been refined and enhanced over a period of years. Moreover, the Firm has put in place a number of practices to help manage its resolvability over time and address risks that may emerge as a result of changes in business practices, financial profile or organizational structure.

The Firm believes that its 2019 Plan presents a feasible and credible strategy that demonstrates that the Firm can be resolved without adverse effects on financial stability in the U.S. or on the broader global economy. Based upon the strength of its capital and liquidity positions and the resiliency and credibility of the Resolution Strategy under a wide range of scenarios, the Firm believes that none of the U.S. government, the FDIC's Deposit Insurance Fund ("**DIF**") nor any foreign governments or taxpayers would incur losses as a result of its failure. The 2019 Plan provides greater detail on all of the actions completed by the Firm to address guidance received from the Agencies and other enhancements to resolvability capabilities. With these actions, the Firm believes that it has the capabilities required to execute its Resolution Strategy, although the Firm will also continue to evaluate and refine its capabilities on an ongoing basis.

1.2. Recent Regulatory Feedback and Guidance

With the submission of this 2019 Plan, the Firm has submitted six Resolution Plans to the Agencies, as it has been required to do on a periodic basis under the 165(d) Rule since the Firm's first Resolution Plan submission in 2012. Each one of the Firm's Resolution Plans has responded to the Agencies' feedback and improved upon the feasibility of the Firm's Resolution Strategy and associated capabilities.

The Firm now submits its 2019 Plan, which provides an update on the Firm's resolution capabilities and Resolution Strategy, including enhancements made subsequent to its Resolution Plan filed in 2017 (the "**2017 Plan**"), while also describing how the Firm has addressed the shortcoming identified by the Agencies in the 2017 Plan by (i) establishing Morgan Stanley Holdings LLC (the "**Funding IHC**") as a resolution funding vehicle that would supply capital and liquidity to the Material Entities in times of stress and in resolution in a manner that is resilient to creditor challenge, (ii) enhancing its "**Legal Entity Rationalization ("LER") Criteria"** for determining its organizational structure and (iii) continuing to simplify its legal entity structure.

The 2019 Plan also describes the significant improvements that the Firm has made with respect to its Derivatives and Trading and Payment, Clearing and Settlement ("**PCS**") capabilities in order to address the updated requirements of the guidance released by the Agencies in December 2018 ("**2019 Guidance**").[3] While the Firm cannot anticipate every possible scenario, as a result of its refinement of the

[3] In December 2018, the Agencies released the 2019 Guidance, which consolidated all prior Agency resolution planning guidance into one document and was substantially similar to the prior guidance released by the Agencies other than with respect to updated requirements pertaining to Derivatives and Trading Activities and Operational: Payment Clearing, and Settlement Activities.

Resolution Strategy and implementation of these additional supporting capabilities, the Firm has become more resilient and more easily resolved in a wider range of circumstances.

1.3. Key Enhancements and Changes in 2019 Plan

Many of the enhancements implemented by the Firm as part of the 2019 Plan are intended to respond to the Agencies' feedback to the 2017 Plan as well as the updated requirements in the 2019 Guidance.

In December 2017, the Agencies provided feedback on the 2017 Plan, noting that the plan contained "meaningful improvements over prior resolution plan submissions of [Morgan Stanley]," but also identified a shortcoming regarding the Firm's development and implementation of criteria for a rational and less complex legal entity structure that supports the Firm's Resolution Strategy. The Agencies noted that the Firm's legal entity structure "increases the inherent risk of misallocating resources and therefore raises questions about the Firm's ability to execute its strategy across a range of scenarios."

In response to the Agency feedback to the 2017 Plan and the updated requirements of the 2019 Guidance, the Firm has made a number of enhancements subsequent to its 2017 Plan and now submits its 2019 Plan, which provides an update on the Firm's resolution capabilities and Resolution Strategy. The Firm has addressed the shortcoming identified by the Agencies in the 2017 Plan while improving its resolvability by:

- Establishing the Funding IHC as a funding vehicle to provide funding flexibility during stress and in resolution;
- Revising the "**Support Agreement**" and "**Security Agreement**" to incorporate the role of the Funding IHC as a stress and resolution funding vehicle;
- Enhancing the Firm's direct LER Criteria to actively support the reduction of legal entity complexity; and
- Reducing complexity within the Firm's legal entity structure through an ongoing process to consolidate ownership of each Material Entity in a single ownership line and rationalize the population of Material Entities and intermediate legal entities.

The 2019 Plan also describes the significant improvements that the Firm has made with respect to its "**Resolution Financial Model**," Derivatives and Trading and PCS capabilities in order to address the updated requirements of the 2019 Guidance and continue improving its resiliency and resolvability. For its Resolution Financial Model, the Firm has, among other improvements:

- Built new functionality in order to address the updated Derivatives and Trading requirements in the 2019 Guidance;
- Implemented the Resolution Liquidity Stress Test ("**RLST**");
- Revised the Resolution Financial Model to take account of the implementation of the Funding IHC and its effect on the Firm's support methodology; and

- Made other, more granular, enhancements to other components of the model to improve the Firm's Resolution Liquidity Execution Need ("**RLEN**")[4] and Resolution Capital Execution Need ("**RCEN**")[5] forecasting capabilities.

For Derivatives and Trading, the Firm has, among other improvements:

- Substantially improved its wind-down capabilities by creating a "**Derivatives Segmentation and Forecasting**" systems-based application on a single, global platform;
- Established the "**Booking Model Office**" responsible for the operationalization, governance and communication of the "**Booking Model Framework**";
- Enhanced its Resolution Strategy by updating its strategy to stabilize and de-risk its derivatives portfolios based on its improved wind-down capabilities developed in response to the 2019 Guidance; and
- Enhanced its inter-affiliate risk monitoring and controls framework (the "**Inter-Affiliate Market Risk Framework**") to improve its inter-affiliate risk monitoring and controls.

For PCS, the Firm has, among other improvements:

- Formalized additional strategies and capabilities in the "**PCS Framework**", which contains the Firm's capabilities for continued access to PCS services essential to an orderly resolution;
- Improved identification and mapping of PCS clients and services;
- Developed a "**PCS Data Repository**" to house and centralize key dynamic data supporting the Firm's PCS Framework;
- Improved its "**Financial Market Utility ("FMU") and Agent Bank Access Playbooks**"; and
- Enhanced its "**Key PCS Provider Library**", which enables a comprehensive understanding of the Firm's PCS activities landscape and contains information about the Firm's direct and indirect relationships with key PCS providers.

1.4. Three Pillars of Resolution Planning

The Firm's development of its Resolution Strategy in accordance with the Dodd-Frank Act and 165(d) Rule has been guided by three primary principles, to which the Firm refers as the "**Three Pillars of Resolution Planning:**"

[4] RLEN provides the estimate of the amount of liquidity that each Material Entity requires to operate during the Resolution Period in accordance with the Firm's Resolution Strategy.

[5] RCEN provides the estimate of the amount of capital that each Material Entity requires for the execution of the Firm's Resolution Strategy following the bankruptcy filing of MS Parent, while still maintaining capital levels that allow them to operate or to be wound down in an orderly manner.

- **Strategic and Legal Framework:** The Firm should have the strategic and legal framework to enable implementation of its Resolution Strategy under required time frames and stress conditions.
- **Financial Adequacy:** Each Material Entity should have access to the liquidity and capital needed to execute its resolution strategy without threatening the pre-failure resiliency of MS Parent.
- **Operational Continuity and Capabilities:** Each Material Entity should have access to the personnel, data and systems, facilities, vendors and other non-financial resources needed to execute the Resolution Strategy.

1.5. Advantages of the Firm's Revised SPOE Resolution Strategy

In accordance with the Three Pillars of Resolution Planning, the Firm has developed and, since 2012, continually refined, its Resolution Strategy. Under its Single Point of Entry ("**SPOE**") Resolution Strategy, MS Parent would recapitalize and provide liquidity resources to the Material Entities prior to MS Parent entering proceedings under Chapter 11 of the U.S. Bankruptcy Code ("**Chapter 11**") in order to enable the Material Entities to remain solvent and be sold or wound down without entering resolution proceedings. The Firm believes that such an SPOE approach is most likely to maximize the value of the Firm for MS Parent stakeholders and minimize the impact of the failure of the Firm on U.S. financial stability and the broader economy. This 2019 Plan describes further enhancements to the Firm's SPOE Resolution Strategy, including the establishment of the Funding IHC as a legal entity to facilitate transfers of capital and liquidity to the Firm's Material Entities during times of stress and in resolution.

The Firm's SPOE Resolution Strategy offers a number of advantages over a Multiple Point of Entry ("**MPOE**") strategy, where individual Material Entities enter into their own resolution proceedings, including the following:

- Maintaining continuity of operation by the Firm's Material Entities, which would remain solvent and would not enter standalone resolution proceedings;
- Reducing the losses that would be associated with the abrupt disruption of Material Entity activities and the termination of their qualified financial contracts ("**QFCs**") and other transactions (including potentially large claims that could be brought against MS Parent based on its guarantees of financial contracts to which Material Entities are party), and the liquidation of collateral for such transactions in an MPOE resolution;
- Minimizing potential financial contagion by confining financial losses to MS Parent creditors, which are effectively junior to the creditors of the Material Entities and would be at risk of absorbing losses of the Firm; and
- Minimizing the complexity of resolution proceedings and avoiding the prospect of multiple competing resolution proceedings for different Material Entities of the Firm.

1.6. The 2019 Plan

The section summarizes the following features of the 2019 Plan:

- **Resolution Objectives**, the specific objectives that the Firm has deemed critical to the development of its Resolution Plan.
- **Resolution Strategy**, the Firm's Resolution Strategy, under which MS Parent would be resolved under the U.S. Bankruptcy Code and the Material Entities would remain solvent and be sold or wound down outside resolution proceedings.
- **Resolvable Morgan Stanley**, the main actions the Firm has taken to enhance its resolvability and embed resolution planning and capabilities into BAU practices and processes, as aligned to the Three Pillars of Resolution Planning.

The Firm has focused on, and invested in, enhancing its resolvability and addressing Agency feedback and the 2019 Guidance. These investments in resolution planning have resulted in the extensive integration of resolution preparedness into the Firm's governance and related BAU activities. With this Plan, the Firm has not only addressed the Agency-identified shortcoming regarding the Firm's legal entity structure but also executed the commitments made in its prior Resolution Plans and further enhanced its resolvability capabilities consistent with the requirements of the 2019 Guidance as well as self-identified areas for improvement.

While the Firm continuously evaluates and implements further enhancements to its capabilities and other aspects of its resolvability, the Firm believes that it has the capabilities required to execute its Resolution Strategy and is confident that it could be resolved in a rapid and orderly manner without endangering financial stability or requiring extraordinary taxpayer or government support.

1.6.1. Resolution Objectives

The overarching goal of the Firm's Resolution Strategy and supporting resolution planning efforts and capabilities is to provide that if the Firm were to encounter "**Material Financial Distress**"[6] or fail, it could be resolved within the time frames and under the stress conditions mandated by the Agencies and without taxpayer or government support or disruption to U.S. and global financial stability. The Firm has developed a Resolution Strategy that would maintain the solvency of its Material Entities, including its insured depository institutions ("**IDIs**"), and sustain its Critical Operations[7] and Critical Economic Functions[8] (collectively, "**Critical Functions**") under a broad range of internal or external stresses. It has

[6] The 165(d) Rule defines Material Financial Distress to mean that (i) the Firm has incurred, or is likely to incur, losses that will deplete all or substantially all of its capital, and there is no reasonable prospect for the Firm to avoid such depletion; (ii) the Firm's assets are, or are likely to be, less than its obligations to creditors and others; or (iii) the Firm is, or is likely to be, unable to pay its obligations (other than those subject to a bona fide dispute), in the normal course of business.

[7] As defined in the 165(d) Rule.

[8] As designated by the UK Prudential Regulation Authority ("**PRA**").

identified several key objectives guiding the development of this strategy. Together, these key objectives require the Firm to design and implement a resolution strategy and are set forth below:

- Avoiding interruptions in performance to the customers and counterparties of the Firm's designated Critical Functions until such Critical Functions can be transferred to an alternate provider or wound down in an orderly manner;
- Minimizing the spread of financial distress into the market due to:
  - Payment defaults on short-term obligations;
  - Counterparty terminations of their QFCs with the Firm;
  - Fire sales of assets by the Firm to keep up with its financial obligations; and
  - Trapping of customer assets;
- Maintaining marketability and separability of marketable business lines across a full range of scenarios;
- Eliminating reliance on a regulator to take discretionary actions (or forbear from taking discretionary actions);
- Eliminating reliance on an affiliate to take actions to benefit another affiliate (except as required by contract) or to forbear from taking actions if such action or forbearance could materially increase the risk that the affiliate itself would default on its obligations to third parties;
- Eliminating reliance on U.S. or foreign government financial support; and
- Eliminating significant risk to the FDIC's DIF.

1.6.2. Resolution Strategy

The Firm has developed its Resolution Strategy to achieve the Resolution Objectives. Under the Resolution Strategy, MS Parent would fail and file for bankruptcy under Chapter 11 but the Firm's Material Entities would remain solvent as a result of support provided by MS Parent (prior to its failure) and the Funding IHC and would be sold or wound down as follows:

- The Firm's Wealth Management ("**WM**") and Investment Management ("**IM**") "**Core Business Lines**"[9] would be sold; and
- Each of the Firm's Institutional Securities Group's ("**ISG**") Material Operating Entities ("**MOEs**") would be wound down in an orderly manner outside of insolvency or resolution proceedings (the "**ISG Solvent Wind Down**").

[9] Core Business Line is defined in the 165(d) Rule as a business line of the Firm, including associated operations, services, functions and support, that, in the view of the Firm, upon failure would result in a material loss of revenue, profit, or franchise value. A description of the Firm's Core Business Lines is included as Appendix A to this Public Section.

The Firm's Resolution Strategy is described in further detail in Section 3 Resolution Strategy.

1.6.3. Resolvable Morgan Stanley

As described in further detail in this section, the Firm has implemented the steps necessary (i) to put in place a strategic and legal framework to enable implementation of its Resolution Strategy under required time frames and stress conditions, (ii) for each Material Entity to have access to the liquidity and capital needed to execute its resolution strategy without threatening the pre-failure resiliency of MS Parent and (iii) for each Material Entity to have access to the personnel, data and systems, facilities, vendors and other non-financial resources needed to execute the Resolution Strategy. Together, the Firm's continued focus on the Three Pillars of Resolution Planning supports the credibility of the Resolution Strategy and demonstrates the Firm's increased resiliency and resolvability.

The Firm has invested significant resources so that it would be able to implement the Resolution Strategy. The Firm has considered vulnerabilities to the successful implementation of the Resolution Strategy identified in the 2019 Guidance, as well as the Firm's own self-identified areas for improvement. The Firm has undertaken significant enhancements, some of which were included in the 2017 Plan, to its capabilities across all Three Pillars of Resolution Planning. In addition to the enhancements described in Section 1.3, including improvements to address the Agency-identified shortcoming relating to the complexity of the Firm's legal entity structure, many improvements since the submission of the 2017 Plan are addressed below. The Firm continues to evaluate and implement further enhancements to its capabilities and other aspects of its resolvability in response to regulatory expectations and self-identified areas of improvement.

With respect to the Strategic and Legal Framework pillar, the Firm has:

- Performed an enhanced legal analysis to confirm that support provided by MS Parent (prior to its failure) and the Funding IHC in a resolution scenario is resilient to potential challenges by creditors of MS Parent;
- Perfected security interests in substantial portions of MS Parent's Contributable Assets and the Funding IHC's assets;
- Enhanced its stress and "**Resolution Period**"[10] "**Trigger and Escalation Framework**" with a set of updated triggers based on capital and liquidity metrics which are linked to specific Firm actions;
- Produced separate "**Governance Playbooks**" for MS Parent and each Material Entity, including fiduciary duties analyses prepared by external counsel, to ensure timely decision-making and action execution;
- Enhanced and expanded its LER Criteria to be more direct and actively support the reduction of legal entity complexity and assessed the Firm's legal entities against these criteria;

[10] The Resolution Period is the period of time following the failure of MS Parent.

- Enhanced its separability analysis to support sales strategies for WM and IM, including through the preparation of sale package buyer documents, carve out financials and valuations; and
- Maintained its capability to create virtual data rooms containing relevant buyer due diligence materials.

With respect to the Financial Adequacy pillar, the Firm has:

- Developed a Resolution Liquidity Adequacy and Positioning ("**RLAP**") model to estimate standalone liquidity requirements for each Material Entity, incorporated this model into the Firm's Internal Liquidity Stress Testing ("**ILST**") framework and improved the Firm's other liquidity and capital modeling capabilities;
- Enhanced the Resolution Financial Model which demonstrates that the Firm has adequate resources to execute its Resolution Strategy in a range of scenarios to, among other things, account for the updated Derivatives and Trading requirements of the 2019 Guidance and the implementation of the Funding IHC and its effect on the Firm's support methodology;
- Enhanced the Firm's "**Positioning Framework**," which the Firm uses to determine the appropriate amount of financial resources (i.e., liquid assets and internal loss absorbing capacity ("**ILAC**")) to be positioned at MS Parent and Material Entities, to be consistent with the enhancements made to address the Agency-identified shortcoming and 2019 Guidance;
- Enhanced the Firm's Derivatives and Trading Activities capabilities, including by updating its strategy to stabilize and de-risk its derivatives portfolios based on its improved wind-down capabilities developed in response to the 2019 Guidance; and
- Strengthened inter-affiliate contracts and service level agreements to promote resolvability.

With respect to the Operational Continuity and Capabilities pillar, the Firm has:

- Enhanced its strategy to maintain access to critical FMUs and agent banks by developing new playbooks and enhancing existing playbooks, including through identification of key clients of the Firm and their mapping to critical FMUs and agent banks;
- Confirmed the Firm's full suite of resolution capabilities and supporting systems through the Annual Resolvability Enhancement Assessment ("**AREA**") process;[11]
- Migrated shared operational resources and services from MOEs to an operationally and financially resilient global network of Material Service Entities ("**MSE**");[12]

[11] AREA is the Firm's process to assess, in an objective and formal manner, the sufficiency of existing practices that support robust recovery and resolution preparedness, relative to explicit regulatory rules, expectations and guidance. Through AREA, the Firm evaluates its ability to execute certain functions and produce the data, reporting and analysis (inclusive of contractual, financial, risk and operational information, at the appropriate level of detail) that would be required to execute the Resolution Strategy in a timely manner.

- Expanded and enhanced its operational mapping process;
- Executed and updated service-level agreements ("**SLAs**") between Material Entities;
- Reviewed "**Critical Contract**"[13] provisions and remediated as necessary;
- Enhanced its "**Guarantee Administrative Priority Motion**"—which ensures certain claims can be appropriately raised to administrative priority status in Chapter 11—by including alternative relief in the form of a transfer motion;
- Identified its QFC population and engaged a vendor to digitize QFC cross-default provisions; and
- Remediated termination rights in QFCs by adhering relevant Firm entities to the International Swaps and Derivatives Association ("**ISDA**") 2018 U.S. Resolution Stay Protocol (together with the ISDA 2015 Universal Resolution Stay Protocol, the "**ISDA Protocols**") and entering into bilateral amendments in order to comply with the requirements of the "**QFC Stay Rules**."[14]

The Firm has taken significant steps in order to achieve the integration of resolution planning into BAU activities. The integration of resolution planning into BAU activities facilitates the evaluation of resolution-related issues and considerations that could arise from the Firm's strategic decisions, regulatory requirements or on account of changes in business practices, financial profile and organizational structure. Notwithstanding that the actions taken by the Firm to date have been more than sufficient to make the Firm resolvable as required by the Dodd-Frank Act and 165(d) Rule, the Firm is also continuing to assess and further develop its resolution planning capabilities beyond July 2019, including by testing and validating existing capabilities.

1.7. Conclusion

This 2019 Plan provides an update on the Firm's resolution capabilities and Resolution Strategy, including enhancements made subsequent to the 2017 Plan, while also describing how the Firm has addressed:

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[12] Material Service Entities provide support services, functions and/or resources that are significant to Material Entities, in support of Core Business Lines and Critical Operations.

[13] Critical Contracts are written contracts, other than QFCs, that relate to the receipt of inter-affiliate and third-party services, products or resources that would be necessary for the business of a Material Entity to function during an orderly resolution and are not promptly substitutable without a material adverse effect on the Material Entity's operation during resolution.

[14] The QFC Stay Rules impose certain restrictions on the terms of QFCs entered into with U.S. global systemically important banks ("**G-SIBs**") and the U.S. operations of foreign G-SIBs and require G-SIBs that are subject to the rules to remediate their in-scope QFCs (unless an exclusion or exemption applies) to (i) expressly acknowledge the FDIC's stay-and-transfer powers pursuant to the Federal Deposit Insurance Act and Orderly Liquidation Authority and (ii) override default rights that are related directly or indirectly to an affiliate of the G-SIB becoming subject to insolvency proceedings, as well as any restriction on the transfer in resolution of related credit enhancements provided by an affiliate of the G-SIB, subject to certain creditor protections.

- The shortcoming identified in the 2017 Plan by establishing the Funding IHC as a funding vehicle, enhancing its LER Criteria framework and continuing to simplify its legal entity structure; and
- The updated requirements of the 2019 Guidance.

With these further enhancements to its capabilities and resolvability, the Firm is confident that it has the ability to successfully execute its Resolution Strategy. Based upon the strength and flexibility of its capital and liquidity positions and the resiliency and credibility of the Resolution Strategy under a wide range of scenarios, the Firm believes that none of the U.S. government, the FDIC's DIF nor any foreign governments or taxpayers would incur losses as a result of its failure.

In particular, the following Public Section provides (i) a summary of the Resolution Strategy; (ii) a summary of the Firm's resolution capabilities with respect to each vulnerability described in the 2019 Guidance; (iii) an overview of the Firm's resolution planning governance structure, review and challenge framework and other processes that have been developed to sustain and enhance the Firm's resolvability capabilities; and (iv) brief summaries of completed remediation projects within the Firm's Recovery and Resolution Enhancement Program ("**RREP**"). The Public Section also includes eight appendices that provide additional information regarding the Firm pursuant to the requirements of the 165(d) Rule, as well as a Glossary.

2. Firm Overview

The Firm is a global financial services institution that, through its subsidiaries and affiliates, advises, and originates, trades, manages and distributes capital for governments, institutions and individuals. MS Parent was originally incorporated under the laws of the State of Delaware in 1981, and its predecessor companies date back to 1924. The Firm is a financial holding company regulated by the Federal Reserve Board under the Bank Holding Company Act of 1956, as amended. The Firm conducts its business from its headquarters in and around New York City, its regional offices and branches throughout the U.S. and its principal offices in London, Tokyo, Hong Kong and other world financial centers. As of December 31, 2018, the Firm had 60,348 employees worldwide.

The Firm is a global financial services institution that maintains significant market positions in each of its Core Business Lines: ISG, WM and IM.[15] Since its founding, the Firm has served the capital markets and advisory needs of its clients within its ISG business, for which the underlying business model has continuously evolved to adapt to the changing economic and regulatory landscape. Over the years, the Firm has diversified into other businesses, including retail services within WM and institutional asset management services within IM. All aspects of the Firm's businesses are highly competitive, and the Firm expects them to remain so in the future. The Firm competes in the U.S. and globally for clients, market share and human talent in all aspects of its Core Business Lines. The Firm competes with commercial banks, brokerage firms, insurance companies, electronic trading and clearing platforms, financial data repositories, mutual fund sponsors, hedge funds, energy companies and other companies offering financial or ancillary services in the U.S. and globally.

The Firm executes the global business operations related to its three Core Business Lines through a number of legal entities within its structure. While legal entities may exist in the Firm's structure to support a variety of business operations and financial efficiencies, the vast majority of the Firm's business operations are conducted through a concentrated subset of the legal entity population, which the Firm designates as its Material Entities.[16]

Exhibit 2-1 identifies the entities that have been designated as the Firm's Material Entities for the 2019 Plan.

Exhibit 2-1. List of Material Entities Included in the 2019 Plan

MATERIAL ENTITY NAME		DESCRIPTION
Material Operating Entities		
1	**Morgan Stanley & Co. LLC ("MSCO")**	U.S. Institutional Broker-Dealer, FCM
2	**Morgan Stanley & Co. International plc ("MSIP")**	UK Broker-Dealer
3	**Morgan Stanley MUFG Securities Co., Ltd. ("MSMS")**	Japan Broker-Dealer

[15] The Firm's Core Business Lines are discussed in greater detail in Appendix A: Description of Core Business Lines.

[16] The Firm's Material Entities are discussed in greater detail in Appendix B: Description of Material Entities.

	MATERIAL ENTITY NAME	DESCRIPTION
4	Morgan Stanley Capital Services LLC (“MSCS”)	U.S. Swap Dealer
5	Morgan Stanley Capital Group, Inc. (“MSCG”)	U.S. Commodities, Swap Dealer
6	Morgan Stanley Bank, N.A. (“MSBNA”)	U.S. National Bank
7	Morgan Stanley Private Bank, N.A. (“MSPBNA”)	U.S. National Bank
8	Morgan Stanley Smith Barney LLC (“MSSB”)	U.S. Retail Broker-Dealer
9	Morgan Stanley Investment Management Inc. (“MSIM Inc.”)	U.S. Investment Advisor
10	Morgan Stanley Investment Management Ltd. (“MSIM Ltd.”)	U.K. Investment Advisor
11	Morgan Stanley Europe SE (“MSESE”)	German Broker-Dealer
12	Morgan Stanley Bank Aktiengesellschaft (“MSBAG”)	German Bank
Material Service Entities		
13	Morgan Stanley Services Group (“MSSG”)	U.S. Support Services Provider
14	MS Financing LLC (“MSFL”)	U.S. Real Estate & Procurement Company
15	Morgan Stanley UK Group (“MSUKG”)	UK Real Estate Company
16	Morgan Stanley UK Limited (“MSUKL”)	UK Support Services Provider
17	Morgan Stanley Smith Barney Financing LLC (“MSSBF”)	U.S. Real Estate and Procurement Company
18	Morgan Stanley Smith Barney FA Notes Holding LLC (“MSSBFA”)	U.S. F.A. Notes Financing Company
19	Morgan Stanley Japan Group Co., Ltd (“MSJG”)	Japan Support Services Provider
20	Morgan Stanley Services Canada Corp (“MSSCC”)	Canada Technology Workforce Center
21	Morgan Stanley Hungary Analytics Limited (“MSHAL”)	Hungary Workforce Center
22	Morgan Stanley Advantage Services Private Limited (“MSASPL”)	India Workforce Center
23	Morgan Stanley Management Services (Shanghai) Limited (“MSMSSL”)	China Workforce Center
24	Morgan Stanley Services Holdings (“MSSH”)	U.S. Payroll Company
25	Morgan Stanley Asia Limited (“MSAL”)	Hong Kong Broker-Dealer and Support Service Provider
26	Morgan Stanley Hong Kong Ltd (“MSHKL”)	Hong Kong Fixed Asset Holding Company
27	Morgan Stanley Employment Services UK Limited (“MSES”)	UK Front Office Employment Entity
28	Morgan Stanley Holdings LLC	Funding IHC

3. Resolution Strategy

3.1. Overview

The Firm has developed its Resolution Strategy and articulated how this strategy could be successfully implemented by the Firm within the time frames and under the stress conditions mandated by the Agencies without taxpayer or government support and without disruption to U.S. and global financial stability. Consistent with its Resolution Objectives, the Firm has developed an SPOE Resolution Strategy under which MS Parent would fail and file for bankruptcy under Chapter 11 but the Firm's Material Entities would remain solvent as a result of support provided by MS Parent (prior to its failure) and the Funding IHC and would be sold or wound down as described below. Throughout the resolution of the Firm, operational continuity and access to all critical internal and external services would be maintained to implement the Resolution Strategy, prevent the failure of any Material Entities and maximize the value preserved for MS Parent's bankruptcy estate. After having implemented the Resolution Strategy, the Firm would essentially no longer exist at the end of the Resolution Period.

Hypothetical Resolution Scenario

To develop its Resolution Strategy, the Firm has used a hypothetical failure scenario and associated assumptions mandated by regulatory guidance (the "**Hypothetical Resolution Scenario**"). Under the Hypothetical Resolution Scenario, the Firm is required to assume that it would face a severe idiosyncratic stress event in a severely adverse economic environment, requiring resolution of the Firm. The Firm is also required to assume that it does not take any recovery actions or that any recovery actions taken would not be successful. The Resolution Plan describes how, in the Hypothetical Resolution Scenario, MS Parent could be resolved in a manner that satisfies the requirements of the 165(d) Rule.

The Hypothetical Resolution Scenario and the related assumptions are hypothetical and do not necessarily reflect an event or events to which the Firm is or may become subject. The Firm's resolution planning efforts are aimed at increasing the Firm's resilience and resolvability under a variety of scenarios. The Hypothetical Resolution Scenario includes a set of extremely severe economic assumptions, which require the Firm to absorb large losses and experience severe liquidity outflows in a severely adverse macroeconomic environment. The Resolution Strategy is not binding on any court or other resolution authority. The Resolution Strategy is dynamic and, in the unlikely event that a real event of Material Financial Distress were to occur, actual events at the time would be based on the facts and circumstances during the actual period of Material Financial Distress, including decisions and actions of regulators and other parties.

Support Agreement Framework

A central component of the Firm's SPOE Resolution Strategy is the "**Support Agreement Framework**," which is comprised of the following:

- The **Trigger and Escalation Framework**: triggers based on capital and liquidity metrics prescribe when the Firm must take clearly identified actions and initiate related communications to implement the Resolution Strategy, including transferring additional resources to the Funding

IHC so that the Funding IHC can provide capital and liquidity to the Material Entities, allowing them to remain solvent and implement the Resolution Strategy.

- The **Support Agreement**: a contractually binding mechanism that commits MS Parent, the Funding IHC and certain of their subsidiaries to support the Material Entities upon the occurrence of certain triggers and ensures that resources are made available to those Material Entities that need them.

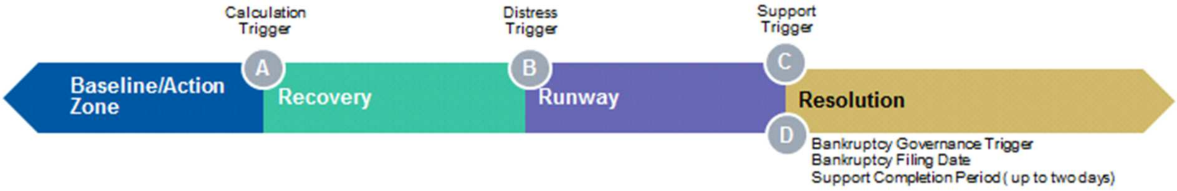
- The **Security Agreement**: creates perfected security interests in assets of MS Parent and the Funding IHC that could be contributed to the Material Entities, incentivizing MS Parent and the Funding IHC to perform its obligations under the Support Agreement and mitigating any potential legal challenges to MS Parent's and the Funding IHC's provision of support to the Material Entities.

The Support Agreement Framework would govern the progression of the Resolution Strategy prior to MS Parent's failure. The Support Agreement Framework includes a full continuum of triggers based on liquidity and capital metrics, described below and illustrated in Exhibit 3-1, which are linked to specific Firm actions and which identify when and under what conditions the Firm, including MS Parent and its Material Entities, would transition from BAU (i.e., the "**Baseline**/**Action Zone**") conditions to a "**Recovery Period**" to the pre-resolution "**Runway Period**" and, in the unlikely event recovery actions proved to be unsuccessful, to the Resolution Period.

Resolution Chronology

The timeline for the Resolution Strategy is illustrated in Exhibit 3-1.

Exhibit 3-1. The Resolution Continuum and Trigger and Escalation Framework



During BAU, substantial capital and liquidity have been pre-positioned at the Funding IHC and the Material Entities, as described further in Section 4.2 Financial Adequacy. Upon the occurrence of a "**Calculation Trigger**" (marked A in Exhibit 3-1), the Firm would exit BAU and enter the Recovery Period. This Recovery Period would last until the occurrence of either (i) a "**Distress Trigger**" (marked B), at which point the Firm would recognize that recovery actions may have been unsuccessful and resolution, rather than recovery, is a potentially more likely outcome, or (ii) the Firm's recovery.

During the Runway Period that would begin upon the occurrence of a Distress Trigger, the Firm would increase the amount of assets pre-positioned at the Funding IHC pursuant to the Support Agreement and would execute strategic preparatory actions for a potential resolution. Pursuant to the Support Agreement, upon the occurrence of a "**Support Trigger**" (marked C), MS Parent would be required to contribute to the Funding IHC its remaining contributable assets (i.e., MS Parent assets other than certain excluded assets, such as interests in subsidiaries and a holdback for bankruptcy expenses). Such assets would be downstreamed to the Funding IHC during the "**Support Completion Period**" (marked D). In addition, upon occurrence of the Support Trigger, any remaining inter-company debts of the Material Entities, or certain intermediate entities, that are ultimately owed to MS Parent and were not contributed to Funding IHC would be subordinated to external creditors of such entities and their maturities would be extended.

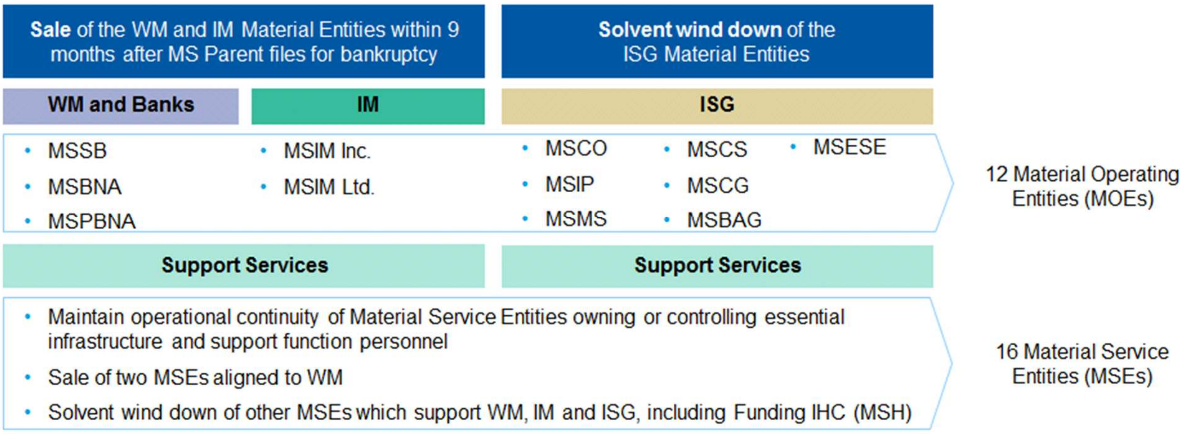
During the Resolution Period, the Funding IHC would be obligated to provide capital and liquidity support to the Material Entities pursuant to the Support Agreement. This support, together with the financial resources already held by the Material Entities prior to the occurrence of the Support Trigger, would be sufficient to allow the Material Entities to remain solvent and implement the Resolution Strategy.

The obligations of MS Parent under the Support Agreement are secured on a senior basis by substantially all of the Contributable Assets of MS Parent. As a result, claims of the Funding IHC and the other Material Entities against the assets of MS Parent (other than the stock of its subsidiaries) will be effectively senior to unsecured obligations of MS Parent. MS Parent, like most parent holding companies, has no operations and depends on dividends, distributions and other payments from its subsidiaries to fund dividend payments and to fund all payments on its obligations, including debt obligations.

Contemporaneously with the occurrence of the Support Trigger, a "**Bankruptcy Governance Trigger"** (marked D) would occur, prompting the MS Parent Board to consider commencing voluntary proceedings under Chapter 11 for MS Parent. Shortly thereafter, MS Parent would be expected to commence a voluntary case under Chapter 11 (marked D), while the Firm's Material Entities would remain solvent and outside of resolution proceedings.[17] The commencement of MS Parent's Chapter 11 case would mark the end of the Runway Period and the beginning of the Resolution Period. Exhibit 3-2 illustrates which MOEs and MSEs will be sold or wound down under the Resolution Strategy.

[17] In order to avoid the close-out on unfavorable terms of QFCs entered into by these Material Entities, MS Parent would seek expedited Bankruptcy Court approval of a motion to elevate guarantees of subsidiary QFCs to administrative priority status or, in the event the bankruptcy court does not approve such elevation, to transfer certain MS Parent assets and guarantee obligations of subsidiary QFCs to a new holding company owned by a trust for the sole benefit of MS Parent's bankruptcy estate.

Exhibit 3-2. Firm Resolution Strategy



During the "**Stabilization Period**,"[18] a sale process would be initiated for the Firm's highly marketable Core Business Lines that would likely retain significant franchise value in a resolution scenario: (i) WM, including the U.S. retail broker-dealer (MSSB) and U.S. banks (MSBNA and MSPBNA); and (ii) IM, including the U.S. investment advisor (MSIM Inc.) and UK investment advisor (MSIM Ltd.). In addition, the ISG Solvent Wind Down would be commenced.

Under the ISG Solvent Wind Down, ISG's MOEs would be wound down while keeping them outside stand-alone bankruptcy or other insolvency proceedings. The ISG Solvent Wind Down is not in any way dependent on financial resources from the sale of WM and IM and the sale of WM and IM would not affect any operational capabilities supporting the ISG Solvent Wind Down, or vice versa.

Advantages of the Firm's SPOE Resolution Strategy

The Firm strongly believes that its Resolution Strategy has the following significant advantages, among others:

- It preserves the value of Core Business Lines and Critical Functions by allowing them to be sold or wound down in an orderly fashion without the Material Entities entering insolvency or resolution proceedings.
- WM retail brokerage customers and ISG Prime Brokerage ("**PB**") customers retain seamless, full and timely access to their accounts and are fully protected during the execution of the Resolution Strategy, and neither MSBNA or MSPBNA depositors nor the FDIC's DIF suffer losses.
- All liabilities of Material Entities are paid as they become due, including liabilities to derivatives counterparties, which will either be paid as scheduled or through novations or consensual tear-ups.

[18] The Firm defines its Stabilization Period as the period during which the Firm would transfer Prime Brokerage clients to alternate providers over a six week timeframe after MS Parent's failure.

- The early terminations of financial contracts based on cross default rights, and related significant losses, are avoided.
- Secured funding counterparties are able to receive payment of cash without foreclosing on securities collateral, and securities lenders are able to receive their securities without foreclosing on cash collateral.
- The use of the Funding IHC as a resolution funding vehicle helps ensure that (i) resources are appropriately allocated in resolution and (ii) flexibility and optionality are maintained in order to be responsive to the facts and circumstances of an actual resolution scenario.
- No customer assets are trapped.

The Resolution Strategy is executable from a business, financial and operational point of view. The financial feasibility of the Resolution Strategy has been analyzed using conservative assumptions and detailed, robust capital and liquidity frameworks. The Firm continues to take significant steps to ensure that its Resolution Strategy is feasible, as described in the following sections.

3.2. ISG Solvent Wind Down Summary

The Firm selected wind down as its strategy for ISG because, while a sale of ISG (alone or as part of a sale of the overall Firm) or continuity of the business as a going concern are theoretically possible, historical examples and the Firm's scenario modeling indicate that a sale would likely not be practical. Therefore, to ensure that the ISG business can be resolved in an orderly manner in a broad range of scenarios, the Firm has elected to demonstrate that its ISG MOEs could be wound down without entering resolution proceedings, which the Firm refers to as the ISG Solvent Wind Down. The ISG Solvent Wind Down is modeled as a 12-month period (i.e., the Resolution Period) and demonstrates that, at the end of the Resolution Period, the Firm does not pose systemic risk to the market. The Firm defines its Stabilization Period as the period during which the Firm would transfer Prime Brokerage clients to alternate providers over a six week timeframe after MS Parent's failure. The Firm assumes it would not actively exit derivatives positions during the Stabilization Period.

The objective of the ISG Solvent Wind Down is a rapid and orderly wind down of ISG's MOEs in a manner that maximizes value, and minimizes cost and disruptions to the broader financial system and economy. The liquidity and capital support provided by MS Parent (prior to its failure) and the Funding IHC pursuant to the Support Agreement Framework and the override of cross defaults in QFCs to which the ISG MOEs are party would enable the ISG MOEs to remain outside of resolution proceedings.

The ISG Solvent Wind Down entails a wind down of sales and trading activity, a transfer of PB customer assets and a cessation of investment banking and capital markets activities. Consistent with the Firm's resolution objectives, the Firm believes that ISG's:

- Sales and trading portfolios are sufficiently liquid to convert non-cash assets into cash at a rate faster than the rate of net liquidity outflows without breaching any capital constraints or transmitting liquidity risk into the market; and

- Operational capacity and infrastructure would be sufficient to quickly transfer PB accounts to alternate providers.

3.3. Wealth Management and Investment Management Sales

As highly marketable businesses with steady cash flows, WM and IM are likely to generate interest from a diverse buyer pool even in stressed market conditions with valuations reflecting assumptions appropriate for resolution. The details of the sales will depend, in many respects, on whether the business is sold to a financial or strategic buyer, but the Firm has attempted to maintain flexibility to accommodate both types of buyers.

The Firm believes that the WM and IM Material Entities should have sufficient capital and liquidity throughout the resolution process. To demonstrate that WM and IM will maintain business continuity through completion of the sale, the Firm has used existing BAU and resolution plan processes, including those described in Section 4.3 Operational Continuity and Capabilities, to identify key front- and back-office dependencies and to develop a strategy to maintain service continuity and retain business value.

To demonstrate that WM and IM are separable, the Firm has a strategy for dedicated personnel, vendor services, technology facilities and related contracts likely to be transferred to each buyer on the first day after the divestiture. Necessary shared services and resources may be provided to buyers by operationally and financially resilient MSEs pursuant to transitional services agreements ("**TSAs**"), which can be based on existing SLAs between MSEs and their MOE customers. The Firm analyzed potential impediments and performed legal risk assessments to demonstrate that the sales can be executed contemporaneously with no disruption to execution of the ISG Solvent Wind Down. No Material Entities are reliant on sale proceeds as a source of funding to satisfy RCEN or RLEN under the Resolution Strategy.

The Firm drew on its institutional knowledge and governance processes from past involvement, as buyer, seller and advisor, in comparable transactions to produce a "**Marketing and Sale Playbook**," separability strategy and business valuations and to facilitate buyer due diligence, sale package materials, and carve-out financial statements and demonstrate its capabilities to populate a virtual data room in a timely manner.

4. Resolvable Morgan Stanley

The Firm has in place a rational legal entity structure, robust capabilities and effective processes required to implement its Resolution Strategy. Since submitting the 2017 Plan, the Firm has taken numerous actions to further simplify its entity structure, enhance its capabilities and improve its processes across its Three Pillars of Resolution Planning. The Firm has assessed the risks to resolvability outlined in the Agency Guidance, as well as other risks identified by the Firm, and has developed or maintained capabilities to address these risks across the Three Pillars.

The following sections provide a detailed overview of the Firm's capabilities across each of the Three Pillars, including how risks to resolvability were identified, assessed and mitigated. The sections are organized according to the Firm's capabilities, which directly address vulnerabilities identified by the Agency Guidance, including applicable shortcomings.

4.1. Strategic and Legal Framework

4.1.1. Governance Mechanisms

The Firm's "**Governance Mechanisms**" are designed to facilitate timely execution of required Board actions, including authorizing MS Parent to provide financial resources to the Funding IHC and Material Entities in a manner that is resilient to potential creditor challenge. This section describes the Firm's key Governance Mechanisms capabilities:

- **Trigger and Escalation Framework**: embedded into the Firm's global capital and liquidity policies to indicate when the Firm is transitioning from each period in the stress continuum and identify when escalation is needed to senior management and Boards of Directors to facilitate timely decision making;
- **Governance Playbooks**: incorporate the Trigger and Escalation Framework and discuss the fiduciary duties of MS Parent and Material Entity Boards in order to support required actions;
- **Support Agreement Framework**: underpins the Resolution Strategy, whereby MS Parent and/or the Funding IHC are contractually obligated to downstream financial support upon clearly defined triggers, enabling Material Entities to have sufficient capital and liquidity to execute the Resolution Strategy; and
- **Material Entity Sales Proceeds Funding Agreements**: serve as an additional source of liquidity in resolution.[19]

The Firm's Governance Mechanisms address the legal issues associated with the implementation of the stay on cross-default rights described in Section 2 of the ISDA Protocols and other contractual provisions that comply with the requirements of the QFC Stay Rules. In addition, the Governance Mechanisms

[19] The Resolution Strategy does not rely on the use of sales proceeds for successful execution.

describe the Firm's preferred relief being sought in MS Parent's Chapter 11 proceeding and address issues that are likely to be raised at the hearing, including through:

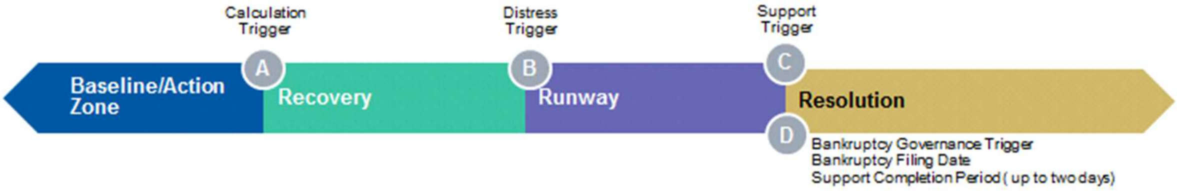
- **Bankruptcy Playbook**: includes all steps and motions needed to file for bankruptcy, essential strategies and components including the override of cross-default rights of QFC counterparties and gaining support of international regulators; and
- **Emergency Motion:** seeks relief from the Bankruptcy Court necessary to meet the requirements of the ISDA Protocols.

Trigger and Escalation Framework

The Firm's Trigger and Escalation Framework is designed to guide the execution of the Resolution Strategy by defining triggers to inform timely execution of required actions, including the provision of capital and liquidity support to the Funding IHC and Material Entities and the decision of MS Parent to file for bankruptcy. These triggers are based on capital and liquidity metrics, including RCEN and RLEN, and reflect changes to the Firm's capital and liquidity positions that may result from anticipated market conditions.

Exhibit 4-1 depicts the sequence of triggers in the context of the continuum between the Baseline/Action Zone and the Resolution Period. The enhanced Trigger and Escalation Framework has been embedded in capital and liquidity policies, as appropriate, to document related roles and responsibilities. These triggers are described in greater detail in Section 3.1 *Overview*.

Exhibit 4-1. Trigger and Escalation Framework through the Continuum



The Trigger and Escalation Framework is flexible enough to function under a wide range of failure scenarios. In any conceivable stress scenario, the Firm's Trigger and Escalation Framework would be activated well in advance of the time at which the Firm's solvency could be in doubt. The Firm's expectation is supported through sensitivity analyses that confirm that the Trigger and Escalation Framework allows sufficient time to prepare for resolution even in scenarios that are different or more severe than the "**Primary Scenario**," which is the hypothetical financial scenario underpinning the Resolution Plan.

The Firm's Trigger and Escalation Framework is grounded in three principles:

- **Management Information Systems ("MIS") capabilities**: Triggers should be linked to metrics that are frequently monitored during the Baseline/Action Zone and are incorporated into existing capital and liquidity policies and frameworks;

- **Timing of actions**: Triggers should enable the Firm to take or begin taking certain actions when bankruptcy is sufficiently remote, allow sufficient time to prepare for resolution (e.g., the Runway Period and enable the downstreaming of MS Parent resources in advance of a bankruptcy filing; and:

- **Flexibility**: Triggers should detect stress in a wide variety of failure scenarios, as supported through sensitivity analysis.

The Firm has enhanced its triggers to inform the timely provision of any MS Parent and the Funding IHC support necessary to maintain capital and liquidity levels at Material Entities in excess of applicable constraints. Such Material Entity capital and liquidity triggers (e.g., those which are based on regulatory capital minimums), as appropriate, have been included within the applicable capital and liquidity policies.

Support Agreement Framework and Legal Challenge Analysis

The Support Agreement is designed to contractually obligate and incentivize MS Parent to provide capital and liquidity resources to the Material Entities (including via the Funding IHC) prior to MS Parent reaching the point of non-viability ("**PNV**"). It allows the Firm to deploy resources flexibly during a BAU environment through the Positioning Framework while ensuring that Material Entities would maintain sufficient capital and liquidity resources during a resolution scenario, enabling them to successfully execute the Resolution Strategy while MS Parent is resolved in a Chapter 11 Proceeding.[20] The Support Agreement (i) provides the Firm with the flexibility to maintain a certain level of resources at MS Parent and the Funding IHC that can be deployed to those Material Entities most in need based on an assessment of the most current and accurate information available during such a time of stress and (ii) makes the Resolution Strategy less vulnerable to ring-fencing and other funding frictions that could exist under full BAU positioning.

The Firm has made extensive changes to its Support Agreement Framework and related capabilities in order to operationalize the Funding IHC as a funding vehicle, including by:

- Entering into an enhanced Support Agreement and Security Agreement;

- Revising its Trigger and Escalation framework to ensure that the Funding IHC is appropriately funded in stress and fully operational prior to MS Parent's failure;

- Establishing appropriate governance arrangements for the Funding IHC;

- Accounting for the use of the Funding IHC in its capital and liquidity modeling;

- Analyzing potential legal impediments to the use of the Funding IHC as a funding vehicle during stress and in resolution;

[20] Immediately prior to MS Parent's failure, the Support Agreement provides for the subordination of upstream inter-company debts from the Material Entities and certain other entities to MS Parent and an extension of term of the same, in addition to the cancellation of the Funding Note issued to MS Parent from the Funding IHC.

- Revising Material Entity Sales Proceeds Funding Agreements; and
- Establishing BAU processes to test the Funding IHC's operational capabilities required for resolution.

Based on a further-developed legal analysis of potential creditor challenges, and other associated mitigants, the Firm believes that MS Parent support to Material Entities, including the Funding IHC, in a time of Material Financial Distress is resilient to potential creditor challenges.

Governance Playbooks

Playbooks have an important role in identifying actions the Firm is expected to take during periods of stress and resolution as well as confirming that the Firm currently has the capabilities to support such actions. Accordingly, the Firm has tailored Governance Playbooks for MS Parent, the Funding IHC and each Material Entity. The Firm's Governance Playbooks are complemented by additional playbooks specifying required actions, including the (i) Bankruptcy Playbook, (ii) "**Funding Playbook**," (iii) "**Financial Stress Communications Playbook**" and (iv) "**Employee Retention Playbook**."

The Governance Playbooks demonstrate the Firm's analysis of appropriate Governance Mechanisms throughout the stress continuum. The Governance Playbooks set out resolution-related considerations for MS Parent, the Funding IHC, and each Material Entity, including the strategic decisions and actions expected to be made by the Boards and the consistency of such decisions with the Directors' fiduciary duties.

The Governance Playbooks serve as a framework for the decision-making process the Boards may go through in a resolution scenario. However, actual decisions would be made in light of the facts and circumstances existing at the time, after due consideration by the Boards and based on: (i) the information before the Boards, (ii) their obligations under the Support Agreement and (iii) the exercise of their fiduciary duties. If MS Parent or the Material Entities were to experience Material Financial Distress, the relevant directors would likely consult with external counsel in order to take actions consistent with the exercise of their fiduciary duties.

The Firm has conducted a conflicts of interest analysis, confirmed that there is currently no overlap in membership between the MS Parent Board and any Material Entity Board (including the Funding IHC) and identified all instances where an individual currently serves on the Board of two or more Material Entities.

The Support Agreement substantially reduces the potential for conflicts of interest among MS Parent, the Funding IHC and the Material Entities. The Support Agreement is executed in BAU, when the interests of MS Parent, the Funding IHC and the Material Entities are aligned. During Recovery and the Runway Period, even if the interests of MS Parent, the Funding IHC and the Material Entities with respect to the downstreaming of financial resources might conflict, MS Parent and the Funding IHC each have secured contractual obligations to provide financial resources to the Material Entities. Conflicts between Material Entities are substantially eliminated by the Firm's SPOE Resolution Strategy, as all Material Entities will benefit from the implementation of the Resolution Strategy. Triggers are set early enough so that all

Material Entities will remain solvent and have adequate resources to perform both inter-company and third-party obligations.

However, while the likelihood of conflicts is remote, the Firm has conflict of interest identification and director resignation processes to mitigate conflicts in the unlikely event that they arise.

The Firm has also briefed the Boards of MS Parent and the Material Entities on, among other things, the Resolution Strategy, Support Agreement Framework, Governance Playbooks and Financial Resource Positioning Framework and made enhancements and clarifications to the Governance Playbooks based on those discussions.

4.1.2. Legal Entity Rationalization

In conducting its global business operations, the Firm utilizes a network of legal entities that are aligned with and support the operations of the Firm's Core Business Lines, to service its institutional, corporate and retail clients from around the world. While the Firm's legal entity structure is driven by its regulatory, client, business, financial and other needs, the Firm recognizes the importance of maintaining a rational and resolvable legal entity structure as the Firm's business strategy and external operating environments evolve. The maintenance of a rational legal entity structure supports the Firm's resolvability objectives, by allowing for transparency on the role that each legal entity serves for the Firm and by facilitating the provision of financial resources to those legal entities that are vital to the execution of the Resolution Strategy.

In an effort to address the shortcoming related to the risk of misallocating resources to Material Entities in resolution and complexity of its Material Entity ownership structure, the Firm has:

- Enhanced its LER Criteria and related processes;
- Established a funding vehicle to preserve the flexibility to manage financial resources as needed to the Material Entities in resolution; and
- Reduced complexity in its legal entity structure through an ongoing process to consolidate ownership of each Material Entity in a single ownership line and rationalize the population of Material Entities and intermediate legal entities.

For the 2019 Plan, the Firm enhanced its LER Criteria framework by differentiating between structural LER Criteria, and other non-structural legal entity and resolvability management standards overseen by relevant governance bodies aligned to their BAU responsibilities. To evaluate its adherence to the LER Criteria and non-structural standards in a transparent, repeatable and measurable manner, the Firm executed an associated assessment framework. This assessment supports updates to the LER Criteria and non-structural standards required as a result of substantial changes in the Firm's business model or in the external operating environment.

In support of the legal entity governance framework and the simplification of its business model, the Firm continues its efforts to reduce the number of legal entities within its structure, so that the remaining legal entities conduct activities and operations that are clearly in support of the Core Business Lines. As of

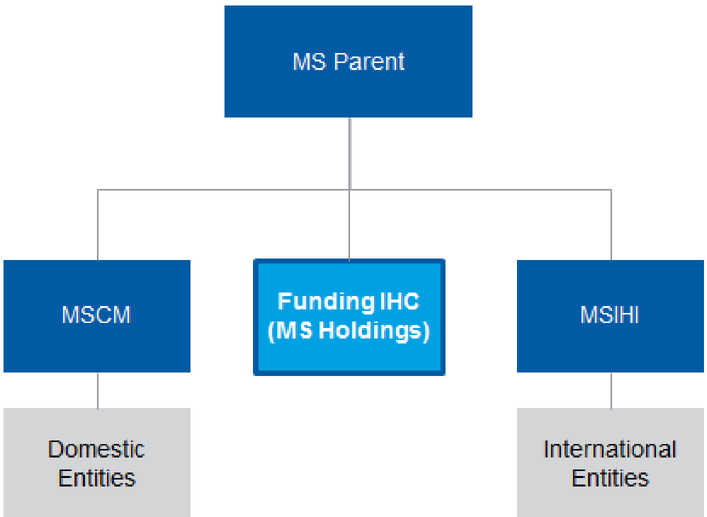
December 31, 2018, the Firm held 735 consolidated legal entities within its structure, a 40% reduction from 1,235 as of December 31, 2007. In addition, the Firm has enhanced its annual legal entity closure pipeline process to incorporate quantitative screens that identify potential dormant and redundant entity candidates. The Firm continues to pursue opportunities to eliminate complexity within its legal entity structure.

4.1.2.1. Funding IHC

To provide funding flexibility and to enhance the ability to allocate financial resources as needed to the Material Entities in BAU and throughout the stress continuum, including in resolution, the Firm implemented the Funding IHC in 2019. The Funding IHC, Morgan Stanley Holdings LLC, allows for the as-needed allocation of financial resources to the Material Entities after the bankruptcy filing of MS Parent. The Funding IHC reduces reliance on the precision of resolution execution need estimates for individual Material Entities and offers additional mitigation to potential creditor challenge.

The Funding IHC is a 100% owned, direct subsidiary of MS Parent with no capital ownership in any entities. The Funding IHC was designated an MSE in March 2019 as part of the Firm's annual Material Entity Designation Process and adheres to all of the Firm's Service Company Principles. The ownership structure of the Funding IHC is shown in Exhibit 4-2.

Exhibit 4-2. Funding IHC Ownership Structure



The Funding IHC will not have third-party creditors and therefore has no requirement to be externally rated.

MS Parent has made an initial contribution to the Funding IHC and, under the terms of the Support Agreement, will provide additional contributions to maintain adequate funding in exchange for a funding note. MS Parent will be able to draw down on the Funding IHC resources through a committed line of credit. The Funding IHC will provide support to certain of the Material Entities prior to MS Parent's failure and capital and liquidity to all Material Entities following an MS Parent bankruptcy filing.

The Firm developed financial, legal and operational capabilities to embed the Funding IHC into existing Firm frameworks.

4.1.2.2. Legal Entity Restructurings

The Firm addressed the shortcoming related to the risk of misallocating resources to Material Entities in resolution and complexity in its Material Entity ownership structure by continuing to execute on its ongoing process to consolidate ownership of each Material Entity in a single ownership line and rationalize the population of Material Entities and intermediate legal entities.

The Firm undertook an extensive analysis to identify opportunities to rationalize its Material Entity and overall legal entity population and to reduce the complexity of its legal entity structure. Where feasible at the time of the analysis, the Firm also undertook efforts to implement improvements based on this analysis. The Firm is committed to ongoing improvements and will continue to review its structures to accomplish a simple, rationale and resolvable legal entity structure.

Strong senior management engagement and robust governance structures were in place to oversee and direct the shortcoming remediation and legal entity rationalization efforts.

4.1.2.3. LER Criteria and Standards

The Firm remains committed to the maintenance of its rational and resolvable legal entity structure as the Firm's business strategy and external operating environments evolve. The Firm demonstrated this commitment through its continued efforts to enhance its framework for managing the Firm’s legal entity structure. For the 2019 Plan, the Firm has enhanced its LER Criteria framework to be more direct and actively support the reduction of complexity within its legal entity structure. The Firm’s LER Criteria were changed to differentiate between the legal entity structure related criteria and other non-structural legal entity and resolvability management standards, with oversight provided by the relevant governance bodies in line with existing oversight responsibilities. The respective governance bodies are responsible for reviewing and approving the LER Criteria and non-structural standards on at least an annual basis. The Firm ensures a heightened level of review and challenge of its legal entity structural related findings and enhanced monitoring of remediation efforts.

While the structural LER Criteria and related non-structural standards incorporate a broad set of considerations related to how the Firm should maintain a rational and resolvable legal entity structure, the actionability of these LER Criteria and non-structural standards are assessed through the Firm’s “**LER Assessment Framework**.” The LER Assessment Framework provides a transparent, repeatable and measurable process for the Firm to assess its adherence to the LER Criteria and non-structural standards and identifies any potential areas requiring remediation efforts and/or enhancements to strengthen its adherence. This section provides an overview of the Firm’s LER Assessment Framework utilized in 2019. The LER Assessment Framework consists of (i) governance process, including the governance structure utilized for legal entity structure-related oversight and associated roles and responsibilities and non-structural related oversight and associated roles and responsibilities and (ii) LER assessment approach.

As a result of its 2019 LER assessment process, the Firm concluded that it adheres substantially to the LER Criteria and non-structural standards. Where necessary, the Firm identified exceptions and required remediation efforts.

4.1.3. Separability

The Firm is well positioned to execute on the WM and IM sales due to its experience as a leading M&A advisory firm and as a party to investment management and retail brokerage M&A transactions, including the Firm's entry into a joint venture by purchasing a controlling stake in Smith Barney in 2009 and its subsequent purchase of the minority stake to own WM in its entirety, as well as the sale of its Retail Asset Management business to Invesco Ltd. in 2010.[21] The extensive M&A experience housed within the Firm has contributed to the success of these efforts, and the Firm expects to leverage this experience in any future divestitures, including in a resolution scenario.

In particular, divestiture efforts would be supported by Firm Strategy and Execution ("**FSE**"), a function dedicated to Firm M&A activities, and the Firm's Investment Banking Division ("**IBD**"), which is a consistent market leader in M&A advisory services. The Firm's planning to facilitate the separation of its WM and IM businesses in a resolution scenario draws upon this extensive experience and, as described further below, the Firm's deep understanding of sale processes has resulted in the identification and enhancement of certain preparatory steps that could accelerate timing of a sale process.

The Firm's Separability capabilities are designed to facilitate the timely divestiture of WM and IM while providing for meaningful optionality under different market conditions. The Firm's Separability capabilities include:

- Detailed identification of each sale package;
- The development of an enhanced Marketing and Sale Playbook, which provides an overview of the process to be executed upon an actual sale of potential sale candidates;
- Preparation of buyer due diligence materials;
- Carve-out financial statements for each of WM and IM;
- Sale package valuations based on a valuation methodology that takes into account a variety of severely stressed operating conditions;
- Assessment of the impact of executing the WM and IM sales from a business, operational, financial and Critical Function perspective;
- Legal risk assessments; and

[21] This transaction was executed during a period of Firm and market-wide distress, which may be similar to the conditions that could exist in a resolution scenario.

- Capabilities to populate a data room in a timely manner with information pertinent to the WM and IM sales.

Sale Structures

The WM and IM sale packages are consistent with the Firm's LER approach to maintaining a rational and resolvable legal entity structure in which legal entities are aligned with, and support the operations of, the Firm's Core Business Lines. The Firm has developed LER Criteria to support separability of the Firm's identified sale candidates.

Marketing and Sale Playbook and Other Preparatory Actions

Marketing and Sale Playbook

The Firm also maintains a Marketing and Sale Playbook, which describes the marketing and sale process that the Firm would expect to execute in a resolution scenario. In identifying the expected sale process steps, FSE drew on the Firm's past divestiture experience, including existing marketing, governance and communications processes. The Marketing and Sale Playbook is documented by FSE and describes the (i) preparation, (ii) marketing, diligence and negotiation and (iii) closing and post-closing phases. The playbook also identifies the potential buyer universe and describes valuation analyses and expected sale proceeds.

Sale Package Buyer Due Diligence Materials

The Firm developed sale package buyer due diligence materials, which involved defining the in-scope business and functional capabilities for each sale candidate and establishing an approach for separating potential sale candidates from the Firm. The exact nature of the sales is expected to be contingent, in many respects, on the buyer type. The sale package buyer documents have therefore been largely prepared based on the expected buyer type, but the separability analysis maintains flexibility to accommodate a wide range of strategic and financial buyers. The WM and IM buyer due diligence materials provide an overview of each business, including the related separability considerations, to support buyer due diligence.

The Firm has built upon existing elements of the 2019 Plan, including operational mapping, employee retention and contract remediation, to identify key front- and back-office dependencies and develop a strategy to maintain service continuity and retain transaction value. Specifically, the Firm identified (i) dedicated personnel, vendor services, technology, facilities and related contracts likely to be transferred to buyers on day one and (ii) shared services and resources likely to be provided through TSAs between the buyers and operationally and financially resilient MSEs with existing SLAs between such MSEs and other Material Entities serving as a basis for TSA discussions with prospective buyers.

Carve-Out Financial Statements

Carve-out financial statements have been prepared to serve as a basis for valuing WM and IM. The carve-out financials were prepared by WM and IM Finance, the divisions responsible for producing the related business and Material Entity financials in BAU. The carve-out financial statements present the operating results of each business as derived from the financial statements of the WM and IM businesses, including their financial information, financial position, financial adjustments and performance as included in the Firm's Form 10-K.

Separability Impact Assessment and Legal Risk Assessment

The Firm has performed an impact assessment of potential risks that may present themselves in the context of the execution of the WM and IM sales. WM, IM, related support and control functions, Corporate Treasury, FSE and IBD, among others, collaborated to identify potential risks to execution of the WM and IM sales and develop strategies to mitigate the risk across the business, operational, financial and legal dimensions and with respect to potential impacts on Critical Functions.

The Firm's impact assessment analysis and legal risk assessment demonstrate that the sales can be executed in a timely manner, contemporaneously and result in no disruption to execution of the ISG Solvent Wind Down. The Support Agreement Framework, in combination with the Firm's resolution financial analysis, demonstrate that WM and IM Material Entities will be provided with required capital and liquidity resources to maintain solvency and continue to perform on obligations to customers and counterparties as they come due during the Resolution Period. With respect to the remaining MOEs that will be part of the ISG Solvent Wind Down and the MSEs that will continue providing critical services during the Resolution Period, none of these Material Entities would be reliant on WM or IM sale proceeds as a source of funding to satisfy their estimated RCEN and RLEN, and none of these Material Entities are dependent on WM and IM for the execution of the Resolution Strategy. In addition, the sales should not impede the continuity of Critical Functions with associated operational continuity maintained through sale and transition of requisite services to the buyers. Finally, the Firm's Critical Contracts are structured to facilitate the sales and the Firm expects any Board or regulatory approvals necessary to affect the sales would be obtained in a timely manner.

Virtual Data Rooms

As a global investment bank with a leading M&A franchise and that engages in due diligence for M&A transactions related to businesses contemplated for disposal or acquisition, the Firm has the capability to populate a virtual data room in a timely manner with information pertinent to a potential divestiture of either business. These capabilities can be leveraged during periods of financial stress, including following the occurrence of a Calculation Trigger, Distress Trigger or Support Trigger.

4.2. Financial Adequacy

To support its financial resiliency and resolvability, the Firm maintains sufficient financial resources and a suite of capital- and liquidity-related capabilities. In BAU and stress scenarios, the Firm's financial resources allow for absorption of a significant amount of capital losses or liquidity outflows without causing a material impact to the business operations of the Firm and its capabilities allow for the proper monitoring and management any associated risks. In the event of the Firm's failure, these enhancements help ensure that the Material Entities will remain adequately capitalized and have sufficient liquidity throughout the Resolution Period, resulting in an orderly resolution with minimal impact to global financial markets.

As a foundation, the Firm maintains substantial reserves of financial resources, which are sufficient to cover upfront losses, outflows and losses during the Runway Period, RLEN and RCEN, as well as durable sources of funding, with the following as of December 31, 2018:

- Loss absorbing capacity that is compliant with final total loss absorbing capacity ("**TLAC**") rules at of the Firm level equal to $203 billion of external TLAC, consisting of $62 billion in Common Equity Tier 1 Capital, $9 billion in preferred shares and $133 billion of long-term debt;
- Firm-consolidated global liquidity reserves ("**GLR**") of $250 billion; and
- No unsecured debt issuances by MS Parent with original maturities of less than one year.

To supplement these financial resources, the Firm's capabilities cover the areas of Resolution Capital Adequacy and Positioning ("**RCAP**"), "**RCAP***" (which excludes upfront losses that are included within RCAP) and RCEN, including "**Resolution Capital Minimum**" (the capital required for the Material Entity to remain well-capitalized during the Resolution Period), as related to Capital and RLAP, Minimum Operating Liquidity ("**MOL**") and RLEN as related to Liquidity. The Firm also introduced additional capital and liquidity metrics in connection with the establishment and operationalization of the Funding IHC as a resolution funding vehicle. The Firm holds a percentage of capital and liquidity resolution needs at the MOEs pursuant to the Positioning Framework which has been enhanced due, in part, to the introduction of the Funding IHC.

The Firm's RCAP capabilities inform the Firm's determination of the appropriate positioning of the ILAC between MS Parent and each of the MOEs and the Firm's RLEN capabilities inform the Firm's determination of the appropriate positioning of liquidity between MS Parent and each of the Material Entities (including the Funding IHC).

Prior to the 2019 Plan submission, the Firm enhanced its capabilities as related to Capital and Liquidity, which currently consist of:

- Capital:
  - RCAP Adequacy: Significant levels of external TLAC, which currently exceed total TLAC and long-term debt requirements, with full compliance with all final TLAC rule requirements as of January 1, 2019;
  - RCAP*: Establishes appropriate positioning of ILAC at MOEs;
  - RCEN: Methodology to estimate the capital requirements of each Material Entity in resolution, including Resolution Capital Minimum and capital to absorb cumulative losses while maintaining a well-capitalized status; and
  - Near-Term RCEN: Estimates of RCEN over the forecast horizon used in resolution.
- Liquidity:
  - RLAP Adequacy:

  - Incorporated into the Firm's liquidity stress testing framework of a 30-day liquidity stress test with ring-fencing impacts;
  - Maintenance of GLR in excess of liquidity needs under all scenarios within the liquidity stress testing framework; and
  - Inter-Affiliate Frictions: Identification, assessment and mitigation of inter-affiliate frictions that may give rise to liquidity risk for the Firm.
 - RLEN: Methodology to estimate the liquidity requirements of each Material Entity in resolution, including peak funding requirements through the Resolution Period and ring-fenced MOL, with impacts from both external and inter-affiliate exposures;
 - MOL: Methodology to estimate the liquidity required to support the daily activities of each Material Entity. Ring fenced MOL includes MOL plus any additional requirements that may result from assumed ring-fencing (used in RLAP and RLEN estimates); and
 - Near-Term RLEN: Estimates of RLEN over the forecast horizon used in resolution.
- Positioning of Financial Resources:
 - Positioning Framework applies a consistent positioning percentage across RCAP*, RLAP, RCEN and RLEN, taking into account regulatory requirements. The Positioning Framework determines appropriate capital and liquidity between MS Parent and each of the Material Entities, resulting in positioning of a significant amount of liquidity and ILAC directly at the Material Entities. The Funding IHC is positioned with a reserve amount of liquidity.
- Estimating Resolution Execution Needs:
 - Enhancement of the Resolution Financial Model with which the Firm produces estimates of RCEN and RLEN for each of its Material Entities, as described in 4.2.3 Resolution Financial Model.
- Downstreaming of Financial Resources Prior to an MS Parent Bankruptcy Filing:
 - Funding Playbook: Enhancement of the playbook that sets forth the processes, roles and responsibilities, systems and reporting and governance related to the Firm's liquidity and capital management across a range of financial conditions, including along the resolution trigger continuum.

The following sections discuss the capabilities within Liquidity, Capital, and the positioning and downstreaming of these financial resources in further detail.

4.2.1. Liquidity

The Firm maintains sufficient financial capacity and a suite of capital and liquidity-related capabilities to support its financial resiliency and resolvability. The Firm's financial capacity allows for absorption of a significant amount of capital losses and liquidity outflows without causing a material impact to the business operations of the Firm and its capabilities allow for the proper monitoring and management of associated risks. In the event of MS Parent's failure, the Material Entities will remain adequately capitalized and have sufficient liquidity throughout the Resolution Period on an ongoing and as needed basis through the Funding IHC, resulting in a rapid and orderly resolution with minimal impact to global financial markets.

As a foundation, the Firm maintains substantial reserves of financial resources, which are sufficient to cover losses and liquidity outflows during the Runway Period and Resolution Period. The Firm's liquidity capabilities cover the areas of RLAP and RLEN.

- MOL = intraday and end of day liquidity usage to support daily operations;
- Ring-fenced MOL = MOL plus any additional requirements that may result from assumed ring-fencing;
- RLAP = ring-fenced MOL plus ILST contingencies assuming ring-fencing;
- RLEN = ring-fenced MOL plus peak cumulative liquidity outflows in the Resolution Period; and[22]
- Near-Term RLEN = ring-fenced MOL plus peak cumulative liquidity outflows over the forecast horizon used during the Resolution Period.

RLAP consists of maintaining adequate levels of liquidity such that the stand-alone liquidity position of each Material Entity would be sufficient to meet liquidity outflows experienced over a 30-day period of idiosyncratic stress (including under a ring-fencing scenario). RLEN provides the estimate of the amount of liquidity that each Material Entity requires to operate during the Resolution Period in accordance with the Resolution Strategy. The Firm holds a percentage of resolution needs at the MOEs and the rest at MS Parent pursuant to the Positioning Framework.

Under severe stress conditions (including a resolution scenario), the Firm may experience additional frictions related to inter-affiliate funding, including ring-fencing of its Material Entities. As a result, to properly assess the stand-alone liquidity needs of its Material Entities, the Firm considers a ring-fencing scenario for both RLAP and RLEN requirements. The Firm defines ring-fencing as a global, concurrent regulatory event impacting all of the Firm's legal entities, wherein inter-affiliate relationships are not expected to persist subsequent to contractual maturities. In applying this scenario, the Firm incorporates additional inter-affiliate considerations within its RLAP and RLEN requirements.

4.2.1.1. RLAP: Adequacy

The Firm's RLAP model, as part of the Firm's ILST infrastructure, assesses the stand-alone net liquidity position of Material Entities and the entire Firm. It ensures that liquidity is readily available to meet forecasted needs. The RLAP model covers a period of 30 days and reflects the idiosyncratic liquidity risk profile of the Firm by covering the following three components:

[22] Ring-fenced MOL for RLEN and Near-Term RLEN excludes operating expenses so as not to double count with the expenses modeling that is included in each of RLEN and Near-Term RLEN.

- Ring-fenced MOL, which represents the Firm's MOL required under a ring-fencing scenario (e.g., no intra-day sharing of resources across legal entities and MS Parent);
- Base contingencies, which include external and inter-affiliate liquidity outflow contingencies that are also included in the Firm's other ILST scenarios; and
- Ring-fencing contingencies, which include inter-affiliate contingencies taking into account the potential impact of a ring-fencing scenario (i.e., treating inter-affiliate exposures in the same manner as third-party exposures).

4.2.1.2. RLEN

RLEN represents the amount of liquidity required by each Material Entity to stabilize the entity subsequent to the failure of the Firm and to allow the entity to operate post-filing to execute the Resolution Strategy. For each Material Entity, the Firm defines RLEN to consist of:

- Ring-fenced MOL, which consists of an MOL, exclusive of operating expenses (because operating expenses are accounted for as part of the peak funding requirement in RLEN), required under the ring-fencing scenario; and
- Peak funding requirement, which consists of the peak cumulative daily liquidity outflows during the Resolution Period.

The Firm utilizes its Resolution Financial Model to estimate the financial resources required for each Material Entity within the Runway Period and the Resolution Period, including estimates of RLEN. Ring-fenced MOL is assumed to remain static throughout the Resolution Period. The day on which a Material Entity experiences its peak funding requirement during the Resolution Period is unique to that entity, and will be determined by its activities, positions and whether it is wound down or sold under the Resolution Strategy.

Peak Funding Requirement

For each Material Entity, the peak funding requirement covers the entirety of the Resolution Period. The Firm expects its Stabilization Period to commence with an MS Parent bankruptcy filing and last for six weeks, in line with the length of time that the Firm expects its PB clients to transfer their assets away from the Firm. However, depending on the nature of its underlying activities and resulting exposures, a Material Entity may experience its peak funding requirement during or subsequent to the Stabilization Period.

4.2.1.3. Minimum Operating Liquidity (MOL)

The Firm uses liquidity on an intraday and end-of-day basis to support its daily operations. Intraday liquidity usage includes usage of the Firm's own cash, usage of unsecured intraday credit from third parties and collateral requirements to support secured intraday credit from third parties. End-of-day liquidity usage includes overnight usage of the Firm's own cash or credit from third parties.

The Firm maintains an MOL methodology that projects MOL needs for Material Entities under various scenarios, including those with and without assumptions of ring-fencing. The Firm refers to MOL in scenarios that assume ring-fencing (i.e., RLAP, RLEN) as ring-fenced MOL. The Firm's MOL methodology is informed by its intraday and end-of-day liquidity uses noted above. The current methodology is conservative in that MOL is held constant throughout the forecasting horizons.

MOE MOL captures: (i) intraday cash and working capital needs, (ii) intraday collateral and pre-funding requirements, (iii) inter-affiliate funding frictions (as applicable) and (iv) operating expenses.

4.2.2. Capital

The Firm maintains sufficient financial capacity and a suite of capital and liquidity-related capabilities to support its financial resiliency and resolvability. The Firm's financial capacity allows for absorption of a significant amount of capital losses and liquidity outflows without causing a material impact to the business operations of the Firm and its capabilities allow for the proper monitoring and management of associated risks. In the event of MS Parent's failure, the Material Entities will remain adequately capitalized and have sufficient liquidity throughout the Resolution Period because of support provided by the Funding IHC, resulting in a rapid and orderly resolution with minimal impact to global financial markets.

As a foundation, the Firm maintains substantial reserves of financial resources, which are sufficient to cover losses and liquidity outflows during the Runway Period and Resolution Period. The Firm's capital capabilities cover the areas of RCAP and RCEN, including Resolution Capital Minimum which is representative of a level of capital to meet or exceed applicable regulatory capital requirements for well capitalized status and maintain market confidence throughout the Resolution Period

- RCEN = Resolution Capital Minimum plus peak cumulative losses in the Resolution Period;
- Near-Term RCEN = Resolution Capital Minimum plus peak cumulative losses over the forecast horizon used during the Resolution Period;
- RCAP = upfront losses plus Runway Period losses plus RCEN; and
- RCAP* = Runway Period losses plus RCEN.

RCAP is designed to maintain adequate levels of external TLAC to support the Firm's ability to absorb losses in stress scenarios. RCAP* is used to establish the appropriate positioning of ILAC at MOEs. RCEN provides an estimate of the amount of capital that each Material Entity requires for the execution of the Resolution Strategy, while maintaining capital levels that allow them to operate or to be wound down in a rapid and orderly manner. The Firm holds a percentage of resolution needs at the MOEs and the rest at MS Parent pursuant to its Positioning Framework.

The Firm's capital-specific capabilities consist of (i) maintaining a significant amount of external TLAC in conformity with the final TLAC rule requirements, (ii) monitoring the ILAC positioned at the MOEs, (iii) using the Resolution Financial Model to estimate Material Entity RCEN and (iv) incorporating its RCEN estimates into its Trigger and Escalation Framework and Support Agreement.

4.2.2.1. Resolution Capital Adequacy and Positioning (RCAP): Adequacy

RCAP is equal to the sum of upfront losses plus Runway Period losses plus RCEN. The Firm has an adequate amount of loss absorbing capacity to recapitalize Material Entities. RCAP* is equal to Runway Period losses plus RCEN and informs the positioning of ILAC at the MOEs.

Upfront losses included in RCAP are used as a means to create a hypothetical failure scenario and therefore are excluded from the RCAP* that the Firm uses to inform ILAC positioning. Runway Period losses are estimated by the Resolution Financial Model. RCEN consists of the MOEs' resolution capital minimum plus peak cumulative daily losses in the Resolution Period.

The Firm has sufficient financial capacity to satisfy the RCAP requirements, as it currently maintains a significant amount of external TLAC. As of December 31, 2018, the Firm held $203 billion of external TLAC, of which $133 billion was long-term debt. These resources would enable the Firm to recapitalize its Material Entities to adequate levels and thereby enable the Material Entities to maintain operations in the Resolution Period.

Pursuant to its Positioning Framework, the Firm positions an appropriate amount of ILAC at its MOEs. The Firm defines ILAC of an MOE as the sum of its equity and intercompany debts owed to MS Parent, the Funding IHC or other entities that can be forgiven pursuant to the Support Agreement.

4.2.2.2. Resolution Capital Execution Needs (RCEN)

RCEN represents the amount of internal loss absorbing capacity required by each Material Entity to stabilize the entity subsequent to the failure of the Firm and to allow the entity to operate post-filing to execute the Resolution Strategy. For each Material Entity, the Firm defines RCEN to consist of:

- Resolution Capital Minimum, which is the capital required for the Material Entity to remain well-capitalized during the Resolution Period; and
- Capital required to absorb the Material Entity's peak cumulative losses following an MS Parent bankruptcy filing.

The Firm utilizes its Resolution Financial Model to estimate the financial resources required for each Material Entity within the Runway Period and the Resolution Period, including estimates of RCEN. The day on which a Material Entity experiences its peak RCEN requirement during the Resolution Period is unique to that entity, and will be determined by its activities, positions and whether it is wound down or sold.

The following sections provide overviews of the Firm's methodology for the two components of RCEN.

Resolution Capital Minimum

The Firm determines Resolution Capital Minimums for the Material Entities such that they can remain above any applicable regulatory minima and maintain a well-capitalized status within the context of the Resolution Strategy. The Firm starts with applicable regulatory requirements or other relevant requirements to determine appropriate well-capitalized levels relative to capital levels to which the Firm manages in the normal course. In the absence of regulatory requirements, the Firm determines appropriate well-capitalized levels based on the nature of the entity's activities and third-party relationships. In doing so, the Firm would maintain levels of capital across all tiers and requirements that avoid insolvency and any actions by its regulator or board that may run contrary to successful Resolution Strategy execution.

Peak Cumulative Losses

RCEN estimates take into account each Material Entity's ability to absorb cumulative losses after MS Parent's bankruptcy filing. Prior to an MS Parent bankruptcy filing, MS Parent or the Funding IHC can contribute incremental capital to the Material Entities using two approaches: (i) a non-cash capital contribution, which may take the form of forgiveness of existing loans to the Material Entity or (ii) a cash contribution in the form of equity or other capital infusion. As such, the Firm considers the following instruments as part of ILAC:

- Equity; and
- Inter-company debts owed to MS Parent, the Funding IHC or other entities that can be forgiven and converted to equity pursuant to the Support Agreement.

The form in which MS Parent or the Funding IHC recapitalizes a Material Entity during the Runway Period or Resolution Period will depend on the various constraints facing the Material Entity, including the amount of ILAC positioned at the entity that has not been forgiven and converted to equity, any Generally Accepted Accounting Principles ("**GAAP**") equity or subordinated debt requirements and whether the entity has sufficient liquidity to meet its RLEN requirements. To recapitalize a Material Entity, MS Parent or the Funding IHC can (i) convert the available ILAC positioned at the entity to equity or subordinated debt, as required, and/or (ii) contribute capital to satisfy any equity or subordinated debt requirements. These recapitalizations are facilitated by the Support Agreement and allow each Material Entity to meet its RCEN requirements during the Resolution Period.

For the ISG MOEs, which wind down over the Resolution Period, losses that may result from cash assets, derivatives, receivables and payables and expenses represent the main drivers of cumulative losses. For WM and IM Material Entities, which are sold during the Resolution Period, the going-concern strategy for these entities results in losses that are more in line with estimates from the Firm's internal stress testing.

4.2.3. Resolution Financial Model

The Firm utilizes its Resolution Financial Model to estimate the RLEN and RCEN required for each Material Entity in resolution. The Resolution Financial Model sources underlying data related to the positions, balance sheet and income statements of the Firm's Material Entities to estimate required resources necessary for the successful wind down of the ISG MOEs and the support of the WM and IM businesses until their points of sale. The model provides daily liquidity flows and profit and loss ("**P&L**") estimates, with associated liquidity and capital requirements, for each Material Entity over the Resolution Period and quantifies the size and composition of any residual portfolio at the end of the Resolution Period.

Outputs from the model are integrated into the Firm's Governance Mechanisms, as they inform the timing of the occurrence of a Support Trigger. To support proper oversight of the Resolution Financial Model, the Firm's independent model validation group, Model Risk Management ("**MRM**"), reviews and validates underlying modules within the Resolution Financial Model. The Liquidity Risk Department ("**LRD**") also reviews the methodology and results from the Resolution Financial Model. All model results are subject to the "**Resolution Plan Review and Challenge Framework**." The Firm has made significant strategic enhancements to its RLEN and RCEN modeling and the 2019 Plan includes initial results from the new models.

2019 Enhancements

The Firm has made significant enhancements to its Resolution Financial Model. The enhancements that improve the Firm's RLEN and RCEN modeling are concentrated in the Firm's derivatives and trading wind down capabilities and resolution liquidity modeling. These enhanced derivatives capabilities can be used to:

- **Segment the Firmwide over-the-counter ("OTC") derivatives portfolio**, leveraging a new position-level database that links Finance and Risk data and covers all derivatives positions at the Firm incorporating a wide variety of dimensions needed to support segmentation (including but not limited to those outlined in the 2019 Guidance). Segmentation rules are provided by the front-office professionals responsible for originating and managing derivatives risk in BAU, and are subject to a rigorous review and challenge process;
- **Apply the Firm's ease of exit** framework to categorize positions based on the expected ability (both financial and operational) to unwind those positions in Resolution. The ease of exit framework is applied at the position-level using a subset of the attributes used for segmentation;
- **Identify the residual portfolio** of positions that could remain at the end of the wind-down, which consists of very hard to exit positions which do not terminate or mature over the course of the wind-down. As discussed further below, the Firm expects to be able to unwind the vast majority of its derivatives positions under its Resolution Strategy and has demonstrated that the potential residual positions remaining at the end of the wind-down would be non-systemic;
- **Apply the Firm's exit cost methodologies**, which include granular, bottom-up forecasts of novation costs (capital-based and risk-based), hedging costs, losses due to basis and un-hedgeable risks, and balance sheet and liquidity impacts. These methodologies leverage the same position-level dataset used for segmentation, allowing for estimation of costs at the segmentation levels that the Firm would likely exit positions; and
- **Perform sensitivity analysis** with respect to the key inputs and assumptions underlying its resolution financial forecasts. The Firm's Derivatives Segmentation and Forecasting capabilities are flexible and provide the ability to rapidly regenerate results based on changes to data or assumptions;

- **Segment and analyze the Firm's PB customer account balances** based on a set of well-defined and consistently applied segmentation criteria, representing a range in potential transfer speeds; and
- **Assess the Firm's ability to transfer PB customer accounts** based on the nature of the transfer process and balances, including long and short positions, portfolio liquidity, customer-to-customer internalization and potential operational challenges.

The RLST is a new component of the Resolution Financial Model and includes enhanced methodologies for liquidity forecasting in resolution. Enhancements since the 2017 Plan include full integration of PB, cash assets and secured funding wind down modeling, representing material drivers of RLEN. The RLST includes daily modeling of sources and uses of collateral on a Committee on Uniform Securities Identification Procedures ("**CUSIP**")-level, with replication of the Firm's "funding waterfall" to calculate the net liquidity needs of each entity. In addition to the derivatives and RLST enhancements, the Firm made certain other enhancements to the Resolution Financial Model that improve the Firm's RLEN and RCEN capabilities, leverage best practices and increase internal consistency.

Sensitivity Analysis

The Firm has conducted sensitivity analyses on certain material RLEN and RCEN drivers, including those that are more subjective in nature. The sensitivity analyses represent additional or different stresses from the Firm's base resolution scenario. The outcomes of the sensitivity analyses are used to assess the appropriateness of the Firm's RLEN and RCEN methodologies.

Governance

The Resolution Financial Model governance framework covers the methodology, process, results, data and infrastructure for the modeling process and associated results. Each model within the Resolution Financial Model undergoes review and challenge by various front office and support function subject matter experts, including LRD, and an annual review and validation process by MRM. Review and challenge participants challenge the Firm's assumptions and methodologies and review modeling results.

4.2.4. Positioning Framework

The Firm's Positioning Framework determines the amount of liquidity and loss absorbing capacity to hold at MS Parent and each of its Material Entities.

The Positioning Framework:

- Balances the certainty associated with positioning resources directly at Material Entities with the flexibility provided by holding resources at MS Parent or the Funding IHC to meet unanticipated losses or outflows at the Material Entities;
- Ensures that liquidity is readily available to meet outflows over a period of 30 days in a scenario reflecting the idiosyncratic liquidity profile and risk of the Firm, assuming inter-affiliate frictions and ring-fencing (i.e., RLAP);

- Complements the Firm's external TLAC with appropriate positioning of additional ILAC at the MOEs;
- Ensures working capital is readily available for MSEs to mitigate any unanticipated service payment delays or disruptions and/or intraday needs;
- Ensures sufficient resources are maintained within the Firm to meet Material Entity resolution execution needs; and
- Accounts for other requirements (e.g., regulatory requirements).

The Firm made several key enhancements to its Positioning Framework since 2017. Changes in calibration of the Firm's positioning are partially driven by the introduction of the Funding IHC, which facilitates funding flexibility and resiliency without compromising the certainty associated with positioning resources directly at Material Entities. The Firm implemented the Funding IHC to provide funding flexibility during stress and in resolution and to mitigate the risk of misallocating resources. The Funding IHC has the obligation and capability to provide Near-Term RLEN and Near-Term RCEN to Material Entities on an as needed basis starting upon the occurrence of a Support Trigger and throughout the Resolution Period.

The Positioning Framework:

- Accounts for resolution needs and other entity requirements;
- Facilitates resiliency with a percentage of resolution needs at Material Entities and the rest at MS Parent or the Funding IHC; and
- Is consistent with 2019 Support Agreement obligations throughout the continuum and regulatory guidance on ILAC and funding flexibility in resolution.

MOE Liquidity Positioning

The Firm determines the amount of liquidity and ILAC to position at MOEs by assessing (i) quantitative factors within three categories of: downstreaming frictions, complexity and interconnectedness, to arrive at a positioning percentage to be applied to resolution requirements; and (ii) any additional requirements based on the nature of the MOE (e.g., regulatory requirements).

MSE Liquidity Positioning

The Firm's operational continuity strategy and associated SLAs helps to ensure the MOEs remain contractually obligated to pay for services received from the MSEs throughout resolution. The MOE RLEN and RCEN modeling account for these continued payments to the MSEs. The MSE modeling nevertheless assumes any working capital positioned at the MSEs remains at the MSEs throughout resolution. Any working capital positioned at the MSEs therefore represents a true "double count" in the normal course and throughout resolution.

The Firm nevertheless has conservatively sized working capital to position at the MSEs as a remote contingency based upon the potentially most disruptive period during resolution, the first six week Stabilization Period, while making other conservative assumptions and enhancements.

MS Parent Resolution Minimum Liquidity

To maintain flexibility and support the Firm's financial resiliency to meet unanticipated liquidity outflows or capital losses, the Firm maintains an "**MS Parent Resolution Minimum Liquidity**" reserve, consisting of the following components:

- Liquidity held on behalf of the Material Entities, defined as the higher of:
  - RLAP minus positioned liquidity at the Material Entity;
  - RLEN minus positioned liquidity at the Material Entity;
  - RCAP minus positioned ILAC at the Material Entity; and
  - A specified percentage of total Material Entity RLAP;
- Liquidity held to cover MS Parent's liquidity outflows under an RLAP scenario; and
- Liquidity held to cover bankruptcy proceeding costs for MS Parent.

Maintaining Resolvability of the Firm

The Firm has established and implemented a governance process around its Positioning Framework to enhance resolvability. The Positioning Framework governance structure is integrated within the Firm's existing liquidity management policies, procedures, and data and reporting controls.

The positioning amounts are refreshed on a daily basis and the positioning percentages are refreshed on an annual basis.

4.2.5. Funding Playbook

The Firm's Funding Playbook documents the steps to estimate resolution-related liquidity and capital requirements and downstream both liquidity and capital resources to its Material Entities, in BAU and throughout the stress continuum including in resolution. The Funding Playbook sets forth the processes, and practices governing the Firm's liquidity and capital management across a range of financial conditions, including the key areas of:

- Estimating the resolution execution needs (RLEN and RCEN and Near-Term RLEN and Near-Term RCEN) for each Material Entity;
- Confirming the amount and location of the Firm's liquid resources;
- Confirming current available capital and ILAC at each Material Entity;
- Determining amounts and form of infusions;
- Infusing liquidity into the Material Entities; and

- Infusing capital into the Material Entities.

The Firm's existing systems and processes, as well as the Support Agreement Framework, support the contribution of the appropriate level of resources to the Material Entities throughout the stress continuum.

To provide funding flexibility and to enhance the ability to allocate financial resources as needed to the Material Entities throughout the stress continuum, the Firm implemented the Funding IHC. The Funding IHC, Morgan Stanley Holdings, LLC, allows for the as-needed allocation of financial resources to the Material Entities after the bankruptcy filing of MS Parent. The Funding IHC reduces reliance on the precision of resolution execution need estimates for individual Material Entities and offers additional mitigation to potential creditor challenge.

As the Funding IHC has been designated an MSE and will survive in resolution until it is no longer needed, it will have the capability to recycle funds among the Material Entities throughout the Resolution Period. The infrastructure for all capabilities required during the Runway Period and Resolution Period has been implemented.

4.2.6. Trigger and Escalation Framework and Support Agreement Incorporation

The Firm's Trigger and Escalation Framework incorporates liquidity and capital metrics to support timely execution of the Resolution Strategy. The RLEN and RCEN estimates are incorporated into the Support Trigger to help ensure that MS Parent sends its remaining contributable assets to the Funding IHC and files for bankruptcy in a timely manner. These triggers are dynamically calibrated and result in defined actions and escalation processes upon their occurrence.

The Firm's Support Methodology ensures that Material Entities are always provided with the required resources to execute the Resolution Strategy. Any incremental equity need is assumed to first be provided through the conversion of existing ILAC. If an equity need remains post conversion, additional equity would be provided.

The Firm also introduced additional liquidity and capital metrics in connection with the establishment and operationalization of the Funding IHC as a funding vehicle.

4.2.7. Derivatives and Trading Activities

In response to the Final Guidance and as part of its continued investment in its derivatives and trading wind-down capabilities, the Firm has developed an enhanced set of derivatives and trading capabilities.

The main capabilities associated with Derivatives and Trading capabilities are the following:

- Booking Practices
- Inter-Affiliate Risk Monitoring and Controls
- Portfolio Segmentation and Forecasting
- PB Customer Account Transfers

- Derivatives Stabilization and De-Risking Strategy

The Firm's ISG MOE Resolution Strategy assumes a Stabilization Period of six weeks immediately following MS Parent's Bankruptcy, where PB accounts would be transferred and no derivatives positions are wound down. Following the Stabilization Period, the Firm executes its wind-down strategy over a one year horizon.

Based on its analysis, assumptions and associated Resolution Financial Model outputs, the Firm demonstrates that it has the financial capacity to exit substantially all of its ISG MOE positions within the Resolution Period and that, based on facts and circumstances of an actual event, it could increase or decrease the speed at which it chooses to exit positions while still maintaining compliance with applicable ISG MOE regulatory capital minimums, holding sufficient liquidity to continue to perform obligations as they come due and meeting heightened requirements for maintaining access to its top FMUs and Agent Banks that are necessary for the execution of the ISG Solvent Wind Down.

4.2.7.1. Booking Practices

4.2.7.1.1 Overview of Derivative Trading Booking Practices

The Firm engages in external and inter-affiliate derivatives transactions within a variety of underlying asset classes to support its external client needs and activities and internal risk management processes. Those activities are executed in accordance with the Firm's booking principles and associated policies as outlined in the **"Derivatives Booking Framework**." The Derivatives Booking Framework, which is described in further detail below, articulates the principles, rationales and approach to the Firm's booking practices.

The vast majority of the Firm's derivative activities are transacted within the ISG segment through its ISG MOEs. Certain legal entities within the ISG BU maintain the memberships with execution venues and clearing houses required to execute the vast majority of the Firm's trades. Within ISG, trading activities are conducted by the Fixed Income ("**FID**") and Institutional Equities ("**IED**") divisions. Below is a description of each of the functions and the trading activity they conduct:

- FID includes the Firm's sales and trading business as related to fixed income, foreign exchange ("**FX**") and commodities BUs, and mostly engages in derivatives transactions related to interest rate, credit, foreign exchange and commodities products; and
- IED includes the Firm's sales and trading business as related to equities, and mostly engages in derivatives transactions related to equity products.

In addition to the ISG BUs, Corporate Treasury and Bank Resource Management ("**BRM**") also conduct trading activities. With multiple derivatives products being traded by a variety of ISG BUs, it is important to maintain a clear strategy and model with which to define and control the Firm's derivatives booking practices.

4.2.7.1.2 Derivatives Booking Framework and Principles

In accordance with the 2019 Guidance, the Firm has a Derivatives Booking Framework which consists of multiple components, including booking principles, governance and oversight, booking model design, risk management and controls and periodic review and optimization. This Derivatives Booking Framework is applicable to all derivative trades executed, cleared or settled through ISG, accounting for the vast majority of derivatives trades across the Firm. Together, the Derivatives Booking Framework components articulate the Firm's approach to managing its booking practices.

The Firm's Derivatives Booking Framework is guided by five principles, known as the **"Derivatives Booking Principles**." The Derivatives Booking Principles, which have been approved by the Booking Model Committee, dictate that the Firm's booking practices should:

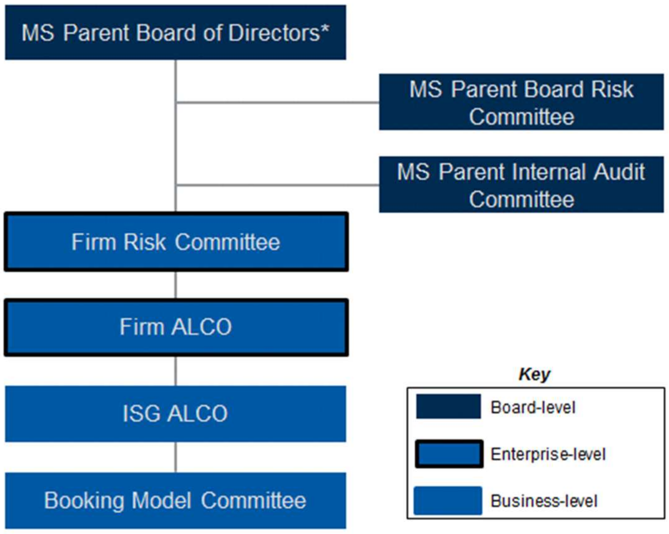
1. Minimize the number of client facing entities;
2. Centralize market risk regionally or globally to minimize the number of entities for efficient risk management;
3. Rationalize the number of inter-affiliate transactions;
4. Align risk and return at the entity level; and
5. Maintain strong booking model governance, including adequate controls, infrastructure, and management information.

The Derivatives Booking Principles focus on minimizing complexity and maximizing risk management efficiency and meeting the Firm's and clients' regulatory and statutory requirements. Although tensions may exist between each of the Derivatives Booking Principles, booking practices must strike a balance between them.

4.2.7.1.3 Governance and Oversight

The Firm utilizes a network of Firmwide, segment, regional and legal entity-specific boards, committees and personnel to provide the appropriate level of governance within the monitoring and management of booking practices. The Booking Model Committee, which was recently re-vamped and formalized with new members and responsibilities, has primary responsibility for overseeing booking practices. The Booking Model Committee has a direct reporting line to ISG ALCO and is expected to regularly report to it. Exhibit 4-3 below provides a high-level view of the governance bodies responsible for overseeing booking practices and the corresponding booking lines.

Exhibit 4-3. Summary of Booking Practice Governance Structure



* In addition to the MS Parent Board of Directors and its associated committees, subsidiary legal entity board of directors have an oversight role over booking practices.

In addition to the governance bodies identified above, regional and legal entity governance bodies support and oversee applicable booking practice related activity. Furthermore, functional areas support multiple layers of risk management processes, which range from first and second lines of risk oversight defense carried out by BU risk management and independent risk management departments for market, credit, liquidity and operational risk, respectively, to functional support across matters related to Treasury, Finance, Legal, Compliance and Operations.

4.2.7.1.4 Key Changes to Derivatives Booking Framework Since 2017 Plan

While many of the components of the Firm's Derivatives Booking Framework remain consistent with the 2017 Plan, enhancements have been made as part of the Firm's Derivatives Booking Framework enhancement project.

Since the 2017 Plan, the Firm has made enhancements to the governance and internal controls related to its booking practices. The most integral of these governance changes is the formalization of the Booking Model Committee with clearly documented roles and responsibilities. The Booking Model Committee is the Firm governance body primarily responsible for overseeing booking practices.

Additionally, the Firm has developed, approved and is in the process of fully implementing a Global ISG Booking Model Policy. The Global ISG Booking Model Policy centralizes and formalizes the Firm's booking model principles, enhances the practices for managing booking models including the process for approving new booking models, and outlines the booking model inventory and escalation process.

4.2.7.2. Inter-Affiliate Risk Monitoring and Controls

The Firm has the capability to assess how inter-affiliate risks can be affected in resolution, including the potential disruption in the transfers of risks between affiliate entities.

The Firm has an Inter-Affiliate Market Risk Framework and performs the market risk analysis outlined in the framework to understand and manage the interconnectivity of the Firm's ISG MOEs with affiliates. In 2019, the Firm expanded its market risk monitoring capabilities to address the impact of terminating specific counterparty or affiliate trades for each ISG MOE and re-hedging the risk using cleared and/or listed products. To monitor, measure and manage inter-affiliate risk, the Inter-Affiliate Market Risk Framework analyzes potential hedge effectiveness through the suppression of risk sensitivities.

As part of the effort to develop the Inter-Affiliate Market Risk Framework, the Firm defined guiding principles to ensure that the framework adequately informs the inter-affiliate market risk analysis and ensure the framework:

- Is transparent, explainable, and attributable;
- Fosters decision making and informs management on current levels of risk and potential impacts on resolvability;
- Focuses on actionable risk metrics, i.e., risk metrics that the front office uses regularly; and
- Aligns with existing related frameworks.

The Firm's Inter-Affiliate Market Risk Framework provides risk managers with an understanding of the type of inter-affiliate trading activity, particularly as it relates to uncleared, bilateral trades, in which each ISG MOE participates.

In the Inter-Affiliate Market Risk Framework, the ability to hedge certain positions is consistent with the analysis and hedging approach modeled in the derivatives wind down.

The Firm's ISG MOEs maintain adequate capabilities for measuring, monitoring, and reporting the market risk exposures resulting from the termination of a specific counterparty or a set of counterparties under *normal* and *conditional* operating conditions. The Inter-Affiliate Market Risk Framework focuses on the metrics the front office uses to manage risk, employs assumptions consistent with the Firm's wind down model, and leverages the Firm's and the legal entities' existing risk infrastructure and governance to facilitate timely review and discussion of inter-affiliate risk and its impact on resolvability.

The Firm expects that the Inter-Affiliate Market Risk Framework, including the overall approach and operating model for reporting, review and analysis, will be refined in the near- to medium-term as required based on the ongoing review and feedback.

4.2.7.3. Portfolio Segmentation and Forecasting

The Firm has the following capabilities related to Portfolio Segmentation and Forecasting:

- **Portfolio Segmentation Capabilities**: The Firm has developed a new Derivatives Segmentation and Forecasting capability that allows it to segment its Firmwide OTC derivatives portfolio at the position level using a wide variety of trade-level characteristics. The foundation for the Firm's Derivatives Segmentation and Forecasting capability is a new position-level dataset that covers all derivatives positions held by the Firm and that aggregates and centralizes a large number of position-level attributes across both Finance and Risk source systems. The Firm's approach to produce segmentation consists of two primary elements: (i) a well-structured process to collect assumptions from front-office professionals responsible for originating and managing derivatives transactions in BAU; and (ii) a robust review and challenge process to validate those assumptions with a cross-functional group spanning the front-office, Finance, Treasury, and Risk;

- **Contractual Maturity Profile and Firmwide Derivatives Portfolios**: Contractual maturity information is available at the position-level within the Derivatives Segmentation and Forecasting capability, allowing the Firm to analyze the run-off profile of its Firmwide derivatives portfolio. The Firm has the capability to analyze the full contractual maturity profile of its Firmwide derivatives portfolio on both an external and inter-affiliate basis;
- **Segmentation Analysis of Firmwide Derivatives Portfolio**: The Firm has segmented its Firmwide OTC derivatives portfolio at the position-level based on how it would package, sell or otherwise wind down that portfolio under its Resolution Strategy. The new position-level derivatives dataset provides a wide range of potential attributes that can be used for segmentation purposes. The Derivatives Segmentation and Forecasting capability maintains all of the granular information necessary to generate alternate segmentations and provides the flexibility to re-parameterize or otherwise adjust the segmentation criteria, should the need arise;
- **Ease of Exit Analysis**: The Firm's newly developed Derivatives Segmentation and Forecasting capability incorporates a method and generalized capability to categorize all Firmwide derivatives positions in terms of their ease of exit based on a set of well-defined and consistently applied segmentation criteria. The ease of exit framework can be applied to all Firmwide derivatives positions within the newly developed Derivatives Segmentation and Forecasting capability;
- **Application of Exit Cost Methodology**: To develop estimates of RCEN and RLEN, the Firm maintains a suite of forecasting analytics used to model the financial impacts of winding down its derivatives and trading activities. These analytics are embedded in the Derivatives Segmentation and Forecasting capability used to segment the derivatives portfolio and rely on the same position-level dataset, and therefore can be applied to the Firmwide derivatives portfolio. The Derivatives Segmentation and Forecasting capability is a systems-based application and provides the Firm with flexibility to analyze alternative strategies and scenarios, thus maximizing optionality to respond to the specific facts and circumstances of a resolution event;
- **Analysis of Operational Capacity**: The Firm has the capabilities to forecast the incremental operational needs and expenses related to execution of its Resolution Strategy, including its ISG Solvent Wind Down. These capabilities include the Firm's overall continuity strategy and analysis of operational capacity, non-compensation expense forecasting and compensation expense forecasting. The Firm also has the ability to manage potential logistical and operational challenges related to novating derivatives portfolios during resolution, including the design and adjustment of novation packages; and

- **Sensitivity Analysis**: The Firm's estimates of derivatives-related costs and liquidity flows under its Resolution Strategy reflect a well-structured process, with strong controls and formal reviews, challenges, and approvals. As part of this process, the Firm identifies and assesses the key assumptions and uncertainties associated with the models that underlie its financial forecasts, including those that could have a material impact on consolidated capital and liquidity estimates.

4.2.7.4. Prime Brokerage Customer Account Transfers

The Firm has a strategy for executing the transfer of customer assets to support its Resolution Strategy. In particular, the strategy supports the ISG Solvent Wind Down with respect to the wind down of ISG's PB business.

The Firm identified two overarching drivers that affect the exit timing of PB clients:

- Client characteristics independent of relationship with the Firm, which can be further broken down into two components:
    - Client size and risk characteristics; and
    - Client leverage and liquidity; and
- PB client credit exposure to the Firm – PB clients with more exposure to the Firm would be incentivized to leave sooner.

As required by the 2019 Guidance, the Firm has segmented all of its PB clients to determine their likely exit timing in a resolution scenario. This segmentation is based on five Agency-suggested and five additional Firm-identified attributes. Each attribute is assigned a threshold, which signifies the level at which a given client could become easier to transfer as a result of its portfolio characteristics. Thresholds are determined based on a combination of subject matter expertise, internal risk management considerations, and the distribution of PB's liquidity risk profile.

The strategy demonstrates that existing processes and resources can transfer customer assets in a timely manner in the event of a resolution scenario. The transfer plans leverage key characteristics of each business including, specifically, that a majority of PB customers have multiple brokerage relationships. This strategy informs the transfer of PB customer accounts of MSCO and MSIP.

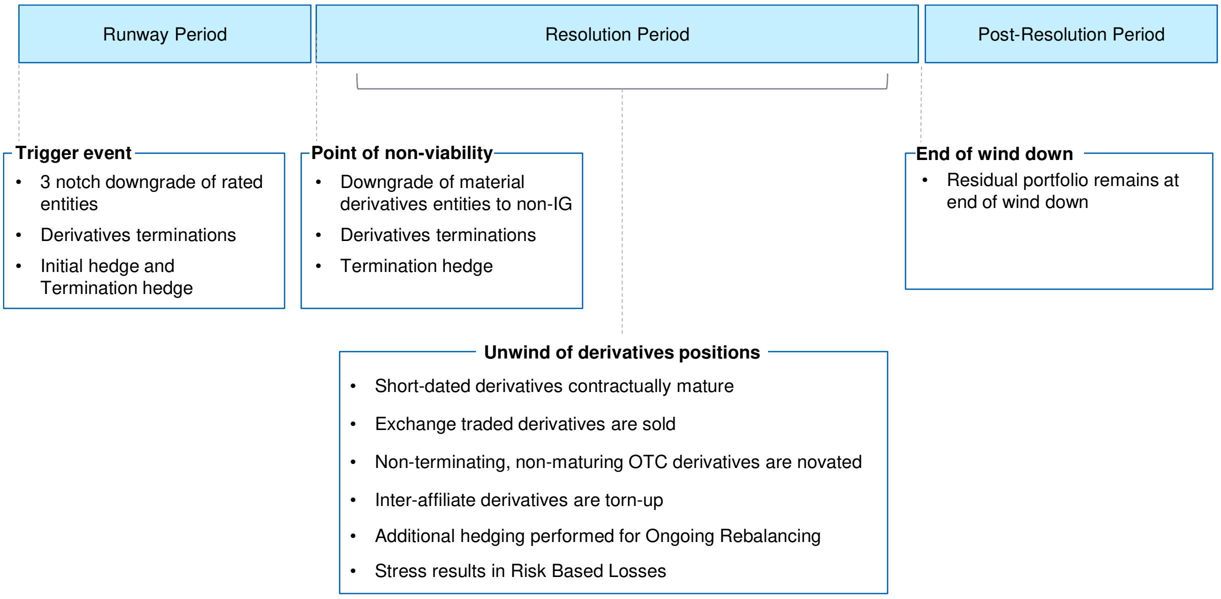
In addition to detailing the processes to transfer assets, this strategy documents the potential impact to transfers in the event that recovery of rehypothecated customer collateral is not possible.

4.2.7.5. Derivatives Stabilization and De-Risking Strategy

4.2.7.5.1 Overview of Derivatives Stabilization and De-Risking Strategy:

The Firm's derivatives stabilization and de-risking strategy has been incorporated into its broader Resolution Strategy and outlines the Firm's approach to wind down its derivatives and trading portfolios in an active manner during Resolution. The objective of this strategy is a rapid and orderly unwind of the Firm's ISG MOEs in a manner that maximizes value, minimizes cost and is least disruptive to the broader financial system and real economy. This strategy covers the entirety of the Firmwide derivatives portfolio, but focuses on those derivatives booked on its ISG MOEs, which collectively represent greater than 99% of its derivatives exposure by notional. The Resolution Timeline and sequence of events are summarized in Exhibit 4-4 below.

Exhibit 4-4. Resolution Timeline and Sequence of Events



Throughout the resolution timeline, the Firm assumes market conditions consistent with a severely adverse stress environment. The Firm also incorporates in its 2019 Plan the potential losses that could arise due to basis risk created by hedging with only listed and cleared instruments in Resolution.

4.2.7.5.2 Assumptions and Constraints

In developing its Resolution Strategy, the Firm makes assumptions with respect to the timeline and sequence of events that would put it on the path to resolution, as well as the conditions under which resolution would occur. Consistent with regulatory guidance, the Firm applies the following assumptions and constraints:

- **Credit ratings:** At the start of the Runway Period, the Firm assumes a universal 3-notch downgrade of all rated entities. At the PNV, the Firm further assumes that all ISG MOEs are further downgraded to non-investment grade, and that they fail to reestablish investment grade status for the duration of the Resolution Period;
- **Market access:** The Firm assumes that it would not be able to enter into new bilateral OTC derivatives during the Runway Period or the Resolution Period, and as a result hedging is limited to listed and centrally cleared instruments. Consistent with this assumption, the Firm also estimates potential losses due to basis and other risks that cannot be hedged using available instruments;

- **Early exits:** The Firm's Resolution Plan incorporates the termination of derivatives contracts with additional termination events in response to the downgrade assumptions cited above as well as the direct default of contracts facing MS Parent and non-MOEs. In identifying those contracts that terminate, the Firm assumes: (i) that all counterparties with the right to terminate would exercise that right consistent with the requirements of the 2019 Guidance; and (ii) that certain termination rights are stayed upon the bankruptcy filing of MS Parent consistent with the ISDA Protocols; and

- **Resolution timeline:** The Firm's Plan reflects a one-year Resolution Period, during which it would wind down the vast majority of its derivatives and trading positions. The timeline was evaluated in light of the Firm's resolution objective of winding down in a rapid and orderly manner that maximizes value, minimizes cost and is least disruptive to the broader financial system and real economy. The Firm believes the timeline is reasonable given its consideration of counterparty behavior, portfolio liquidity, financial capacity, operational capacity, residual portfolio and alternative scenarios.

4.2.7.5.3 Analysis of the Derivatives Stabilization and De-Risking Strategy

The Firm's analysis of its derivatives strategy takes into account the Resolution Strategy timeline and sequence of events, as well as the assumptions and constraints described above, and includes:

- **A derivatives wind down strategy** (i.e., a method for timely segmenting, packaging, and selling its derivatives positions), taking into account the starting profile of its derivatives portfolios and the profile and function of derivatives entities in resolution. This analysis relies on the Firm's newly developed Derivatives Segmentation and Forecasting capability and related assumptions, described above, including its assessment of ease of exit for OTC derivatives positions;

- **A re-hedging (de-risking) strategy** that specifies the risk sensitivity factors the Firm would seek to hedge in resolution and the instruments it would use, subject to the prescribed market access constraint;

- **Forecasts of financial resources needed to execute its strategies**, including the cost of novating OTC derivatives, the cost of entering into new derivatives hedges, and the losses the Firm could incur as a result of only hedging with listed and centrally cleared instruments. These forecasts also include estimates of the liquidity and funding impacts of the wind down, and are incorporated into the Firm's RCEN and RLEN estimates for its Resolution Strategy;

- **An assessment of the operational costs and capacity to execute its strategies** that describes the process, resources and costs associated with the execution of the ISG Solvent Wind Down, both for derivatives novations and PB customer account transfers. This assessment is integrated with the Firm's overall operational continuity strategy and related playbooks (e.g., Employee Retention Playbooks) and informed by the Firm's experience as a buyer and seller of novation packages and observed counterparty behavior in past stress events. The operational costs to execute the wind-down are also incorporated into the Firm's RCEN and RLEN estimates for its Resolution Strategy; and

- **Identification and evaluation of the residual portfolio** that could remain at the end of the wind down, including its size, composition, complexity and potential counterparties. The Firm has identified its potential residual exposure as being less than 0.03% of its starting third-party OTC derivatives exposure.

4.2.7.5.4 Residual Derivatives Portfolio

Under its Resolution Strategy, the Firm expects to be able to dispose of greater than 99% of the OTC derivatives booked on its ISG MOEs by the end of the Resolution Period through a combination of terminations, contractual maturities, third-party novations, and inter-affiliate tear-ups. However, any derivatives positions that remain at the end of the Resolution Period would form a residual portfolio that would be held until contractual maturity if the Firm is unable to exit these positions after the Resolution Period. The Firm has identified these potential residual positions using the ease of exit framework as transactions that are (i) very hard to exit; and (ii) which do not contractually terminate prior to the end of the 1-year Resolution Period. The Firm has assessed the risk profile of this potential residual derivatives portfolio across the following three dimensions, as summarized below:

- **Size**: The Firm assessed the size of its potential residual portfolio under the Resolution Strategy relative to the size of its starting derivatives portfolio and relative to the size of the derivatives portfolios of other U.S. dealers. For the starting point comparison, the Firm compared the notional balance of its potential Residual portfolio against the derivatives notional balance of its ISG MOEs as of December 31, 2018. For the peer analysis, the Firm compared the notional balance of its residual portfolio against the aggregate derivatives notional held by other U.S. bank holding companies as of December 31, 2018. Both analyses demonstrate that the potential residual derivatives portfolio is immaterial from a size perspective, representing less than 1% of the Firm's starting external derivatives exposure and an even smaller fraction of the broader markets.

- **Composition and complexity**: The Firm assessed the composition and complexity of its potential residual portfolio under the Resolution Strategy by analyzing the underlying positions using transaction-level attributes such as legal entity, product / desk, currency, maturity, counterparty, and level of collateralization. This analysis demonstrates that while the residual consists of illiquid trades and trades with certain types of counterparties, the portfolio is relatively simple as it consists of a limited set of positions with few counterparties and booking entities.

- **Potential counterparties**: The Firm conducted an assessment of the counterparty composition of its potential residual derivatives portfolio under the Resolution Strategy. The assessment looked at the nature and concentration of counterparties to the Firm's residual portfolio and also the extent to which residual portfolio positions are collateralized.

The three analyses described above strongly indicate that the Firm's potential residual derivatives portfolio under the Resolution Strategy does not pose a systemic risk to the stability of the U.S. or global financial markets. Given that the residual portfolio is immaterial in size, its composition is simple, and its counterparty concentration is limited, non-performance on these contracts is not likely to have a materially adverse impact on markets or on the Firm's counterparties.

4.2.7.6. Communications Strategies

Consistency and clarity of communications is important to the execution of the Resolution Strategy, particularly with respect to the Firm's Derivatives and Trading Activities. The Financial Stress Communications Playbook sets forth the Firm's plans to manage and execute communications with key stakeholders in periods of financial stress.

Communications Strategy

Fundamental to the Firm's ability to manage itself during a period of financial stress is its ability to communicate with its key internal and external stakeholders, including clients, employees and regulators, in a timely and globally coordinated manner. As financial stress events may vary in terms of severity and speed, it is important that the Firm have a well-developed, well-understood communications protocol and clear assignment of responsibilities that can be promptly activated to allow the Firm to achieve its strategic objective of having its key stakeholders take (or refrain from taking) certain actions.

The Firm's global communications strategy is described in the Financial Stress Communications Playbook and is grounded in the principle that the Firm's BAU processes should be "crisis-ready," adaptable to the particular facts and circumstances at the time and able to be executed in a wide range of scenarios in a timely manner.

Central to the global communications strategy is "**BRM Command**," a communications protocol first developed in response to the 2008 financial crisis, which provides globally coordinated communications and governs the Firm's preparedness, organization, escalation and response to events that could potentially affect the Firm's financial position. BRM Command is designed to ensure control over information inflows and outflows, identify and vet potential risks in the current environment, generate customized dashboard reporting of relevant metrics and implement action plans to respond to macro/market and Firm-specific events, including any related counterparty issues.

The Firm's global communications strategy has been successfully implemented in numerous stress events since 2008 (including crises related to the U.S. debt ceiling, Greece's potential debt default and exit from the Eurozone and the UK's exit from the Eurozone), demonstrating the credibility of the strategy.

4.3. Operational Continuity and Capabilities

Building on efforts completed prior to the 2017 Plan, the Firm continued to upgrade its Operational Continuity and Capabilities so that the Material Entities would have access to the critical personnel, systems, applications, facilities, vendors and other non-financial resources needed to execute the Resolution Strategy and the ability to produce the data and information and perform the processes necessary to execute the Resolution Strategy.

The below sections describe the Firm's Operational capabilities and strategy for maintaining operational continuity and map to each of the areas identified under the Operational vulnerability in the 2019 Guidance.

4.3.1. Payment, Clearing and Settlement Activities

4.3.1.1. Overview of PCS Activities

The Firm conducts PCS activities to support its business operations. As part of these activities, the Firm utilizes FMUs and agent banks (together, "**PCS providers**") to facilitate the clearing and settlement of cash and securities transactions in various markets globally. The Firm also provides PCS services to clients in certain limited instances, but does not perform utility-like agent bank services (e.g., payment clearing, settlement agent, etc.) for other large financial intermediaries.

In most major markets, one or more Firm entities have memberships with local FMUs that allow the Firm direct access to clearing and settlement infrastructure in the region. In markets where the Firm does not have direct access, Firm entities utilize third-party agent banks to facilitate PCS activities and provide indirect access to local infrastructure. In addition, the Firm also has in place certain inter-affiliate arrangements whereby a Firm entity with direct access to an FMU or agent bank may provide PCS services to another Firm entity that does not have direct access for the relevant market.

The Firm maintains a mapping of the PCS services to the Material Entities, Core Business Lines and Critical Functions that use and/or provide them, as well as to the key FMUs and agent banks the Firm utilizes and the key PCS clients it serves.

4.3.1.2. Overview of PCS Framework

A loss of access to the key PCS providers that the Firm utilizes, or to key financial and operational resources within the Firm, could disrupt the continuity of the Firm's PCS activities and impede the execution of the Resolution Strategy.

To address this potential risk, the Firm has a PCS Framework that comprises the Firm's capabilities for continued access to PCS services essential to an orderly resolution. Key capabilities incorporated within the PCS Framework include:

- Identification of PCS clients,[23] FMUs and agent banks as key from the Firm's perspective;
- Mapping of Material Entities, Critical Functions, Core Business Lines and key PCS clients to both key FMUs and key agent banks;
- A PCS continuity strategy that describes how the Firm would maintain access to its current network of FMUs and agent banks, leveraging contingency arrangements where appropriate, as well as key financial and operational resources within the Firm;

[23] "PCS clients" include individuals or entities, including affiliates of the Firm, to whom the Firm provides PCS services and any related credit or liquidity offered in connection with those services.

- A detailed analysis of financial resources that each MOE may need during the Runway Period and Resolution Period to meet potential heightened requirements imposed by PCS providers, including increased collateral and margin requirements and reduction in access to secured and unsecured credit;
- A communications protocol ("**FMU Command**") that supports the Firm's PCS continuity strategy; and
- Playbooks for the Firm's relationships with key FMUs and agent banks that (i) reflect the Firm's roles as a user and/or provider of PCS services, and (ii) outline how the Firm would maintain access to the provider in a manner that would support an orderly resolution.

The PCS Framework addresses both direct and indirect relationships with PCS providers as well as the Firm's role as both a user and provider of PCS services.

4.3.1.3. Enhancements to PCS Capabilities

The Firm continually looks for opportunities to enhance its PCS capabilities, both with respect to BAU activities as well as contingency planning. The Firm also reviews and responds to regulatory guidance and feedback as it is published, and seeks to maintain capabilities that are consistent with the expectations of its regulators globally and in line with peer practices.

The Firm has implemented the following key enhancements to its PCS capabilities, many of which are directly in response to the Final Guidance published by the Agencies:

- Formalization of the Firm's FMU and agent bank access strategy and related capabilities into the PCS Framework;
- Development and implementation of an approach to identify PCS clients as key from the Firm's perspective and to map such key PCS clients to key FMUs and key agent banks;
- Definition of discrete PCS services used and/or provided by the Firm and mapping of such services to Material Entities, Critical Functions, Core Business Lines, key FMUs, key agent banks and key PCS clients;
- Development of a PCS Data Repository to house and centralize key dynamic data supporting the Firm's PCS Framework including projections of potential liquidity needs related to PCS activities, contact information for key internal and external stakeholders, mapping of key PCS clients to key FMUs and key agent banks, and current availability of intraday credit from PCS providers;
- Additional description of the Firm's role as a provider of PCS services into the FMU and Agent Bank Access Playbooks where relevant;
- Incorporation of additional analysis of potential financial and operational impacts to key PCS clients due to adverse actions that may be taken by a key FMU or a key agent bank and contingency actions that may be taken by the Firm;

- Enhanced description of how the Firm will communicate to key PCS clients the potential impacts of implementation of potential contingency arrangements or alternatives; and
- Enhancement of the Firm's Key PCS Provider Library to incorporate additional data points for key FMUs and agent banks and expanded mapping of PCS services used and/or provided.

Through the PCS Framework and component PCS capabilities, the Firm addresses applicable regulatory guidance and expectations with respect to maintaining continuity of PCS services.

4.3.1.4. PCS Continuity Strategy

PCS providers have the discretion to increase, modify or supplement their BAU requirements in response to Firm financial stress, which would place additional demands on Firm resources. The Firm's PCS continuity strategy is to maintain access to key PCS providers by meeting financial, operational and communications and reporting requirements that may be imposed by such providers.

The Firm has engaged in internal and industry efforts to further understand the potential heightened requirements that could be imposed by PCS providers in stress or resolution and the likely reactions of PCS providers to the Resolution Strategy. These efforts have included detailed reviews of PCS provider rulebooks and contracts, engagement directly with PCS providers and consideration of the Firm's historical experience. Through these efforts, the Firm has either actively participated in or obtained the output of a variety of discussions about resolution planning with the PCS providers that it utilizes. These discussions have helped to understand the likely responses of FMUs and agent banks to the resolution of a participant firm and to set expectations around the actions market participants would need to take to maintain access to PCS providers in such a scenario.

In addition to industry efforts, the Firm also conducts its own bilateral discussions with PCS providers to review its PCS continuity strategy, discuss heightened requirements and consider potential contingency options. These discussions have informed the Firm's understanding of the potential heightened requirements that could be imposed and validated the Firm's FMU and agent bank access strategy. The discussions have also supported the Firm's view that contingency strategies such as switching to an alternative provider or obtaining indirect access through a third-party would not be feasible in many cases, emphasizing the importance of maintaining access to existing FMU and agent bank relationships.

4.3.1.5. FMU and Agent Bank Access Playbooks

The Firm has FMU and Agent Bank Access Playbooks for each of its key PCS providers, which include an assessment of potential heightened requirements and the Firm's capacity to respond to those requirements.

4.3.1.6. Financial Capacity

The Firm considers the potential financial heightened requirements that may be imposed by PCS providers, which are:

- Increased margin for central counterparties ("**CCPs**");

- Pre-funding and/or additional collateral requirements to support reduced access to secured and unsecured intra-day credit from securities agents and central securities depositories ("**CSDs**"); and
- Additional liquidity needs resulting from reduced access to In/Out swaps with other CLS FX settlement members.

The Firm projects liquidity that may be required by MOEs to meet such heightened requirements during periods of stress and in resolution, and incorporates these projections into the Resolution Financial Model. The Firm continues to reassess these methodologies and enhance its projection approaches where possible, including to account for any changes in the Firm's risk profile on an ongoing basis.

A summary of the Firm's current projections of liquidity that may be needed across Material Entities to meet potential heightened requirements from PCS providers during periods of stress and in resolution is included within the PCS Data Repository. These projected liquidity needs are incorporated into various components of the Resolution Financial Model based on the anticipated timing of the imposition of the relevant heightened requirement and the nature of the liquidity need.

4.3.1.7. Communications and Reporting

FMU Command is the Firm's global protocol for maintaining open communications with PCS providers in times of stress. Once activated, FMU Command's goal would be to preserve FMU and agent bank access, which would rely on maintenance of robust communication with other Firm functions, including in particular BRM Command and "**Firmwide Shared Services Command**," to identify, assess, escalate and mitigate potential risks. FMU Command would coordinate closely with BRM Command to provide the detail it needs to carry out its duties as they relate to FMU access.

In BAU, PCS provider relationships are the responsibility of key Managing Directors in Operations and BRM with deep knowledge of the Firm's PCS providers. These senior executives manage teams that interact with PCS providers on a day-to-day basis and maintain senior-level relationships with the providers. These individuals comprise the membership of the **"PCS Steering Committee,"** and if FMU Command is activated during periods of stress or resolution, would become the core members of FMU Command.

Following activation of FMU Command, the members of FMU Command would prepare to alert FMUs and agent banks of the current state of the Firm, if not already done. The FMU Command members would then initiate the efforts needed to meet any heightened requirements implemented by the FMUs or agent banks, including an increase in communication and reporting requirements. FMU Command would coordinate with BRM Command, providing the relevant information necessary for communication with internal and other external stakeholders. BRM Command is responsible for coordinating communication with clients, counterparties, regulators, vendors and other key internal and external stakeholders.

4.3.2. Managing, Identifying and Valuing Collateral

Role of Collateral Management at the Firm

Collateral management is used by the Firm to manage the counterparty credit risk associated with its sales and trading, hedging and retail activities. Margin and collateral transactions are executed with CCPs, clearing agencies, exchanges, banks, securities firms and other financial counterparties, including affiliates. During a period of stress, collateral management activity may increase as counterparties call for additional collateral and the value of certain types of collateral becomes more volatile. The Firm's Resolution Financial Model, however, demonstrates that sufficient liquidity would be maintained under severely adverse conditions, such that any potential disturbances in the regular flow of collateral management activity would not impair the Firm's dealings with its counterparties in a substantial way. The Firm's financial capacity combined with its robust collateral management practices, as described further below, would enable the Firm to properly value, manage, return and source collateral as necessary without resorting to collateral fire sales or otherwise transmitting liquidity stress to counterparties.

Collateral Management Capabilities and Processes

The Firm has assessed its ability to produce necessary collateral management-related information contained in the 2019 Guidance through the AREA process.

The Firm has robust capabilities in place to manage, identify and value collateral received from and posted to external parties and affiliates on a Material Entity basis, including:

- Defined processes and procedures to identify and review, on at least a quarterly basis, legal and operational differences and potential challenges in managing collateral within specific jurisdictions, agreement types, counterparty types, collateral forms, or other distinguishing characteristics;
- Maintaining a collateral management policy that outlines how the Firm as a whole approaches collateral and serves as a single source for governance with underlying divisional collateral management policies for each Core Business Line;
- Systems and reporting capabilities to identify efficiently the location of, and legal rights to, all pieces of collateral pledged to, pledged by, or held in custody by any Material Entity, including: (i) the legal entity and geographic jurisdiction where counterparty collateral is held by end of day, (ii) CUSIP and asset class information on collateral pledged to CCPs, and (iii) collateral pledged and received across branches;
- Standards in place to document all netting and re-hypothecation arrangements as well as produce risk measurements for cross-entity and cross-contract netting;
- Process to monitor counterparty credit risk exposure between affiliates and track/manage collateral requirements as part of the Firm's strategy for optimizing collateral allocations;

- Process to consider terms, such as triggers or cross defaults, that may be impacted by a change in market conditions as well other key collateral-related terms that may not be impacted in an adverse economic environment, and processes for identifying, capturing, tracking and reporting on these key terms;
- Defined procedures in place to review, on a quarterly basis, ISDA and Credit Support Annex agreements for triggers that may be breached as a result of changes in market conditions; and
- As part of its Liquidity Stress testing, a process for forecasting changes in collateral requirements and cash and non-cash collateral flows under a variety of stress scenarios, at least on a quarterly basis.

Collectively, these processes serve as the framework and strategic plan for continuing collateral management processes in a resolution scenario. The Firm has embedded these capabilities into regular business practices, thereby enhancing the Firm's overall preparedness and readiness to respond to crisis situations and contributing to the ongoing resolvability of the Firm. These capabilities have also been assessed through the AREA process.

Each business has an appropriately designed collateral management process, supported by the Operations function in coordination with BRM, Credit Risk and front-office BUs.

Maintaining Resolvability

Reflecting the Firm's commitment to sound and effective resolution planning, the Firm maintains its capabilities related to managing, identifying and valuing collateral. The Firm has in place practices and reporting capabilities and project governance mechanisms to monitor the timely completion of any identified enhancements, where and as needed.

Several key collateral management capabilities are embedded into the Firm's regular business practices, including:

- Updated, global collateral management policies;
- Expanded collateral-related assumptions as part of the Firm's regular liquidity stress testing, including enhancing the Firm's existing cash flow framework to incorporate all inter-affiliate contingencies with material liquidity flows and maintaining a stress testing scenario which consists of assumptions for ring-fencing for all inter-affiliate flows;
- Increased frequency and efficiency of conducting periodic reviews of key terms and triggers; and
- Maintained reporting and analytic platform that combines the structured contract data points with exposure data, counterparty data, legal entity data and other key data points to deliver insightful analysis derived from this combined data set.

4.3.3. Management Information Systems

The execution of the Firm's Resolution Strategy is grounded in the ability to leverage BAU MIS capabilities. The Firm's MIS include technology systems, applications and automated reporting tools necessary to manage Core Business Lines and Critical Functions in BAU. In BAU, the Firm generates data produced by MIS on a regular basis for use by senior and other management to monitor the activities of the Firm. MIS includes financial and risk data that would be required to execute the Firm's Resolution Strategy, including information that would underlie timely decision-making by key stakeholders throughout the stress continuum.

The Firm has carefully considered the requirements for continued provision of MIS in periods of financial stress and has taken measures to ensure appropriate MIS capabilities persist in resolution. Accordingly, the Firm maintains its MIS reporting capabilities to readily produce data to support the Firm's oversight and decision-making capabilities and enable general monitoring of the Firm's financial health, risks and operations.

The functional components of the Firm's resolution planning objectives include:

- **Identifying and Evaluating MIS Capabilities**: The Firm identifies and evaluates MIS capabilities required to support resolution preparedness, including associated testing, through AREA.
- **MIS Supporting Trigger and Escalation Framework**: The Firm relies on MIS to support its Trigger and Escalation Framework in order to monitor conditions throughout the stress continuum, and support timely decision making.
- **MIS Enabling Execution of Resolution Strategies**: The Firm describes MIS in its playbooks that are relied upon to execute enumerated actions.
- **Providing Access to MIS to Regulators**: The Firm has established procedures to provide access to MIS to regulators.

4.3.4. Shared and Outsourced Services

The successful execution of the Firm's Resolution Strategy requires continuity of critical shared and outsourced services to the Material Entities notwithstanding MS Parent's entry into resolution proceedings. Accordingly, the Firm's strategy is to maintain service continuity in a range of scenarios and conditions. As part of this Shared and Outsourced Services strategy, the Firm has developed its capabilities to ensure that critical services will continue in resolution through the implementation of a global network of MSEs ("**MSE Network**"). A service is deemed critical in resolution if the Firm's Resolution Strategy could no longer be feasibly executed if the process were absent. The Firm understands the critical services that are needed in recovery and resolution and has arrangements in place to ensure there is continued access to these critical services. The Firm has enhanced the MSE Network by operationalizing the Funding IHC to preserve funding flexibility and to allocate financial resources as needed to Material Entities in resolution.

Under the MSE Network framework:

- Support Control Function ("**SCF**") personnel are employed by MSEs;
- Systems, applications and infrastructure are under the direct control of MSEs;

- Intellectual property is either legally owned by MSEs, or MSEs have a perpetual, fully paid up license to intellectual property;
- "**Critical Vendor**" contracts reference resolution friendly terms; and
- Facilities are under the direct control of MSEs (whether owned or leased), including data centers.[24]

To strengthen the continuity of services during resolution and recovery, the Firm has taken additional measures to (i) contractually require MSEs to take actions consistent with the Firm's strategy, (ii) make the MSEs financially resilient through the use of the Funding IHC and other means and (iii) implementing controls to monitor the MSE Network, including:

- **Governance & Communication Framework:** The Firm has a governance and communication framework to coordinate operational continuity in recovery and resolution.
- **MSE Service Company Principles:** MSEs comply with a set of principles that limit their ability to take risks and keep them independent from risks that occur in the Firm's operating subsidiaries (e.g., MOEs).
- **Operational Mapping**: The operational mapping is the process through which the Firm understands its critical services, interconnectedness across systems, applications and infrastructure and support service vendors. The process is underpinned by the Firm's "**Service Taxonomy**,"[25] which is the common language for describing services across the Firm. The Service Taxonomy is linked to the "**Process Taxonomy**," the Firm's method of describing its functions. operational mapping is supported by the Strategic Warehouse of Operational Relationship Data ("**SWORD**"), the Firm's strategic technology platform for managing service relationship data;
- **Inter-Affiliate Task Order Framework**: Services provided by MSEs are documented in legally binding arm's length inter-affiliate task orders ("**IATOs**"). These documents obligate the MSEs to provide services to their customers in both BAU and resolution and prevent the MSEs from terminating services in the event of a resolution. The schedule of services in these documents references SWORD;
- **MSE Financial Resilience**: The Firm's Positioning Framework ensures working capital is readily available for MSEs to mitigate any unanticipated service payment delays or disruptions or intraday needs. The Firm's operational continuity strategy and associated SLAs ensure the MOEs remain contractually obligated to pay for services from the MSEs throughout resolution. The MOE RLEN and RCEN modeling accounts for these continued payments to the MSEs.

[24] Subject to certain documented exceptions.

[25] The Service Taxonomy is used across the Firm's operational mapping data and inter-affiliate contractual framework. This allows the services provided to be tied to the payments made by affiliates, the contractual agreements governing those services, and transparency initiatives.

- **Access to Operational Assets**: Under the Firm's operational continuity model, operational assets required to support the provision of critical services are held within the global MSE Network. Playbooks are in place that describe how, for each operational asset under the control of MSEs, access would be maintained and managed in resolution.

4.3.4.1. Operational Mapping

Operational mapping provides a detailed inventory of services, applications and vendors required by the Firm's Critical Functions, Core Business Lines and Material Entities, including which of those resources are critical in resolution.

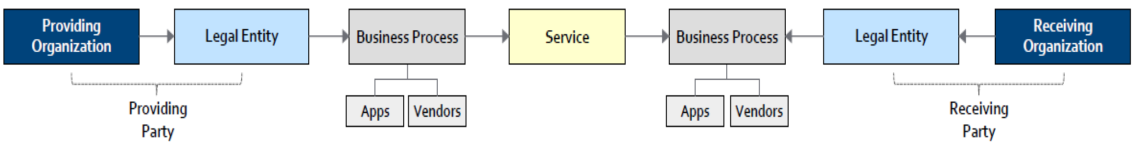
The operational mapping process articulates services in a common language, the Service Taxonomy that has been adopted in legal documentation, cost allocations / invoicing and supplier risk management. The Service Taxonomy is linked to the Process Taxonomy, the Firm's method of describing its functions.

The operational mapping exercise is managed, governed and executed by SWORD. On an ongoing basis, the data is subject to a verification governance process. Data is collected through co-ordination with the business segments, verified and approved by business management, and subject to verification and confirmation processes within SWORD. All Material Entities (MOEs and MSEs), as well as all Firm entities with at least one employee, are included in this exercise.

The "**Global Outsourcing and Sourcing Policy**" includes the obligation of each business to identify and maintain services that are of essential importance to the execution of the Firm's Resolution Strategy through the operational mapping process.

Exhibit 4-5 illustrates how operational mapping articulates the service relationship data between the Firm's divisions and legal entities. As a process, service or associated resource may not be critical for the entire Resolution Period, operational mapping captures the time period (on a quarterly basis) during which each process, service and associated resource is critical to the execution of the Resolution Strategy.

Exhibit 4-5. Operational Mapping Service Relationship Example



SWORD is considered the Firm's service catalogue. SWORD captures all services and business processes globally, with those critical to the execution of the Resolution Strategies being flagged as resolution critical. All processes, applications, third party vendors and affiliates have been identified in support of critical services and are mapped in SWORD. Service relationships are substantiated through linkages to the resources (vendors and technology) required to support them, contracts that govern them, and payments (allocations) given in consideration of those services.

The Firm defines critical services as those services provided through an inter-affiliate or by an unaffiliated third-party (vendor) needed to: (i) facilitate the execution of critical business processes; or (ii) support the general business activities of a group or function that is deemed to be performing critical business processes. These determinations were made by each BU and SCF based on the Firm's Resolution Strategy.

In addition, groups identified the operational resources that are critical to execution of critical processes and services. Criticality of these associated resources (such as technology and vendor supplied services) was determined based on responses to technology application and vendor criticality qualifying questions.

Filtering, visualization and reporting tools in SWORD allow information to be viewed by Critical Function, BU and legal entity.

Certification of the operational mapping data currently takes place on an annual basis.

4.3.4.2. Inter-affiliate Contractual Service Provisions

The Firm's IATO framework provides a contractual services provision which obligates MSEs to exercise their capabilities to promote a safe and sound resolution. This IATO framework consists of task orders entered into among the MSEs and between the MSEs and their customers (operating entities). During a resolution scenario, IATOs will be managed in the same way as they are in BAU. SCFs will perform the services documented in IATOs and be responsible for meeting required service standards. Oversight for these services will be performed by the SCFs responsible for providing the services. BAU incident reporting will be leveraged and provided to Firmwide Shared Services Command as well as individual MSE and MOE boards where necessary.

The key features of the IATO framework are:

- Full coverage of all MSEs;
- Full coverage of all services for those entities;
- Meets the arm's length standard;
- Is constructed on terms similar to those a third-party would expect in both form and substance and thus can be used as the basis for TSAs with buyers of the Firm's objects of sale;
- No resolution impairing provisions;
- Significant resolution-enhancing provisions, explicitly obligating the continuation of services in resolution;
- Documentation of services in the language of the service taxonomy, allowing IATOs to be clearly linked to operational mapping and remuneration for services;
- Integration with the SWORD repository;

- Integration with the Firm's existing processes for workforce strategy and supervisory documentation;
- Sustainable BAU structure; and
- Storage in the Firm's Inter-affiliate Agreement Repository.

4.3.4.3. Contract Repositories

The Global Resolution Planning Non-Qualified Financial Contract Policy (the "**Non-QFC Policy**") states that all contracts related to the receipt of inter-affiliate and third-party services, products or resources that would be necessary for the business of a Material Entity to function during an orderly resolution must be maintained within an approved contract repository. The supplements to the Non-QFC Policy, as listed in the Non-QFC Policy, list the contract repositories in which such contracts are maintained.

4.3.4.4. Continuity of Critical Services (Third Party Vendors) to the Firm in Resolution

The Firm's approach to continuity of critical outsourced services has involved taking measures to confirm that Critical Vendors do not have the contractual right to terminate their relationships with the Firm in a manner that jeopardizes the Firm's orderly resolution. In addition, because vendors transact with MSEs that are insulated from financial and business risk, the Firm's approach to continuity of critical outsourced services mitigates vendors' incentive to cease performing under Critical Contracts for fear of non-payment or failure of the service entities. The Firm's framework is flexible and is resilient in the preferred SPOE Resolution Strategy and also in a variety of alternative scenarios, including an SPOE resolution strategy in which MS Parent's equity in certain of its subsidiaries is transferred to a bridge company and MPOE resolution scenarios in which Material Entities are forced into resolution.

The Firm has established BAU processes to (i) identify Critical Contracts with vendors; and (ii) confirm that such Critical Contracts will facilitate continuity of services covered under the contracts in resolution in accordance with the Firm's standards (or remediate the same to comply with Firm standards).

4.3.4.5. MSE Financial Resilience

To facilitate the financial resilience of MSEs, the Firm manages and accounts for the risks associated with BAU, recovery and resolution such as employee, Critical Vendor and lease costs, expense-revenue mismatch, loss of revenue and restructuring and wind down costs. As described below, this is achieved through a Positioning Framework, with liquidity segregated from other group liquid assets.

The Firm's Resolution Financial Model calculates the financial capacity of each MSE to continue to provide resolution-critical services throughout execution of the Resolution Strategy. The model projects the financial position of each MSE on a daily basis throughout the period, demonstrating their ability to remain a solvent going concern with adequate liquidity to continue to function. If the model identifies that additional resources, beyond those positioned in accordance with the Firm's Positioning Framework, are required by the MSEs in resolution, this additional requirement informs the amount of capital or liquidity provided by MS Parent or the Funding IHC to each MSE under the Firm's Support Agreement.

The model projects the wind down of each MSE, including projections of revenues, expenses, balance sheet, cash flows and their wind down over the period. The rates of wind down used by the MSE Financial Model reflect the fact that services capacity may scale at a different rate than the business wind-down and therefore mitigates timing risks caused by mismatches in supply and demand for services. At all times during the Resolution Period, as in BAU, each MSE will maintain sufficient working capital to support the peak two months of each MSE's BAU operating expenses.

4.3.4.6. Operational Continuity Playbooks

The Firm has developed four operational continuity playbooks to describe plans and specific actions taken in support of shared and outsourced services.

Exhibit 4-6. Operational Continuity Playbooks

Playbook	Purpose
Employee Retention Playbook	Provides plans for Human Resources and business management to identify and retain personnel considered critical for the execution of the Resolution Strategy, including the related governance bodies and decision-making process
Facilities and Fixed Assets Continuity Playbook	Describes the Firm's plan to maintain: (i) continuity of access to Firm identified critical facilities, (ii) core facilities services to keep facilities functional, (iii) workplace support services to an acceptable level and to alleviate the Firm of Corporate Services managed liabilities and obligations to the extent practicable
Technology Continuity Playbook	Details arrangements and continuity plans relating to global technology systems and infrastructure in support of the Firm's Resolution Strategy
Vendor Continuity Playbook	Describes the methodology used to identify Critical Vendors and the processes the Firm has in place to manage vendors in BAU

Each playbook details the Firm's plan for maintaining operational continuity in a resolution scenario and includes (i) a description of the assessment the Firm performed to identify critical services or personnel, (ii) the actions the Firm will take in a resolution scenario to maintain continuity of resolution-critical services as well as critical personnel and (iii) the Firm's contingency strategies in the unlikely event of the loss of access to critical services or personnel.

4.3.5. Legal Obstacles Associated with Emergency Motions

The Resolution Plan includes the Firm's strategy to satisfy the conditions necessary to satisfy the creditor protection conditions of the ISDA Protocols via an emergency Guarantee Administrative Priority Motion that causes the claims of the counterparties under MS Parent credit enhancements to be elevated to administrative priority status in MS Parent's Chapter 11 proceeding. In addition to the requested relief, the Guarantee Administrative Priority Motion addresses potential legal obstacles that arise without the implementation of the permanent stay on QFC cross defaults.

The Firm's Bankruptcy Playbook outlines the basic process for preparing for MS Parent's bankruptcy filing and addresses the key issues in the days and weeks preceding and immediately following the bankruptcy filing. The Bankruptcy Playbook ties the key steps that are necessary to prepare for the bankruptcy filing to the triggers, timeframes and escalation processes described in the MS Parent Governance Playbook and addresses the Legal Obstacles Associated with Emergency Motions capability from the 2019 Guidance. MS Parent actions and related items within the Bankruptcy Playbook include:

- An "**ISDA Protocols Playbook**" that analyzes issues associated with the implementation of the stay on cross default rights described in Section 2 of the ISDA Protocols and provides an actionable guide to supplement the related motions and memoranda with a day-to-day description of the steps that would be taken in the periods before entering and upon commencement of the bankruptcy proceeding;
- A refreshed Guarantee Administrative Priority Motion to, consistent with the requirements of the ISDA Protocols, (i) elevate guarantees of subsidiary QFCs to administrative expense status as preferred relief or (ii) transfer certain of MS Parent assets and guarantee obligations of subsidiary QFCs to a new holding company owned by a trust for the sole benefit of MS Parent's bankruptcy estate as alternative relief; and
- An actionable document completion guide, including other forms of the key motions and other documents necessary to be filed with the Bankruptcy Court to implement the Resolution Strategy.

The ISDA Protocols and the QFC Stay Rules represent a key development in eliminating the potentially destabilizing effects of early terminations of QFCs due to the inclusion of cross-default rights on the orderly resolution of a G-SIB and enhance the ability of the Firm to unwind its QFCs in an orderly manner in accordance with its Resolution Strategy. In response to the 2019 Guidance, the Firm analyzed the impact of early termination rights in QFCs on MS Parent's resolution, including legal issues associated with the implementation of the stay on cross-default rights, and expects that counterparties would not be able to exercise cross-default rights that would otherwise be available upon MS Parent's insolvency, assuming full compliance with the QFC Stay Rules by January 1, 2020.

The Firm has undertaken a "**QFC Remediation Project**" which seeks to address various resolution-related impediments associated with contractual provisions contained within the Firm's QFCs. In addition to compliance with the QFC Stay Regulations and associated adherence to the ISDA Protocols, the Firm has, since 2014, been engaged in an ongoing institutional QFC identification and digitization effort.

4.3.5.1. Bankruptcy Playbook

The Bankruptcy Playbook sets forth MS Parent's strategic actions from the Recovery Period through the Resolution Period. The Bankruptcy Playbook describes the basic process for preparing for MS Parent's bankruptcy filing, key issues that will need to be addressed in the days and weeks preceding and immediately following the bankruptcy filing, and legal obstacles associated with emergency motions.

The Bankruptcy Playbook includes a step-by-step bankruptcy plan that lays out the steps that would need to be taken to prepare for the bankruptcy filing and ties such steps to the Trigger and Escalation

Framework. Key MS Parent actions serve as the main chapter headers, with triggers and time frames signaling the commencement and end of such actions noted in each chapter.

Key MS Parent actions and related items within the Bankruptcy Playbook include:

- Provision of financial support to the Material Entities prior to filing for Chapter 11, while the Firm's Material Entities are supported by capital and liquidity provided by the Funding IHC following the Chapter 11 filing;
- Oversight of the execution of business sales;
- An ISDA Protocols Playbook that analyzes issues associated with the implementation of the stay on cross default rights described in Section 2 of the ISDA Protocols and provides an actionable guide to supplement the related motions and memoranda with a day-to-day description of the steps that would be taken in the periods before entering, and upon commencement of, MS Parent's bankruptcy proceeding;
- Other emergency and routine first day motions, including indications of requisite information and the sources of such information;
- An enhanced Guarantee Administrative Priority Motion to obtain Bankruptcy Court approval to elevate guarantees of subsidiary QFCs to administrative expense status, consistent with the requirements of the ISDA Protocols;
- Subsidiary terminations of QFCs with MS Parent, including close-out processes and resultant financial impacts;
- Establishment of and interaction with the creditors' committee;
- Execution of resolution operating agreements and other interactions with Material Entities;
- Payments to Critical Vendors;
- Issuance of a disclosure statement and plan of reorganization; and
- Description of the resulting organization upon completion of the resolution process.

The Bankruptcy Playbook seeks to evidence that:

- MS Parent, leveraging its pre-drafted forms and advance planning, is able to prepare and commence the Chapter 11 Proceeding quickly and in an orderly manner;
- MS Parent's commencement of a voluntary case under Chapter 11 of the Bankruptcy Code does not result in any payment defaults to the customers and counterparties of the Material Entities and their Critical Functions;

- MS Parent and Funding IHC financial resources will be made available to the Material Entities to meet their needs in resolution in a way that preserves the value of the Material Entities and minimizes the risk of potential creditor challenges to such support;
- The Firm can be resolved in an orderly manner without any reliance on U.S. or foreign government financial support; and
- Governance Mechanisms exist to facilitate timely decision making and action execution by MS Parent and the Funding IHC.

5. Recovery and Resolution Planning Governance

5.1. RRP Governance

The Firm has a robust resolution planning and governance framework designed to ensure that all aspects of the Firm's resolution planning—including development, review, approval and maintenance of the Resolution Plan—receive appropriate attention by management and the MS Parent Board. The governance framework relies upon meaningful engagement across the Firm and leverages established roles and responsibilities and committee charters. As a result, resolution plan development, review, approval and maintenance activities at the Firm are fully integrated into the corporate governance structure.

From a day-to-day perspective, the resolution planning process is overseen by the "**Executive Sponsors**" and the Chair of the "**RRP Steering Committee**," and managed by "**Firm RRP**." Resolution planning is a highly integrated set of BAU processes at the Firm, with defined components owned directly by applicable BUs or SCFs (with advisory and coordination support from Firm RRP), fostering integration of the themes of resolvability directly into day-to-day processes and Firm culture. Similar recovery and resolution planning governance processes exist at certain other entities, such as the U.S. Banks and the U.K. MOEs.

The Resolution Plan was formally approved by the RRP Steering Committee, the RRP Committee and the Risk Committee of the Board and such approvals are reflected in their respective minutes.

5.2. Resolution Plan Review and Challenge Framework

The Resolution Plan content undergoes several rounds of vetting and challenges throughout the development process. The Firm established a Resolution Plan Review and Challenge Framework to expand the breadth and depth of the content reviews throughout the planning cycle by facilitating appropriate challenge opportunities.

The Firm structured its Resolution Plan Review and Challenge Framework to be organized by resolvability capabilities. This capability-led approach brought together cross-functional teams to provide comprehensive feedback on the Firm's capabilities required to support the Resolution Strategy. The objectives of each session were to:

- Assess if recent enhancements to the Firm's capabilities (if any) sufficiently address regulatory guidance and/or internal priorities;
- Confirm the feasibility of approaches articulated in the Firm's Resolution Strategy, core capabilities, playbooks and related assessments;
- Challenge underlying assumptions for analyses and articulated approaches;
- Identify potential inconsistencies across Resolution Plan modules and sections documentation;
- Enhance and clarify Resolution Plan documentation based on lessons learned; and

- Assess whether the Firm has adequately incorporated capabilities into BAU to maintain ongoing resolvability.

To ensure robust challenge, Firm RRP worked with capability owners to identify appropriate session participants. Consistant with embedding the Resolution Plan Review and Challenge Framework into BAU, the RRP Steering Committee has assumed additional responsibilities related to the capabilities review and challenge. As an informed, cross-functional body that is knowledgeable about the Firm's Resolution Strategy, the RRP Steering Committee is well-positioned to provide meaningful challenge and feedback.

Lastly, MRM performed an independent review and challenge of the Firm's financial modeling capabilities. MRM independently reviewed and validated models utilized within the Firm's 2019 Plan, based on defined requirements for overall data quality as well as model usage, validation, documentation, and testing. It also provided an appropriate level of review and challenge of the embedded assumptions in a manner compliant with SR Letter 11-7, Guidance on Model Risk Management.

6. Recovery and Resolution Enhancement Program

The earlier sections describe the actions the Firm has undertaken to continue to enhance its resolvability and to address the 2019 Guidance. To help ensure appropriate focus and consistency in these enhancement efforts, the Firm established the RREP. Projects enter and exit the RREP as needed to bolster the governance and prioritization of these efforts.

From 2015–2017, the RREP projects successfully changed the Firm's practices, processes, systems and structure to enhance its resolvability capabilities under the Bankruptcy Code. Following the completion of the 2017 Plan, the Firm updated the RREP with a revised set of projects based on identified enhancements. In general, RREP projects are executed on an as-needed basis. Projects are identified to respond to new regulatory guidance and requirements or address self-identified enhancement opportunities for more strategic solutions. Enhancements to resolvability are always a key driver, although projects within the RREP portfolio may also contain select deliverables, drivers and requirements that fall outside of the remit of resolution planning.

Oversight of the RREP portfolio and associated remediation efforts is provided by the Firm's RRP Committee, the Firm's Enterprise Risk Oversight Committee ("**EROC**"), the RRP Steering Committee and multiple divisional-level governance bodies with responsibility for overseeing individual projects. The Board of Directors of MS Parent is apprised of the status and delivery on the RREP portfolio through regular reporting from EROC and periodic updates from Firm RRP.

Firm RRP ensures that (i) projects align with the Firm's resolvability objectives and are well-coordinated; (ii) remediation activities are appropriately prioritized, resourced and budgeted; and (iii) progress is consistently tracked and any delivery challenges are promptly escalated and mitigated.

7. Conclusion

The Firm's 2019 Plan articulates a Resolution Strategy detailing how the Firm would be resolved under a range of scenarios and how potential vulnerabilities that might otherwise hinder or prevent a rapid, orderly and value-maximizing resolution would be addressed and overcome. This Resolution Strategy is supported by extensive resolution planning efforts that have been refined and enhanced over a period of years. Moreover, the Firm has put in place a number of practices to help manage its resolvability over time and address risks that may emerge on account of changes in business practices, financial profile or organizational structure.

The Firm believes that its 2019 Plan presents a feasible and credible strategy that demonstrates that the Firm can be resolved without adverse effects on financial stability in the U.S. or on the broader global economy. Based upon the strength of its capital and liquidity positions and the resiliency and credibility of the Resolution Strategy under a wide range of scenarios, the Firm believes that no losses would be incurred by the U.S. government, the FDIC's DIF nor any foreign governments or taxpayers as a result of its failure. The 2019 Plan provides greater detail on all of the actions completed by the Firm to address Agency Guidance and other enhancements to resolvability capabilities. With these actions, the Firm believes that it has the capabilities required to execute its Resolution Strategy.

8. Forward Looking Statements

Certain statements contained herein may constitute “forward-looking statements” within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These statements, which reflect management’s beliefs and expectations, are subject to risks and uncertainties that may cause actual results to differ materially. For a discussion of the risks and uncertainties that may affect the Firm’s future results, see “Forward-Looking Statements” immediately preceding Part I, Item 1, “Business—Competition” and “Business—Supervision and Regulation” in Part I, Item 1, “Risk Factors” in Part I, Item 1A of the Firm’s Annual Report on Form 10-K for the year ended December 31, 2018 and “Liquidity and Capital Resources—Regulatory Requirements” and “Regulatory Developments” of the Firm’s Quarterly Report on Form 10-Q for the period ended March 31, 2019.

9. Appendix A: Description of Core Business Lines

The Firm is a global financial services firm that maintains significant market positions in each of its Core Business Lines: ISG, WM and IM. The designation of the Firm's Core Business Lines serves as an important first step to the development of the Firm's Resolution Strategy and the supporting processes to wind down, transfer or sell those business operations. As per the 165(d) Rule, the Firm considers its Core Business Lines of ISG, WM and IM to be "those business lines, including associated services, functions and support, that in the Firm's view, upon failure, would result in material loss of revenue, profit or franchise value." These business lines represent those identified to be engaged in Critical Functions, to be highly marketable and/or to be strategically important to the Firm.

ISG

The Firm's ISG Core Business Line provides financial advisory and capital-raising services, as well as assistance accessing capital markets and taking or hedging risk, to a diverse group of corporate and other institutional clients globally. ISG's business activities include providing advice on M&A, restructurings, real estate and project finance, corporate lending, investment activities, and providing sales, trading, financing and market-making activities in equity and fixed income securities and related products, including FX and commodities, both as principal and as agent. ISG operates primarily through MSBNA and seven MOEs: MSCO, MSIP, MSMS, MSCG, MSCS, MSBAG and MSESE.

ISG operates through three divisions:

- IED, which acts as agent and principal (including as a market-maker) in executing transactions globally in cash equity, equity related products, equity derivatives and equity-linked or related products, as well as offering a full suite of PB services;
- FID, which trades and makes markets in fixed income securities and related products (including commodities products); is a primary dealer, distributor or market marker in various government securities; acts as an intermediary between borrowers and lenders of short-term funds; provides funding for inventory positions; originates and distributes loans; and provides warehouse lending; and
- IBD (including Global Capital Markets), which offers financial advisory and capital raising services to corporations, organizations and governments globally, including through capital raising services, financial advisory services and corporate lending.

Additionally, BRM is responsible for the Firm's securities financing transactions (including securities sold under agreements to repurchase ("**repurchase agreements**") and securities lending), hedging multiple valuation adjustments associated with fixed income and commodities derivatives and optimizing resources associated with the Firm's cleared activity and collateral management globally.

As of December 31, 2018, ISG had total assets of approximately $646.4 billion, which was approximately 75.7% of the Firm's total assets.

WM

The Firm's WM Core Business Line provides investment solutions designed to accommodate the investment objectives, risk tolerance and liquidity needs of individual investors and small-to-medium-sized businesses and institutions. WM operates through a network of more than 16,000 global representatives in approximately 600 locations as of December 31, 2018. WM operates primarily through three MOEs MSBNA, MSPBNA and MSSB, and two MSEs, MSSBF and MSSBFA.

WM provides clients with an extensive array of financial solutions, including the following services:

- Brokerage and investment advisory services tracking various types of investments;
- Fixed income principal trading, which primarily facilitates clients' trading or investments in such securities;
- Education savings programs, financial and wealth planning services, annuity and other insurance products;
- Cash management services, including deposits, debit cards, electronic bill payments and check writing (including some services offered through unaffiliated third parties);
- Securities-based lending, mortgage loans and home equity lines of credit;
- Access to trust and fiduciary services, cash management and commercial credit solutions for small- and medium- sized businesses in the U.S.;
- Individual and corporate retirement solutions, including individual retirement accounts and 401(k) plans; and
- Stock plan services to corporate executives and businesses.

WM also operates through the Firm's two U.S. national bank subsidiaries, which offer select banking and cash management services to WM customers, including FDIC-insured deposits and Portfolio Loan Accounts, mortgages and tailored lending solutions. As of December 31, 2018, in aggregate, WM's banking entities MSBNA and MSPBNA held approximately $121.2 billion and $65.9 billion, respectively, in Bank Deposit Program ("**BDP**") deposits.

IM

The Firm's IM Core Business Line provides a broad suite of investment management solutions to a diverse client base that includes governments, institutions, corporations, pension plans and individuals worldwide. IM had 667 investment professionals around the world, with approximately $463.1 billion in assets under management as of December 31, 2018. IM provides investment and advisory services predominantly through MSIM Inc. and MSIM Ltd., along with other affiliates.

IM's investment strategies span the risk/return spectrum across investment styles and asset classes, including active fundamental equity, global fixed income, global liquidity/money market mutual funds, solutions and multi-asset alternatives, merchant banking, and real estate. IM delivers its strategies as an advisor through a number of investment vehicles, including U.S. registered investment companies, Luxembourg-based “sociétés d’investissement à capital variable”, separately managed accounts and private investment funds.

Core Business Line Financial Information

The following exhibits summarize the revenues and income for each of the Core Business Lines in the first quarter of 2019:

Income Statements

Exhibit 9-1. ISG Income Statement from March 31, 2019 Form 10-Q

	Three Months Ended March 31,		
$ in millions	**2019**	2018	% Change
Revenues			
Investment banking	**$ 1,151**	$ 1,513	**(24)%**
Trading	**3,130**	3,643	**(14)%**
Investments	**81**	49	**65%**
Commissions and fees	**621**	744	**(17)%**
Asset management	**107**	110	**(3)%**
Other	**222**	136	**63%**
Total non-interest revenues	**5,312**	6,195	**(14)%**
Interest income	**3,056**	1,804	**69%**
Interest expense	**3,172**	1,899	**67%**
Net interest	**(116)**	(95)	**(22)%**
Net revenues	**5,196**	6,100	**(15)%**
Compensation and benefits	**1,819**	2,160	**(16)%**
Non-compensation expenses	**1,782**	1,828	**(3)%**
Total non-interest expenses	**3,601**	3,988	**(10)%**
Income from continuing operations before income taxes	**1,595**	2,112	**(24)%**
Provision for income taxes	**190**	449	**(58)%**
Income from continuing operations	**1,405**	1,663	**(16)%**
Income (loss) from discontinued operations, net of income taxes	**—**	(2)	**100%**
Net income	**1,405**	1,661	**(15)%**
Net income applicable to noncontrolling interests	**34**	34	**—%**
Net income applicable to Morgan Stanley	**$ 1,371**	$ 1,627	**(16)%**

Exhibit 9-2. WM Income Statement from March 31, 2019 Form 10-Q

	Three Months Ended March 31,		
$ in millions	**2019**	2018	% Change
Revenues			
Investment banking	**$ 109**	$ 140	**(22)%**
Trading	**302**	109	**177%**
Investments	**1**	—	**N/M**
Commissions and fees	**406**	498	**(18)%**
Asset management	**2,361**	2,495	**(5)%**
Other	**80**	63	**27%**
Total non-interest revenues	**3,259**	3,305	**(1)%**
Interest income	**1,413**	1,280	**10%**
Interest expense	**283**	211	**34%**
Net interest	**1,130**	1,069	**6%**
Net revenues	**4,389**	4,374	**—%**
Compensation and benefits	**2,462**	2,450	**—%**
Non-compensation expenses	**739**	764	**(3)%**
Total non-interest expenses	**3,201**	3,214	**—%**
Income from continuing operations before income taxes	**1,188**	1,160	**2%**
Provision for income taxes	**264**	246	**7%**

$ in millions	Three Months Ended March 31, 2019	2018	% Change
Net income applicable to Morgan Stanley	**$ 924**	$ 914	**1%**

N/M—Not Meaningful

Exhibit 9-3. IM Income Statement from March 31, 2019 Form 10-Q

$ in millions	Three Months Ended March 31, 2019	2018	% Change
Revenues			
Trading	**$ (3)**	$ 5	**(160)%**
Investments	**191**	77	**148%**
Asset management	**617**	626	**(1)%**
Other	**3**	10	**(70)%**
Total non-interest revenues	**808**	718	**13%**
Interest income	**4**	1	**N/M**
Interest expense	**8**	1	**N/M**
Net interest	**(4)**	—	**N/M**
Net revenues	**804**	718	**12%**
Compensation and benefits	**370**	304	**22%**
Non-compensation expenses	**260**	266	**(2)%**
Total non-interest expenses	**630**	570	**11%**
Income from continuing operations before income taxes	**174**	148	**18%**
Provision for income taxes	**33**	19	**74%**
Net income	**141**	129	**9%**
Net income applicable to noncontrolling interests	**5**	2	**150%**
Net income applicable to Morgan Stanley	**$ 136**	$ 127	**7%**

N/M—Not Meaningful

10. Appendix B: Description of Material Entities

The bulk of the Firm's activities are conducted through its Material Entities.

The process to designate legal entities as "material" is an important starting point for the Firm's Resolution Plan, allowing those legal entities that are most significant to the Firm's Core Business Lines to be identified and corresponding resolution strategies for these legal entities to be developed. As per its regulatory definition from the Final Rule, a Material Entity is "a subsidiary or foreign office of the covered company that is significant to the activities of a critical operation or core business line."[26] The Firm designates its Material Entities using a defined and repeatable process, which consists of quantitative screens, qualitative considerations, review and challenge and formal approval by the RRP Steering Committee. As summarized in Exhibit 2-1. List of Material Entities Included in the 2019 Plan, for its 2019 Plan, the Firm designated 28 of its entities as Material Entities, consisting of 12 MOEs and 16 MSEs. The Firm defines an MOE as a legal entity that offers products or services to clients or counterparties and earns a significant portion of any Core Business Lines' profits. The Firm defines an MSE as a legal entity that owns or controls resources that are significant to the continuity of the Firm's Core Business Line activities, as executed by MOEs, but which is not an MOE itself. The Firm's MOEs and MSEs are described in this section. The Firm's interconnectedness is discussed in Appendix F: Interconnectedness.

ISG Entities

ISG operates its non-bank businesses primarily through the seven MOEs as described below. It also operates banking businesses through one MOE, MSBNA.

Morgan Stanley & Co. LLC (MSCO)

MSCO operates as the Firm's primary institutional U.S. broker-dealer and as a futures commission merchant and acts as a swap dealer. MSCO engages in the provision of financial services to corporations, governments, financial institutions and institutional investors. Its businesses include securities underwriting and distribution; brokerage and investment advisory services; securities research; sales, trading, financing and market making in equity securities and related products and fixed income securities and related products including foreign exchange; equity, fixed income and commodity listed and OTC derivatives transactions; listed futures and options execution and clearing services; PB services; securities lending and borrowing; financial advisory services, including advice on mergers and acquisitions, restructurings, real estate and project finance; credit and other lending products; and cash management services. To conduct this business, MSCO maintains various regulatory registrations, including with the SEC as a broker-dealer, with the Municipal Securities Rulemaking Board as a municipal securities dealer, with the Federal Reserve Board as a primary dealer and with the Commodity Futures Trading Commission ("**CFTC**") as a futures commission merchant and provisionally as a swap dealer.

[26] MS Parent is considered as the Firm's covered company and is not evaluated for Material Entity designation, but MS Parent's activities are nevertheless in-scope for the Resolution Plan.

As of December 31, 2018, MSCO had assets of $303.6 billion, liabilities of $295.6 billion and equity of $8.02 billion. MSCO had $6.73 billion net revenues and $1.04 billion net income for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley & Co. International plc (MSIP)

MSIP operates as the Firm's primary European broker-dealer and is a UK authorized financial services firm whose principal activity is the provision of financial services to corporations, governments and financial institutions. MSIP's services include capital raising; financial advisory services, including advice on mergers and acquisitions, restructurings, real estate and project finance; corporate lending; sales and trading, and financing and market making activities in equity and fixed income securities and related products, including foreign exchange and commodities. MSIP is authorized by the UK PRA and regulated by the UK Financial Conduct Authority ("**FCA**"), the PRA and the National Futures Association, and is provisionally registered with the CFTC as a swap dealer.

MSIP operates branches in Seoul, Amsterdam, Zurich, Warsaw, the Dubai International Financial Centre and the Qatar Financial Centre. MSIP's branches are authorized in the European Union ("**EU**") under the Markets in Financial Instruments Directive ("**MiFID**") or by local regulators in each other jurisdiction.

As of December 31, 2018, MSIP had assets of $252.9 billion, liabilities of $235.1 billion and equity of $17.8 billion. MSIP had $5.4 billion net revenues and $650 million net income for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley MUFG Securities Co., Ltd. (MSMS)

MSMS is the Firm's Japanese broker-dealer, operated as a securities joint venture with Mitsubishi UFJ Financial Group, Inc. ("**MUFG**"). The Firm has a 51% voting interest in MSMS (through Morgan Stanley Japan Holdings Co., Ltd., a Firm consolidated entity) and a 40% economic interest in the overall joint venture with MUFG, which includes MSMS and Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. MSMS focuses on trading fixed income and equity securities and provides sales and trading, capital markets and research services to corporations and institutional clients, with a focus on institutional clients transacting in Japanese products. MSMS is primarily regulated by the Japanese Financial Services Agency (among other regulators) and is provisionally registered with the CFTC as a swap dealer. MSMS has no branches or offices outside Japan.

As of December 31, 2018, MSMS had assets of $48.1 billion, liabilities of $46.35 billion and equity of $1.7 billion. MSMS had $840 million net revenues and $206 million net income for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley Capital Services LLC (MSCS)

MSCS is the Firm's primary OTC derivatives dealer and also centrally manages the market risk associated with a substantial amount of the Firm's OTC derivatives businesses, including transactions cleared by central clearinghouses. Significant products traded include equity swaps; interest rate derivatives; credit derivatives and FX derivatives. MSCS also holds equities, bonds and listed derivatives as hedges to its OTC derivatives positions. MSCS is regulated by the CFTC and the National Futures Association and is provisionally registered with the CFTC as a swap dealer. As of December 31, 2018, MSCS had assets of $81.1 billion, liabilities of $74.9 billion and equity of $6.1 billion. MSCS had $1.3 billion net revenues and $111 million net loss for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley Capital Group Inc. (MSCG)

MSCG acts in transactions as a principal, engaging in sales and trading activities across the energy, metals and agricultural commodity sectors. MSCG trades in physical commodities and associated derivative and futures products, and makes markets in spot, forward, swap and futures markets priced based on commodities. In cases in which MSCG is trading listed products (e.g., futures, listed options on futures and cleared swaps), these transactions are cleared through a central exchange, consistent with DCM and SEF requirements. MSCG is a CFTC registered swap dealer and margins its bilateral counterparties on over-the-counter activities consistent with the requirements of section 4s(e) of the Commodity Exchange Act. As of December 31, 2018, MSCG had assets of $12.3 billion, liabilities of $11.15 billion and equity of $1.14 billion. MSCS had $609 million net revenues and $157 million net income for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley Bank Aktiengesellschaft (MSBAG)

MSBAG is a fully licensed bank (a Capital Requirements Regulation ("**CRR**") credit institution), including MiFID services. MSBAG provides services primarily to clients in Germany and Austria. Offerings include mergers and acquisitions, corporate finance, equity and debt capital markets, and sales and trading activities. MSBAG is authorized by the German Federal Financial Supervisory Authority ("**Bundesanstalt für Finanzdienstleistungsaufsicht**" – "**BaFin**") and regulated by BaFin and the German Central Bank ("**Deutsche Bundesbank**").

As of December 31, 2018, MSBAG had assets of $3.5 billion, liabilities of $3.15 billion and equity of $316 million. MSBAG had $119 million net revenues and $17 million net income for the year ending December 31, 2018 (all financials presented using U.S GAAP).

In the first quarter of 2019, the Firm has made changes to both its legal entity structure and certain booking practices in the Europe, the Middle East and Africa ("**EMEA**") region due to a possible exit of the United Kingdom from the European Union impacting also the scope of business being conducted on MSBAG. MSBAG now forms part of the "**MSEHSE Group**," consisting of Morgan Stanley Europe Holding SE, MSESE and MSBAG. The scale of activities of MSBAG will continue to evolve throughout 2019 and 2020 depending on political developments.

Morgan Stanley Europe SE (MSESE)

MSESE is the Firm´s new broker-dealer (CRR investment firm) established for purposes of managing certain business activities to clients in the European Economic Area (**"EEA**"). To further this purpose, MSESE has obtained membership with EU exchanges, clearing houses and trading venues. MSESE is envisaged to become Morgan Stanley's primary investment services hub to operate the ISG business in the EEA in case of the United Kingdom´s exit from the EU. It provides multiple services including, but not limited to, financial advisory services, sales and trading (including the execution of Morgan Stanley client's flow on in-scope EEA exchanges), market making, securities lending, financing, hedging and clearing services for selected products in equity and fixed income securities and related products, including foreign exchange and commodities. The scale of activities of MSESE will continue to evolve throughout 2019 and 2020 depending on political developments and client demands. MSESE is authorized by BaFin and regulated by BaFin and the Deutsche Bundesbank. It forms part of the MSEHSE Group.

Wealth Management Entities

WM operates its non-bank business primarily through one U.S. broker-dealer entity, MSSB. WM also operates banking businesses through one MOE, MSBNA, and, to a lesser extent, a second U.S. insured depository institution, MSPBNA.

Morgan Stanley Smith Barney LLC (MSSB)

MSSB is a U.S. registered broker-dealer that provides financial services to clients through a network of more than 16,000 financial advisors in approximately 600 locations across the U.S. MSSB financial advisors serve retail and middle market investors with an emphasis on ultra-high net worth, high net worth and affluent investors. MSSB provides solutions designed to accommodate individual investment objectives, risk tolerance and liquidity needs, including such significant products as brokerage and investment advisory services, fixed income principal trading (primarily to facilitate clients' trading or investments in such securities) and education savings programs, financial and wealth planning services, annuity and other insurance products, as well as access to deposit, cash management, loan and credit services for individuals, small and medium-sized businesses in the U.S., retirement accounts, 401(k) plans and stock plan services. MSSB is registered with the SEC as a broker-dealer and as an investment adviser. MSSB deregistered as a futures commission merchant and is registered as an introducing broker with the CFTC and introduces futures business to MSCO.

As of December 31, 2018, MSSB had assets of $27.44 billion, liabilities of $16.78 billion and equity of $10.66 billion. MSSB had $13.6 billion net revenues and $975 million net income for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley Bank, N.A. (MSBNA)

MSBNA is a U.S. insured depository institution that is headquartered in Salt Lake City, Utah and has representative offices in New York, New York. MSBNA's businesses are concentrated in institutional lending and securities-based lending for clients of its affiliated broker-dealers. Certain foreign exchange trading activities are also conducted by MSBNA. MSBNA is regulated by the Office of the Comptroller of the Currency ("**OCC**"), among other regulators, and is registered with the CFTC as a swap dealer.

As of December 31, 2018, MSBNA had assets of $149.8 billion, liabilities of $134.6 billion and equity of $15.22 billion. MSBNA had $4.33 billion net revenues and $2.91 billion net income for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley Private Bank, N.A. (MSPBNA)

MSPBNA is a U.S. insured depository institution that is headquartered in Purchase, New York. MSPBNA is a federally chartered national association whose activities are subject to comprehensive regulation and examination by the OCC. MSPBNA has access to low cost deposits swept from WM clients' brokerage accounts, eliminating the need for a physical branch network typical of its competitors. MSPBNA is regulated by the OCC, among other regulators.

As of December 31, 2018, MSPBNA had assets of $75.2 billion, liabilities of $67.99 billion and equity of $7.18 billion. MSPBNA had $1.82 billion net revenues and $1.0 billion net income for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Investment Management Entities

The IM business operates primarily through two Material Entities, MSIM Inc. and MSIM Ltd.

Morgan Stanley Investment Management, Inc. (MSIM Inc.)

MSIM Inc. is a registered investment advisor in the U.S. for certain mutual funds and other institutional products and one of two Material Entities of the IM business. MSIM Inc. is also the investment sub-adviser to certain mutual funds, and to certain fund and institutional accounts advised by MSIM Ltd. MSIM Inc. is registered as an investment adviser with the SEC, as a commodity pool operator and commodity trading adviser with the CFTC, and with Canadian, Chinese, Indian and Korean securities regulators. As of December 31, 2018, MSIM Inc. had assets of $1.62 billion, liabilities of $739 million and equity of $884 million. MSIM Inc. had $876 million net revenues and $108 million net income for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley Investment Management Limited (MSIM Ltd.)

MSIM Ltd. is a UK authorized financial services company that is the primary IM entity in EMEA. The only activities in which it engages are the provision of IM services to institutional and fund managed clients. MSIM Ltd. serves as the investment advisor to Active Fundament Equity, Global Fixed Income and Solutions & Multi-Asset funds. MSIM Ltd. is primarily regulated by the UK FCA but is also registered with the SEC as an investment advisor and with a number of foreign securities regulators.

As of December 31, 2018, MSIM Ltd. had assets of approximately $581 million, liabilities of $267 million and equity of $314 million. MSIM Ltd. had $880 million net revenues and $108 million net income for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Material Service Entities

Morgan Stanley Services Group Inc. (MSSG)

MSSG is the primary U.S. support services company. It is responsible for providing the preponderance of services to U.S. entities. It is responsible for the governance and supervision of the majority of services that flow into the U.S. from the Firm's affiliates, globally. MSSG was created through an extensive series of restructurings, personnel migrations and asset migrations pursuant to the "**Gladiator Program.**"

As of December 31, 2018, MSSG had assets of $4.6 billion, liabilities of $4.6 billion and equity of $3 million. MSSG had $6.86 billion net revenues and $19 million net loss for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

MS Financing LLC (MSFL)

MSFL's main function is the financing of fixed assets for North America. Aside from its role as an indirect owner and lessee of tangible real estate property to affiliates, MSFL does not conduct significant business activities. MSFL leases tangible personal property to other affiliates. MSFL is headquartered in New York and indirectly owns properties in the state of New York for the use of the Firm's operating businesses.

As of December 31, 2018, MSFL had assets of $1.74 billion, liabilities of $1.68 billion and equity of $59 million. MSFL had $633 million net revenues and $7 million net income for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley UK Group (MSUKG)

MSUKG's primary service is to provide physical workspace to the Firm employees residing in the UK who support the Firm's UK entities including MSIP, MSIM Ltd and MSUKL. The provided physical workspace is all located in the UK and is leased (not owned) by MSUKG. MSUKG provides a full range of property services in support, including physical security to all of the Firm's UK entities.

As of December 31, 2018, MSUKG had assets of $762 million, liabilities of $696 million and equity of $66 million. MSUKG had $195 million net revenues and $12 million net loss[27] for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley UK Limited (MSUKL)

MSUKL acts as an employment company that is responsible for the payment of all remuneration and benefits due to the Firm employees residing in the UK who support the Firm's UK entities. As part of its provision of employment services, MSUKL is the contractual counterparty (the sponsoring employer) to the Firm's pension plan in the UK. MSUKL serves as an MSE in the UK and provides shared services such as operations, technology, HR and accounting services.

As of December 31, 2018, MSUKL had assets of $1.84 billion, liabilities of $1.74 billion and equity of $105 million. MSUKL had $2.1 billion net revenues and an $12 million net loss for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley Smith Barney Financing LLC (MSSBF)

MSSBF's primary activities are to hold real estate leases for MSSB's branch offices and finance fixed assets for Wealth Management. Its activities are primarily conducted in the U.S.

[27] Non-interest expense and equity in undistributed income (loss) of subsidiary(ies) of MSUKG resulted in a higher net income than revenue.

As of December 31, 2018, MSSBF had assets of $943 million, liabilities of $586 million and equity of $357 million. MSSBF had $590 million net revenues and $1 million net loss for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley Smith Barney FA Notes Holding LLC (MSSBFA)

MSSBFA engages in the administration of notes related to the recruiting and retention of MSSB financial advisors and certain financial advisor compensation programs. Its activities are primarily conducted in the U.S.

As of December 31, 2018, MSSBFA had assets of $3.4 billion, liabilities of $2.4 billion and equity of $981 million. MSSBFA had $5 million net revenues and $0 million net income for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley Japan Group Co., Ltd (MSJG)

MSJG provides information technology, administration and personnel-related services, including human resources, payroll, welfare, professional education and training, to Firm affiliates in Japan.

As of December 31, 2018, MSJG had assets of $479 million, liabilities of $421 million and equity of $58 million. MSJG had $459 net revenues and $8 million net loss for the year ending December 31, 2018.

Morgan Stanley Services Canada Corp (MSSCC)

MSSCC serves as Canada's shared service provider, delivering technology services globally. MSSCC center houses full-time employees (front- and back-office), support contingent workers, fixed assets and real estate leases. As of December 31, 2018, MSSCC had assets of $115 million, liabilities of $25 million and equity of $90 million. MSSCC had $266 million net revenues and $25 million net income for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley Hungary Analytics Limited (MSHAL)

MSHAL is a deployment center and is part of the Firm's location support strategy. MSHAL is a shared service provider and delivers Finance, Risk, Operations, Technology and Research services from Hungary to the Firm's offices globally.

As of December 31, 2018, MSHAL had assets of $121 million, liabilities of $64 million and equity of $57 million. MSHAL had $182 million net revenues and $4 million net income for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley Advantage Services Private Limited (MSASPL)

MSASPL[28] is a deployment center and is part of the Firm's location support strategy. MSASPL teams provide support services from India to various businesses within the ISG, WM and IM world across the Firm's offices globally. As of December 31, 2018, MSASPL had assets of $261 million, liabilities of $60

[28] Morgan Stanley Solutions India Private Limited was merged into MSASPL on March 1, 2018.

million and equity of $201 million. MSASPL had $254 million net revenues and $30 million net income for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley Management Services (Shanghai) Limited (MSMSSL)

MSMSSL is China's primary shared service provider, delivering Technology and Firm operations services. These include maintaining access to critical applications and the underlying technology infrastructure. The Firm's China houses support full-time employees and contingent workers, fixed assets, contracts and real estate leases. As of December 31, 2018, MSMSSL had assets of $139 million, liabilities of $46 million and equity of $93 million. MSMSSL had $119 million net revenues and $3 million net loss for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley Services Holdings (MSSH)

MSSH acts as payroll processing entity for personnel in the Americas. MSSH processes and funds payroll for all North American employees.

As of December 31, 2018, MSSH had assets of $1.4 billion, liabilities of $1.31 billion and equity of $81 million. MSSH had $-18 million net revenues and $-7 million net income[29] for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley Asia Limited (MSAL)

MSAL is a licensed corporation under the Hong Kong Securities and Futures Ordinance. The principal activities of the company consist of investment banking, foreign exchange sales and trading, and introductory brokerage. MSAL provides shared services to other Firm entities.

As of December 31, 2018, MSAL had assets of $1.92 billion, liabilities of $621 million and equity of $1.3 billion. MSAL had $1.83 billion net revenues and $236 million net income for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley Hong Kong Ltd (MSHKL)

MSHKL holds fixed assets for the benefit of the Firm's companies in Hong Kong.

As of December 31, 2018, MSHKL had assets of $1.98 billion, liabilities of $31 million and equity of $1.95 billion. MSHKL had $75 million net revenues and $317 million net income[30] for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley Employment Services UK Limited (MSES)

MSES is comprised of 2,050 front-office employees. MSES serves primarily as an employment services company in the UK.

[29] Applicable income taxes and equity in undistributed income (loss) of subsidiary(ies) of MSSH resulted in a higher net income than revenue.

[30] Equity in undistributed income (loss) of subsidiary(ies) of MSHKL resulted in a higher net income than revenue.

As of December 31, 2018, MSES had assets of $1.24 billion, liabilities of $1.21 billion and equity of $30 million. MSES had $1.24 billion net revenues and $14 million net loss for the year ending December 31, 2018 (all financials presented using U.S. GAAP).

Morgan Stanley Holdings LLC (MSH)

MSH serves as the Firm's Funding IHC, providing funding flexibility in stress and in resolution. Under the Firm's Resolution Strategy, MSH would serve as a resolution funding vehicle that would supply capital and liquidity to the Material Entities in times of stress and in resolution in a manner that is resilient to creditor challenge. MSH funds MSCO and the Material Service Entities in BAU, and all remaining Material Entities in Resolution.

11. Appendix C: Summary Financial Information

Exhibit 11-1 shows the Firm's Consolidated Statement of Financial Position from the March 31, 2019 Form 10-Q.

Exhibit 11-1. Consolidated Statement of Financial Position from March 31, 2019 Form 10-Q

$ in millions, except share data	**(Unaudited) At March 31, 2019**	At December 31, 2018
Assets		
Cash and cash equivalents:		
Cash and due from banks	**$ 35,472**	$ 30,541
Interest bearing deposits with banks	**14,498**	21,299
Restricted cash	**30,712**	35,356
Trading assets at fair value (**$103,750** and $120,437 were pledged to various parties)	**264,818**	266,299
Investment securities (includes **$61,641** and $61,061 at fair value)	**97,944**	91,832
Securities purchased under agreements to resell (includes **$5** and $— at fair value)	**96,570**	98,522
Securities borrowed	**138,891**	116,313
Customer and other receivables	**52,667**	53,298
Loans:		
Held for investment (net of allowance of **$259** and $238)	**101,266**	99,815
Held for sale	**14,931**	15,764
Goodwill	**6,686**	6,688
Intangible assets (net of accumulated amortization of **$2,952** and $2,877)	**2,084**	2,163
Other assets	**19,425**	15,641
Total assets	**$ 875,964**	$ 853,531
Liabilities		
Deposits (includes **$692** and $442 at fair value)	**$ 179,731**	$ 187,820
Trading liabilities at fair value	**144,565**	126,747
Securities sold under agreements to repurchase (includes **$622** and $812 at fair value)	**47,948**	49,759
Securities loaned	**12,508**	11,908
Other secured financings (includes **$4,283** and $5,245 at fair value)	**8,043**	9,466
Customer and other payables	**193,092**	179,559
Other liabilities and accrued expenses	**17,494**	17,204
Borrowings (includes **$56,464** and $51,184 at fair value)	**190,691**	189,662
Total liabilities	**794,072**	772,125
Commitments and contingent liabilities (see Note 11)		
Equity		
Morgan Stanley shareholders' equity:		
Preferred stock	**8,520**	8,520
Common stock, $0.01 par value: Shares authorized: **3,500,000,000**; Shares issued: **2,038,893,979**; Shares outstanding: **1,685,996,391** and 1,699,828,943	**20**	20
Additional paid-in capital	**23,178**	23,794
Retained earnings	**66,061**	64,175
Employee stock trusts	**3,000**	2,836
Accumulated other comprehensive income (loss)	**(2,473)**	(2,292)
Common stock held in treasury at cost, $0.01 par value (**352,897,588** and 339,065,036 shares)	**(14,582)**	(13,971)
Common stock issued to employee stock trusts	**(3,000)**	(2,836)
Total Morgan Stanley shareholders' equity	**80,724**	80,246
Noncontrolling interests	**1,168**	1,160

$ in millions, except share data	(Unaudited) At March 31, 2019	At December 31, 2018
Total equity	**81,892**	81,406
Total liabilities and equity	**$ 875,964**	$ 853,531

The Federal Reserve Board establishes capital requirements for the Firm, including well-capitalized standards, and evaluates the Firm's compliance with such capital requirements. The OCC establishes similar capital requirements and standards for the Firm's U.S. subsidiary banks.

The U.S. banking regulators have comprehensively revised their risk-based and leverage capital framework to implement many aspects of the Basel III capital standards established by the Basel Committee. The Firm and its U.S. subsidiary banks became subject to U.S. Basel III on January 1, 2014.

As an "Advanced Approaches" banking organization, the Firm is required to compute risk-based capital ratios under both the U.S. Basel III Standardized approach framework and U.S. Basel III Advanced approach framework. The U.S. Basel III Standardized Approach modifies certain U.S. Basel I-based methods for calculating RWAs and prescribes new standardized risk weights for certain types of assets and exposures. The Firm is required to calculate and hold capital against credit, market and operational RWAs. RWAs reflect both on- and off-balance sheet risk of the Firm. The Firm is subject to a "capital floor" such that these regulatory capital ratios currently reflect the lower of the ratios computed under each approach, taking into consideration applicable transitional provisions.

Exhibit 11-2 presents the Firm's capital measures under the U.S. Basel III Advanced Approach transitional rules and the minimum regulatory capital ratios, as of December 31, 2018. The Firm's Common Equity Tier 1 risk-based capital ratio was 17.1% (fully phased-in, using the U.S. Basel III Advanced Approach) and Tier 1 risk-based capital ratio was 19.5%. The "capital floor" is represented by the U.S. Basel III Advanced Approach.

Exhibit 11-2. Morgan Stanley Capital Measures as of December 31, 2018

	At December 31, 2018			
	Transitional		Fully Phased-In	
$ in millions	Standardized	Advanced	Standardized	Advanced
Risk-based capital				
Common Equity Tier 1 capital	**$ 60,398**	**$ 60,398**	**$ 62,086**	**$ 62,086**
Tier 1 capital	**68,097**	**68,097**	**70,619**	**70,619**
Total capital	**78,917**	**78,642**	**80,052**	**79,814**
Total RWAs	**340,191**	**358,141**	**367,309**	**363,054**
Common Equity Tier 1 capital ratio	**17.8 %**	**16.9%**	**16.9 %**	**17.1 %**
Tier 1 capital ratio	**20.0 %**	**19.0%**	**19.2 %**	**19.5 %**
Total capital ratio	**23.2 %**	**22.0%**	**21.8 %**	**22.0 %**
Leverage-based capital				
Adjusted average assets[1]	**$ 811,402**	**N/A**	**$ 843,074**	**N/A**
Tier 1 leverage ratio[2]	**8.4 %**	**N/A**	**8.4 %**	**N/A**

Funding Sources

The Firm manages its funding in a manner that reduces the risk of disruption to its operations. It pursues a strategy of diversification of secured and unsecured funding sources (by product, investor and region) and attempts to ensure that the tenor of its liabilities equals or exceeds the expected holding period of the assets being financed. The Firm funds its balance sheet on a global basis through diverse sources, which may include equity capital, long-term borrowings, repurchase agreements, securities lending, deposits, letters of credit and lines of credit. The Firm has active financing programs for both standard and structured products targeting global investors and currencies.

Secured Financing

A substantial portion of the Firm's total assets consist of liquid marketable securities and short-term receivables arising principally from sales and trading activities in ISG. The liquid nature of these assets provides the Firm with flexibility in managing the composition and size of its balance sheet. The Firm's goal is to achieve an optimal mix of durable secured and unsecured financing. Secured financing investors principally focus on the quality of the eligible collateral posted. Accordingly, the Firm actively manages the secured financing book based on the quality of the assets being funded.

The Firm utilizes shorter-term secured financing only for highly liquid assets and has established longer tenor limits for less liquid asset classes, for which funding may be at risk in the event of a market disruption. The Firm defines highly liquid assets as government-issued or government-guaranteed securities with a high degree of fundability and less liquid assets as those that do not meet these criteria. At December 31, 2018 and December 31, 2017, the weighted average maturity of its secured financing of less liquid assets was greater than 120 days. To further minimize the refinancing risk of secured financing for less liquid assets, the Firm has established concentration limits to diversify its investor base and reduce the amount of monthly maturities for secured financing of less liquid assets. Furthermore, the Firm obtains term secured funding liabilities in excess of less liquid inventory as an additional risk mitigant to replace maturing trades in the event that secured financing markets, or its ability to access them, become limited. As a component of its liquidity risk management framework, the Firm holds a portion of its GLR against the potential disruption to its secured financing capabilities.

The Firm also maintains a pool of liquid and easily fundable securities, which provide a valuable future source of liquidity. With the implementation of liquidity standards, the Firm has also incorporated high-quality liquid asset classifications that are consistent with the U.S. Liquidity Coverage Ratio definitions into its encumbrance reporting, which further substantiates the demonstrated liquidity characteristics of the unencumbered asset pool and the Firm's ability to readily identify new funding sources for such assets.

Unsecured Financing

The Firm views long-term debt and deposits as stable sources of funding. Unencumbered securities and non-security assets are financed with a combination of long-term and short-term debt and deposits. The Firm's unsecured financings include structured borrowings, whose payments and redemption values are based on the performance of certain underlying assets, including equity, credit, foreign exchange, interest rates and commodities. When appropriate, the Firm may use derivative products to conduct asset and liability management and to make adjustments to its interest rate and structured borrowings risk profile.

Deposits

Available funding sources to the Firm's U.S. bank subsidiaries include demand deposit accounts, money market deposit accounts, time deposits, repurchase agreements, federal funds purchased and Federal Home Loan Bank advances. The vast majority of deposits in the Firm's U.S. bank subsidiaries are sourced from retail brokerage accounts and are considered to have stable, low-cost funding characteristics. At December 31, 2018 and December 31, 2017, deposits were $187,820 million and $159,436 million, respectively.

Short-Term Borrowings

The Firm's unsecured short-term borrowings may primarily consist of structured notes, bank loans and bank notes with original maturities of 12 months or less. At December 31, 2018 and December 31, 2017, the Firm had approximately $2,036 million and $2,034 million, respectively, in short-term borrowings.

Long-Term Borrowings

The Firm believes that accessing debt investors through multiple distribution channels helps provide consistent access to the unsecured markets. In addition, the issuance of long-term borrowings allows the Firm to reduce reliance on short-term credit sensitive instruments. Long-term borrowings are generally managed to achieve staggered maturities, thereby mitigating refinancing risk, and to maximize investor diversification through sales to global institutional and retail clients across regions, currencies and product types. Availability and cost of financing to the Firm can vary depending on market conditions, the volume of certain trading and lending activities, the Firm's credit ratings and the overall availability of credit.

The Firm may engage in various transactions in the credit markets (including, for example, debt retirements) that it believes are in its investors' best interests.

Exhibit 11-3. Borrowings by Remaining Maturity at December 31, 2018

$ IN MILLIONS	PARENT COMPANY	SUBSIDIARIES	TOTAL
Due in 2019	$19,849	$4,845	$24,694
Due in 2020	18,575	2,705	21,280
Due in 2021	21,208	3,434	24,642
Due in 2022	14,969	1,816	16,785
Due in 2023	11,553	2,385	13,938
Thereafter	70,093	16,685	86,778
Total	**$156,247**	**$31,870**	**$188,117**

12. Appendix D: Memberships in Material Payment, Clearing and Settlement Systems

Exhibit 12-1 contains a representative list of the Firm's top memberships in payment, clearing and settlement systems. For additional information on the Firm's payment, clearing and settlement activities, refer to Section 4.3.1 Payment, Clearing and Settlement Activities.

Exhibit 12-1. Morgan Stanley's Top FMUs

CENTRAL COUNTERPARTY CLEARING HOUSES (CCPS)	CENTRAL SECURITIES DEPOSITORIES (CSDS)	FX SETTLEMENT	AGENT BANKS
Chicago Mercantile Exchange	BOJ	CLS	BNY Mellon
Eurex	ClearStream SA		Citigroup
Fixed Income Clearing Corporation	Depository Trust Company		BNP Paribas
ICE Clear Credit	Euroclear Bank		HSBC
ICE Clear Europe	Euroclear EUI (CREST)		RBC
Japan Securities Clearing Corporation	Euroclear France		MUFG
LCH Ltd.	HKSCC		
LCH SA	JASDEC		
NSCC	KSD		
Options Clearing Corporation			

13. Appendix E: Foreign Operations

The Firm operates in both U.S. and non-U.S. markets. The Firm's non-U.S. business activities are principally conducted and managed through European and Asia-Pacific locations. As of December 31, 2018, the Firm had 60,348 employees worldwide.

The net revenues disclosed in Exhibit 13-1 reflect the regional view of the Firm's consolidated net revenues on a managed basis, based on the following methodology:

- **Institutional Securities**: advisory and equity underwriting – client location; debt underwriting – revenue recording location; sales and trading – trading desk location;
- **Wealth Management**: wealth management representatives operate in the Americas; and
- **Investment Management**: client location, except for Merchant Banking and Real Estate Investing businesses, which are based on asset location.

Exhibit 13-1. Net Revenues by Region from March 31, 2019 Form 10-Q

Net Revenues by Region

	Three Months Ended March 31,	
$ in millions	**2019**	2018
Americas	**$ 7,321**	$ 8,018
EMEA	**1,702**	1,708
Asia-Pacific	**1,263**	1,351
Net revenues	**$ 10,286**	$ 11,077

The following are the Firm's non-U.S. MOEs and the products and services they offer:

- **MSIP**: MSIP is the Firm's primary European broker-dealer. MSIP provides services to corporations, governments and financial institutions including capital raising; financial advisory services, including advice on mergers and acquisitions; restructuring; real estate and project finance; corporate lending; sales and trading; financial and market making activities in equity and fixed income securities and related products, including foreign exchange and commodities; and investment activities. MSIP operates branches in Seoul, Amsterdam, Zurich, Warsaw, the Dubai International Financial Centre and the Qatar Financial Centre.
- **MSIM Ltd.**: MSIM Ltd. is the primary IM entity in EMEA. As such, the only activities in which it engages are the provision of IM services to institutional and fund managed clients. MSIM Ltd. serves as the investment advisor to Active Fundament Equity, Global Fixed Income and Solutions & Multi-Asset funds.
- **MSMS**: MSMS is the Firm's Japanese broker-dealer and the most significant of the Firm's subsidiaries in Japan. MSMS has been operating its broker-dealer business for more than 30 years in Japan. All business transacted on the entity is within the Firm's ISG Core Business Line. MSMS provides sales and trading, capital markets and research services to corporations and institutional clients. Transactions involving Japan Government Bonds, either as the primary trade or as collateral on other positions, represent a significant proportion of MSMS's activities. MSMS

primarily serves institutional clients transacting in Japanese products. It also serves Japan-based clients trading offshore products. Transactions for offshore clients and for offshore products are largely executed through its offshore affiliates. MSMS also trades with other Firm affiliates, primarily for the purposes of hedging positions resulting from client trading. In particular, MSMS sources derivatives for hedging from MSCS and MSCG.

- **MSESE**: MSESE is the Firm´s new broker-dealer (CRR investment firm) established for purposes of managing certain business activities to clients in the EEA. To further this purpose, MSESE has obtained membership with EU exchanges, clearing houses and trading venues. MSESE is envisaged to become Morgan Stanley's primary investment services hub to operate the ISG business in the EEA in case of the exit of the United Kingdom from the European Union. It provides multiple services including, but not limited to, financial advisory services, sales and trading (including the execution of Morgan Stanley client's flow on in-scope EEA exchanges), market making, securities lending, financing, hedging and clearing services for selected products in equity and fixed income securities and related products, including foreign exchange and commodities. The scale of activities of MSESE will continue to evolve throughout 2019 and 2020 depending on political developments and client demands. MSESE is authorized by BaFin and regulated by BaFin and the Deutsche Bundesbank. It forms part of the MSEHSE Group.
- **MSBAG:** MSBAG is a fully licensed bank (CRR credit institution), including MiFiD services. MSBAG provides services primarily to clients in Germany and Austria. Offerings include mergers and acquisitions, corporate finance, equity and debt capital markets, and sales and trading activities. MSBAG is authorized by BaFin and regulated by BaFin and the Deutsche Bundesbank. In the first quarter of 2019, the Firm has made changes to both its legal entity structure and certain booking practices in the EMEA region due to a possible exit of the United Kingdom from the European Union impacting also the scope of business being conducted on MSBAG. MSBAG now forms part of the MSEHSE Group. The scale of activities of MSBAG will continue to evolve throughout 2019 and 2020 depending on political developments.

14. Appendix F: Interconnectedness

The Firm's legal entity structure facilitates a rapid and orderly resolution, including with respect to the sales of WM and IM and the wind down of ISG. Each Core Business Line operates largely on a distinct set of Material Entities,[31] and each Core Business Line has clean ownership structures supporting separability. The Firm has also established operationally and financially resilient MSEs, which are separate and distinct from its MOEs.

While some level of interconnectedness between Material Entities is inherent in a global business such as the Firm, a core goal of resolution planning is to ensure that such relationships are rational and would not impede the Firm's orderly resolution.

The Firm's Material Entities generally fall into four categories:

- **Core Business Line Subsidiaries**: Non-bank operating companies and dedicated service entities that transact with the Core Business Line's customers and counterparties and hold licenses or memberships to engage in certain activities:
    - ISG MOEs include MSCO, MSIP, MSMS, MSCG, MSCS, MSBAG and MSESE
    - WM MOEs include MSSB.
    - IM MOEs include MSIM Inc. and MSIM Ltd.
- **Bank Subsidiaries**: Insured depository institutions that take deposits and provide loans and other banking products to their customers:
    - WM MOEs include MSBNA and MSPBNA.
- **Shared Service Entities**: Dedicated service entities that provide corporate and support services to operating companies, such as technology, real estate and payroll services, and support all Core Business Lines and Critical Functions:
    - Includes the MSEs shared across Core Business Lines.
- **Holding Companies**: Raise debt and equity funding, and invest or loan proceeds to subsidiaries:
    - MS Parent[32]

There are broadly three types of relationships through which interconnections between Material Entities exist:

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[31] The primary exception is MSBNA, which offers both ISG and WM products and services. As an insured depository institution, MSBNA's interconnection with ISG is at arm's-length pursuant to regulatory requirements. These connections therefore would not impede the sale of MSBNA together with the WM business.

[32] MS Parent is technically the "Covered Company," not a Material Entity, as per the 165(d) Rule, but is fully in scope for the Firm's resolution planning exercises.

- **Funding Relationships**: Material Entities may have funding relationships with affiliates in which an entity raises funds and lends those funds to its affiliates. Examples include unsecured debt (e.g., long-term debt), equity funding and secured funding (e.g., repurchase agreements or securities lending). To mitigate the potential misallocation of resources in resolution, the Firm implemented the Funding IHC structure in 2019. The Funding IHC was established to preserve funding flexibility and enhance the ability to allocate financial resources as needed to Material Entities in resolution. MS Parent will contribute assets to the Funding IHC to provide capital and liquidity to Material Entities both before and after an MS Parent bankruptcy filing.

- **Service Relationships**: Material Entities may have service relationships with affiliates in which an entity obtains ownership or control of operational resources (e.g., personnel or real estate) and then uses those resources to support the activities of an affiliate. Examples include clearing and settlement, technology, facilities and payroll services.

- **Transactional Relationships**: Material Entities may have transactional relationships with affiliates in which (i) an entity faces a client and transfers its exposure to another entity for risk management (ii) an entity maintains direct access to an FMU or agent bank and then acts as principal to intermediate such access for an affiliate. Examples include securities and derivatives transactions and related FMU and agent bank access.

Material Entity interconnections are most prominent for (i) funding relationships in which MS Parent provides funding to Material Entities and (ii) service relationships in which MSEs provide support to other Material Entities.

A majority of the Firm's MSEs are Shared Service Entities that provide a variety of services to the Firm's MOEs across jurisdictions, as described in Exhibit 14-1.

Exhibit 14-1. Identification of Material Service Entities by Jurisdiction

JURISDICTION	MATERIAL SERVICE ENTITY	PRINCIPAL SERVICE CATEGORIES	PRIMARY PROVIDERS TO MATERIAL ENTITIES
U.S.	MSSG	Personnel Software Data centers Fixed assets	All Material Entities
	MSFL	Owned real estate Vendor contracts Fixed assets	All U.S. Material Entities
	MSSH	Payroll	All U.S. Material Entities
	MSSBF	Software Fixed assets Real estate leases Vendor contracts	All U.S. Material Entities
	MSSBFA	Other (e.g. issuance of FA notes)	MSSB

JURISDICTION	MATERIAL SERVICE ENTITY	PRINCIPAL SERVICE CATEGORIES	PRIMARY PROVIDERS TO MATERIAL ENTITIES
UK	MSUKL	Owned real estate Software Payroll Vendor contracts	All Material Entities
	MSUKG	Vendor contracts Data centers	MSIP
	MSES	Personnel	MSIP, MSIM Ltd.
Japan	MSJG	Data centers Payroll Vendor contracts	MSMS
Canada	MSSCC	Vendor contracts	All Material Entities
Hungary	MSHAL	Vendor Contracts	All Material Entities
India	MSASPL	Data centers Payroll Vendor contracts	All Material Entities
China	MSMSSL	Vendor contracts	All Material Entities
Hong Kong	MSAL	Data centers Payroll Vendor contracts	All Material Entities
	MSHKL	Owned real estate	All Material Entities

Within each Core Business Line, additional interconnections may exist across all types of relationships. Within the Firm's ISG Core Business Line, for instance, MOEs have transactional relationships driven largely by differences between the legal entities that transact with clients and counterparties in local markets around the globe, on one hand, and the legal entities offering the products that such clients and counterparties require, on the other. Such financial interconnections between these entities are used to manage risk and satisfy regulatory requirements. The most common forms of financial interconnections among ISG MOEs are secured funding and derivatives relationships, as well as related FMU and agent bank access. Significant examples of each type of interconnection within ISG are provided in Exhibit 14-2. All of the ISG MOEs may receive these services. In addition to interconnections *within* the ISG Core Business Line described in this exhibit, other Firm entities—predominantly MS Parent—provide credit support with respect to some transactions of MOEs.

Exhibit 14-2. Interconnections within ISG Core Business Line

RELATIONSHIP TYPE	DESCRIPTION	PRIMARY PROVIDERS TO ISG MATERIAL ENTITIES
Secured Funding	MOEs use inter-affiliate secured funding transactions (e.g., repurchase agreements, securities lending) to finance their securities positions or borrow securities from affiliates that serve as regional market hubs for those activities.	MSCO, MSIP, MSMS, MSBAG, MSESE

RELATIONSHIP TYPE	DESCRIPTION	PRIMARY PROVIDERS TO ISG MATERIAL ENTITIES
Derivatives	MOEs use inter-affiliate OTC derivatives and FX transactions to, for example: (i) execute hedge transactions with market-making businesses operated by affiliates that offer the hedging product or (ii) enter into market-making transactions with the customers or counterparties of the MOE's affiliates.	MSIP, MSCS, MSCO, MSBNA, MSMS, MSCG

In addition to ISG interconnections, the Firm has identified interconnections within WM and IM MOEs. Significant examples of each type of interconnection within WM are provided in Exhibit 14-3**.**

Exhibit 14-3. Interconnections within WM Core Business Line

RELATIONSHIP TYPE	DESCRIPTION	PRIMARY PROVIDERS TO WM MATERIAL ENTITIES
Deposit Funding	MSBNA and MSPBNA funding is primarily through cash deposits of MSSB clients through the BDP. MSBNA provides WM with a mechanism to provide FDIC insurance protection to its clients' cash balances as well as a means to generate accretive returns to the Firm.	MSBNA, MSPBNA, MSSB
Lending	MSBNA and MSPBNA offer lending products for customers of its affiliate retail broker-dealer, MSSB.	MSBNA, MSPBNA, MSSB

Significant examples of each type of interconnection within IM are provided in Exhibit 14-4.

Exhibit 14-4.Interconnections within IM Core Business Line

RELATIONSHIP TYPE	DESCRIPTION	PRIMARY PROVIDERS TO IM MATERIAL ENTITIES
Advisor	MSIM Inc. is the investment sub-advisor to certain mutual funds and fund and institutional accounts advised by MSIM Ltd.	MSIM Inc., MSIM Ltd.

The Firm's top FMUs and agent banks are listed in Appendix D. The Firm's MOEs access these PCS providers either directly through their own memberships or indirectly through other affiliates with direct memberships. For ISG, indirect access to top FMUs in the U.S., EMEA and Japan markets is primarily provided by MSCO, MSIP and MSMS, respectively. For WM, MSSB primarily has its own direct memberships to the top FMUs that it utilizes.

MS Parent guarantees the payment obligations of certain subsidiaries and certain subsidiaries guarantee the payment obligations of certain affiliates. As required by the Firm's "**Parent Company Guarantee Policy**," MS Parent is the preferred issuer for all guarantees. The Parent Company Guarantee Policy outlines the guidelines to be followed by Corporate Treasury when issuing MS Parent guarantees. In situations where an MS Parent guarantee does not satisfy the applicable regional legal, regulatory and/or business requirements, a guarantee may be issued by an MS Parent subsidiary, subject to the Consolidated Subsidiary Guarantee Policy. As required by the Federal Reserve Board's final rules regarding total loss absorbing capacity, long term debt and clean holding company requirements,[33] the Firm now prohibits the issuance of a guarantee that contains a default right related to the insolvency of MS Parent, unless the guarantee is separately subject to the Federal Reserve Board's and OCC's final rules regarding resolution stay requirements for QFCs, which also impose certain restrictions on interconnectedness for QFCs.[34]

[33] Board of Governors of the Federal Reserve System, Final Rule, Total Loss-Absorbing Capacity, Long-Term Debt, and Clean Holding Company Requirements for Systemically Important U.S. Bank Holding Companies and Intermediate Holding Companies of Systemically Important Foreign Banking Organizations, 82 Fed. Reg. 8266 (Jan. 24, 2017).

[34] Board of Governors of the Federal Reserve System, Final Rule, Restrictions on Qualified Financial Contracts of Systemically Important U.S. Banking Organizations and the U.S. Operations of Systemically Important Foreign Banking Organizations; Revisions to the Definition of Qualifying Master Netting Agreement and Related Definitions, 82 Fed. Reg. 42882 (Sept. 12, 2017); Office of the Comptroller of the Currency, Final Rule, Mandatory Contractual Stay Requirements for Qualified Financial Contracts, 82 Fed. Reg. 56630 (Nov. 29, 2017).

15. Appendix G: Material Supervisory Authorities

The Firm is subject to extensive regulation by U.S. federal and state regulatory agencies and securities exchanges and by regulators and exchanges in each of the major markets where the Firm conducts business. Moreover, in response to the 2007-2008 financial crisis, legislators and regulators, both in the U.S. and worldwide, have adopted, continue to propose or are in the process of implementing a wide range of reforms that have resulted or that may in the future result in major changes to the way the Firm is regulated and conducts its business. These reforms include the Dodd-Frank Act; risk-based capital, leverage and liquidity standards adopted or being developed by the Basel Committee on Banking Supervision, including Basel III, and the national implementation of those standards; capital planning and stress testing requirements; the QFC Stay Rules; and new resolution regimes that are being developed in the U.S. and other jurisdictions. While certain portions of these reforms are effective, others are still subject to final rulemaking or transition periods. Exhibit 15-1 identifies material supervisory authorities for the Firm's MOEs.

Exhibit 15-1. Supervisory Authorities

SUPERVISOR	JURISDICTION
Commodity Exchange, now a division of CME	U.S.
Commodity Futures Trading Commission	U.S.
Consumer Financial Protection Bureau	U.S.
Federal Deposit Insurance Corporation	U.S.
Federal Energy Regulatory Commission	U.S.
Federal Reserve Board	U.S.
Financial Industry Regulatory Authority, Inc.	U.S.
Municipal Securities Rule Board	U.S.
National Futures Association	U.S.
New York Mercantile Exchange, now a division of CME	U.S.
North American Securities Administrators Association	U.S.
Office of the Comptroller of the Currency	U.S.
Securities and Exchange Commission	U.S.
Prudential Regulation Authority	UK
Financial Conduct Authority	UK
Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin)	Germany
Deutsche Bundesbank (German Central Bank)	Germany
Bank of Japan	Japan
Financial Services Agency	Japan
Japan Securities Dealers Association	Japan

SUPERVISOR	JURISDICTION
Securities and Exchange Surveillance Commission	Japan
Reserve Bank of India	Mumbai
Hong Kong Securities and Futures Commission	Hong Kong

In addition to the regulators shown, MSIP's branches in the Netherlands and Poland operate under the "passport" available to investment firms authorized in the EU under the MiFID. MSIP's other branches are authorized by local regulators in each jurisdiction.

16. Appendix H: Principal Officers

Exhibit 16-1identifies the executive officers of MS Parent and their current titles.

Exhibit 16-1. Morgan Stanley Principal Officers

OFFICER	POSITION
James P. Gorman	Chairman of the Board and Chief Executive Officer
Eric F. Grossman	Executive Vice President and Chief Legal Officer
Keishi Hotsuki	Executive Vice President and Chief Risk Officer
Colm Kelleher	President
Jonathan M. Pruzan	Executive Vice President and Chief Financial Officer
Daniel A. Simkowitz	Head of Investment Management
Jeffrey S. Brodsky	Executive Vice President and Chief Human Resources Officer

17. Glossary

TERM	ACRONYM	DEFINITION
165(d) Rule		Federal Reserve Board Regulation QQ, 12 CFR Part 243 and Federal Deposit Insurance Corporation Regulation 12 CFR Part 381
2017 Plan		The Firm's 2017 Title I Resolution Plan
2019 Guidance		Guidance for 2019 § 165(d) Annual Resolution Plan Submissions by Domestic Covered Companies that Submitted Resolution Plans in July 2017
2019 Plan		The Firm's 2019 Title I Resolution Plan
Agencies		A collective term for the Board of Governors of the Federal Reserve System and the Federal Deposit Insurance Corporation
Agent Bank		A financial institution that allows the Firm to access payment, clearing and settlement infrastructure in markets in which the Firm does not maintain direct access
Annual Resolvability Enhancement Assessment	AREA	The Firm's process to assess, in an objective and formal manner, the sufficiency of existing practices that support robust recovery and resolution preparedness, relative to explicit regulatory rules, expectations and guidance. Through AREA, the Firm evaluates its ability to execute certain functions and produce the data, reporting and analysis (inclusive of contractual, financial, risk and operational information, at the appropriate level of detail) that would be required to execute the Resolution Strategy in a timely manner
Asset and Liability Committee	ALCO	A type of governance body that is responsible for overseeing capital adequacy, funding requirements and liquidity risk management from various perspectives (e.g., the Firm, segment, region or entity)
Banks		A collective term for the Firm's bank legal entities, inclusive of (but not limited to) MSBNA and MSPBNA
Bank Deposit Program	BDP	Deposit program through which free credit balances in accounts of MSSB customers are automatically deposited into deposit accounts at MSBNA and MSPBNA
Bank of Japan	BOJ	
Bank Resource Management	BRM	A division within ISG that is responsible for the Firm's securities financing transactions (including repurchase agreements and securities lending), hedging multiple valuation adjustments associated with Fixed Income derivatives, optimizing resources associated with the Firm's cleared activity (cash/listed/OTC and securities financing transactions) as well as optimizing collateral management globally
Bankruptcy Code		Title 11 of the U.S. Code, as amended
Bankruptcy Court		The U.S. Bankruptcy Court with jurisdiction over the Chapter 11 Proceedings
Bankruptcy Governance Trigger		A trigger occurring upon a Support Trigger that would require the process for consideration and approval of a bankruptcy filing to be initiated and escalated to the MS Parent Board
Basel		Refers to the Basel III agreement, which updates and strengthens the Basel Accords set by the Basel Committee on Bank Supervision and includes requirements related to the minimum amount of common equity and minimum liquidity ratio for banks and additional requirements for those banks deemed as "systemically important banks"
Baseline/Action Zone		Business-as-usual, normal operating environment
Billion	Bn	
BNP Paribas	BNP	
Board of Directors	Board	

TERM	ACRONYM	DEFINITION
Booking Model Framework		The Firm's framework for managing its booking models
Booking Model Office		Responsible for the operationalization, governance and communication of the Booking Model Framework
BRM Command		Firm's command and control protocol that provides globally coordinated communications and governs the Firm's preparedness, organization, escalation and response to events that could potentially impact the Firm's financial position
Bundesanstalt für Finanzdienstleistungsaufsicht	BaFin	German Federal Financial Supervisory Authority
Business Management		Refers to a division within the Firm that serves in one or more of the following capacities: - Business Administration - Program/Project Management - Strategy, Governance and Compliance
Business Unit	BU	Organization or group within the Firm that represents a specific front-office business function
Business-as-Usual	BAU	Normal operating environment
Calculation Trigger		A trigger that is meant to indicate that the Firm is potentially in distress but not yet in Material Financial Distress
Capabilities		Ability of the Firm to produce critical information and perform critical activities in a timely manner under developing stress conditions
Central Counterparty	CCP	Facilitates the clearing and settlement of certain financial transactions by serving as the intermediary of credit risk between the buyer and seller of such transactions
Central Securities Depositories	CSDs	FMU holding shares either in certificated or uncertificated (dematerialized) form so that ownership can be easily transferred
Chapter 11		Chapter 11 of the U.S. Bankruptcy Code
Committee on Uniform Securities Identification Procedures	CUSIP	
Commodity Futures Trading Commission	CFTC	
Common Equity Tier 1	CET1	
Contractually Binding Mechanism		A support agreement or other legally binding contract that is designed to mitigate potential creditor challenges to the provision of capital and liquidity support by a top-tier or intermediate holding company to its subsidiaries during a time of financial distress
Contributable Assets		Certain assets of MS Parent that may be used to make capital contributions and provide liquidity to Material Entities pursuant to the Support Agreement
Core Business Line	CBL	Pursuant to the 165(d) Rule, Core Business Lines means those business lines of the Firm, including associated operations, services, functions and support, that, in the view of the Firm, upon failure would result in a material loss of revenue, profit, or franchise value. The Firm has defined its Core Business Lines as ISG, WM and IM
Critical		Of essential importance to Resolution Strategy execution

TERM	ACRONYM	DEFINITION
Critical Contracts		All written contracts, other than QFCs, that relate to the receipt of inter-affiliate and third-party services, products or resources that would be necessary for the business of a Material Entity to function during an orderly resolution and are not promptly substitutable without a material adverse effect on the Material Entity's operation during resolution
Critical Economic Function		Product/activity of the Firm for which a withdrawal or disorderly wind down could have a material impact on the UK economy or financial system.
Critical Functions		A collective term referring to the Firm's Critical Operations and Critical Economic Functions
Critical Operations		Pursuant to the 165(d) Rule, Critical Operations means those operations of the Firm, including associated services, functions and support, the failure or discontinuance of which, in the view of the Firm or as jointly directed by the Agencies, would pose a threat to the financial stability of the U.S.
Critical Personnel		Critical Personnel are employees who perform or support critical services in resolution
Critical Vendor		A vendor that provides services that would be necessary for the business of a Material Entity to function during an orderly resolution, and that is not promptly substitutable without a material adverse effect on the Material Entity's operation during resolution
Demand Deposit Account		Deposit account with a bank or other financial institution that allows the depositor to withdraw his or her funds from the account without warning or with less than seven days' notice
Deposit Insurance Fund	DIF	The FDIC's deposit insurance fund
Derivatives Segmentation and Forecasting		The Firm's capability to segment and model the wind down of its derivatives portfolio
Dodd-Frank Act		Dodd-Frank Wall Street Reform and Consumer Protection Act
Deutsche Bundesbank		German Central Bank
Employee Retention Playbook		Playbook providing plans for HR and business management to identify and retain personnel considered critical for the execution of the Resolution Strategy, including the related governance bodies and decision-making process
Enterprise Risk Oversight Committee	EROC	
Euro	EUR	
Europe, Middle East and Africa	EMEA	
European Economic Area	EEA	International agreement uniting EU Member States and three additional States (Iceland, Liechtenstein and Norway) into a single market
European Union	EU	
Executive Sponsors		Firm Chief Legal Officer and Chief Financial Officer
Federal Deposit Insurance Corporation	FDIC	
Federal Reserve Board		The Board of Governors of the Federal Reserve System
Finance		Firm division that includes product, regulatory and infrastructure controllers as well as Corporate Treasury, Tax, Financial Planning and Analysis and Strategy, Operations and Technology groups

TERM	ACRONYM	DEFINITION
Financial Market Utilities	FMU	Multilateral systems that provide the infrastructure for transferring, clearing and settling payments, securities and other financial transactions among financial institutions or between financial institutions and the system
Financial Stress Communications Playbook		Playbook setting forth the Firm's plans to manage and execute communications with key stakeholders in periods of financial stress
Firm		A collective term for MS Parent with all of its subsidiaries on a consolidated basis
Firm Recovery and Resolution Planning Team	Firm RRP	The Firm's group that is responsible for managing the development of the Resolution Strategy, submission and maintenance of the Resolution Plan and related requirements and monitoring the progress of related remediation projects
Firm Strategy and Execution	FSE	Firm division that is responsible for Firmwide and division-specific strategic planning and execution of corporate M&A processes
Fixed Income Division	FID	Firm division that includes the Firm's sales and trading business as related to fixed income, foreign exchange and commodities BUs
FMU and Agent Bank Access Playbooks		Playbooks describing strategies to facilitate continued access to the Firm's top FMUs and agent banks during a period of financial stress
FMU Command		Governance and communication protocol to support the Firm's PCS access strategies
Foreign Exchange	FX	
Funding Playbook		Playbook documenting the steps to estimate resolution-related liquidity and capital requirements and downstream both liquidity and capital resources to its Material Entities, in BAU and throughout the stress continuum including in resolution
Generally Accepted Accounting Principles	GAAP	
Gladiator Program		A project within the RREP to provide for the identification, retention and continuity of access to the critical shared services and resources that are necessary to support the Firm in resolution
Global Capital Markets		Division of the Firm that provides traditional market coverage and underwriting services focused on providing customized capital structure solutions to clients
Global Liquidity Reserve	GLR	The Firm's reserve for liquidity, which is comprised of highly liquid and diversified cash and cash equivalents and unencumbered securities
Global Resolution Planning Non-Qualified Financial Contract Policy	Non-QFC Policy	The Firm's policy that sets forth a framework for identifying, assessing and managing the risks associated with the potential inability of a Material Entity to receive the benefits provided under any Critical Contract as the Material Entity approaches, or is in, a resolution scenario
Global Systemically Important Bank	G-SIB	Financial institutions that have been deemed as systemically important to global financial markets by the Financial Stability Board
Governance Mechanisms		Mechanisms designed to facilitate timely execution of required Board actions, including authorizing MS Parent to provide financial resources to the Funding IHC and Material Entities in a manner that is resilient to potential creditor challenge
Governance Playbooks		Playbooks that incorporate the Trigger and Escalation Framework and discuss the fiduciary duties of MS Parent and Material Entity Boards in order to support required actions
Guarantee		An undertaking by MS Parent or a subsidiary for the benefit of counterparty to pay an underlying obligation in the event the subsidiary does not make such payment to the counterparty

TERM	ACRONYM	DEFINITION
Guarantee Administrative Priority Motion		Emergency elevation motion, with transfer as an alternative form of relief, that would be submitted to the bankruptcy court to elevate guarantees of subsidiary QFCs to administrative priority status, consistent with the requirements of the ISDA Protocols
Hong Kong Securities Clearing Company Limited	HKSCC	
Human Resources	HR	Division of the Firm that provides expertise and advice on human capital planning and organization design to help ensure the Firm has the appropriate resources needed to meet its goals
Hypothetical Resolution Scenario		Hypothetical failure scenario and associated assumptions mandated by regulatory guidance
IM Sale Package		Refers to the in-scope business and functional capabilities of IM, including key business processes, personnel, systems, applications, vendors, facilities and intellectual property that would be included within the sales in a resolution scenario.
Institutional Equities Division	IED	
Institutional Securities Group	ISG	Segment of the Firm that provides institutional customers with a range of financial advisory and capital-raising services, assists them in accessing the capital markets and taking or hedging risk
Insured Depository Institution	IDI	
Inter-Affiliate Market Risk Framework		The Firm's framework for inter-affiliate risk monitoring
Inter-Affiliate Task Orders	IATO	Task orders entered into among the MSEs and between the MSEs and their MOE customers
Intermediate Holding Company	IHC	Entity that sits in the ownership chain between a top-tier parent entity and another subsidiary of the top-tier parent company
Internal Liquidity Stress Testing	ILST	The Firm's internal liquidity stress testing framework
Internal Loss Absorbing Capacity	ILAC	For a given legal entity, the GAAP equity and subordinated debt of the entity, plus unsecured borrowings of the entity from MS Parent or direct affiliate holding companies that can be converted into subordinated debt or GAAP equity through the Firm's Support Agreement in resolution
International Swaps and Derivatives Association	ISDA	
Investment Banking Division	IBD	Division of the Firm that offers financial advisory and capital-raising services to corporations, organizations and governments around the world. IBD manages and participates in public offerings and private placements of debt, equity and other securities worldwide
Investment Management	IM	Division of the Firm that provides a comprehensive suite of investment management solutions to a diverse client base that includes governments, institutions, corporations, pension plans and individuals worldwide
ISDA Protocols		Part of a series of initiatives promoted by U.S. and foreign regulators and the financial industry to contractually limit early termination of QFCs and is a recognized method of compliance with the QFC Stay Rules

TERM	ACRONYM	DEFINITION
ISDA Protocols Playbook		Part of the Bankruptcy Playbook which analyzes issues associated with the implementation of the stay on cross default rights described in Section 2 of the ISDA Protocols and provides an actionable guide to supplement the related motions and memoranda with a day-to-day description of the steps that would be taken in the periods before entering, and upon commencement of, MS Parent's bankruptcy proceeding
ISG MOEs		MOEs that are part of the ISG Solvent Wind Down, which include MSCO, MSIP, MSMS, MSCS and MSCG
ISG Solvent Wind Down		A sub-strategy of the Resolution Strategy that includes the recapitalization of the ISG MOEs as necessary for them to remain solvent and liquid as they are wound down outside of resolution proceedings
Japanese Securities Depository Center, Inc	JASDEC	Central securities depository of Japan
Key PCS Provider Library		Library that enables a comprehensive understanding of the Firm's PCS activities landscape and contains information about the Firm's direct and indirect relationships with key PCS providers
Korea Securities Depository	KSD	Central securities depository of Korea
LCH Ltd.		UK-registered clearing house, offering clearing services for asset classes including rates, FX, repos and fixed income, commodities, cash equities and equity derivatives
LCH SA		France-registered clearing house, offering clearing services for credit default swaps, repos and fixed income, commodities, cash equities and equity derivatives
Legal Entity Rationalization	LER	Vulnerability in resolution related to a firm's legal entity structure that was identified within the 2019 Guidance
Legal Entity Rationalization Criteria	LER Criteria	The Firm's criteria for upholding a rationale and resolvable legal entity structure
LER Assessment Framework		Framework that provides a transparent, repeatable and measurable process for the Firm to assess its adherence to the LER Criteria and non-structural standards and identifies any potential areas requiring remediation efforts and/or enhancements to strengthen its adherence
Liquidity Coverage Ratio	LCR	Under the Basel III agreement, an assessment to determine whether or not a bank has sufficient HQLA to survive a significant stress scenario lasting 30 calendar days
Liquidity Risk Division	LRD	Division responsible for reviewing the methodology and results from the Resolution Financial Model
Listed Derivatives		Derivatives traded via an open exchange or market
Management Information System	MIS	
Marketing and Sale Playbook		Playbook that describes the marketing and sale process that the Firm would expect to execute in a resolution scenario
Markets in Financial Instruments Directive	MiFID	
Material Entity	ME	Legal entity that is significant to the activities of a Core Business Line or Critical Function and may be a MOE or MSE
Material Entity Sales Proceeds Funding Agreements		Agreements regarding the proceeds of sales of Material Entities, which serve as an additional source of liquidity in resolution. The Resolution Strategy does not rely on the use of sales proceeds for successful execution.

TERM	ACRONYM	DEFINITION
Material Financial Distress		Point in time at which (i) the Firm has incurred, or is likely to incur, losses that will deplete all or substantially all of its capital, and there is no reasonable prospect for the Firm to avoid such depletion, (ii) the assets of the Firm are, or are likely to be, less than its obligations to creditors and others and (iii) the Firm is, or is likely to be, unable to pay its obligations (other than those subject to a bona fide dispute) in the normal course of business
Material Operating Entities	MOEs	Legal entity that offers products or services to clients or counterparties and earns a significant portion of any Core Business Line's profits
Material Service Entities	MSEs	Legal entity that owns or controls resources that are significant to the continuity of the activities of the Firm's Core Business Lines as executed by MOEs, and is not an MOE itself
Mergers and Acquisitions	M&A	
Million	Mn	
Minimum Operating Liquidity	MOL	The amount of liquidity that the Firm needs to run its daily operations
Mitsubishi UFJ Financial Group, Inc.	MUFG	Japan broker-dealer and Firm's joint venture partner since 2008 when the Firm entered into an alliance to provide integrated services across corporate and investment banking, retail banking and asset management
Model Risk Management	MRM	Division of the Firm that is responsible for independent risk control and review and validation of the pricing and risk measurement models used by the Firm for valuation models
Money Market Mutual Funds		Mutual fund that invests in short-term debt securities.
Morgan Stanley & Co. International Plc	MSIP	UK Broker-Dealer; Designated as a MOE
Morgan Stanley & Co. LLC	MSCO	U.S. Broker-Dealer; Designated as a MOE
Morgan Stanley Advantage Services Private Limited	MSASPL	India Workforce; Designated as a MSE
Morgan Stanley Asia Limited	MSAL	Hong Kong Broker-Dealer and Support Service Provider; Designated as a MSE
Morgan Stanley Bank Aktiengesellschaft	MSBAG	German Bank; Designated as a MOE
Morgan Stanley Bank, N.A.	MSBNA	U.S. National Bank; Designated as a MOE
Morgan Stanley Capital Group Inc.	MSCG, MSCGI	U.S. Commodities, Swaps Dealer; Designated as a MOE
Morgan Stanley Capital Services LLC	MSCS	U.S. Swaps Dealer; Designated as a MOE
Morgan Stanley Employment Services	MSES	UK Pay Company; Designated as a MSE
Morgan Stanley Europe SE	MSESE	German Broker-Dealer; Designated as an MOE

TERM	ACRONYM	DEFINITION
Morgan Stanley Holdings LLC	Funding IHC	Resolution funding vehicle; Designated as a MSE
Morgan Stanley Hong Kong Ltd	MSHKL	Hong Kong Fixed Asset Holding Company; Designated as a MSE
Morgan Stanley Hungary Analytics Limited	MSHAL	Hungary T&D Center; Designated as a MSE
Morgan Stanley Investment Management Inc.	MSIM Inc.	U.S. Investment Advisory; Designated a MOE
Morgan Stanley Investment Management Limited	MSIM Ltd	UK Investment Advisory; Designated as a MOE
Morgan Stanley Japan Group Co., Ltd (MSJG)	MSJG	Japan Support Services Provider; Designated as a MSE
Morgan Stanley Management Services (Shanghai) Limited (MSMSSL)	MSMSSL	China Workforce Center; Designated as a MSE
Morgan Stanley MUFG Securities Co., Ltd.	MSMS	Japan Broker-Dealer; Designated as a MOE
Morgan Stanley Private Bank, National Association	MSPBNA	U.S. National Bank; Designated as a MOE
Morgan Stanley Services Canada Corp	MSSCC	Montreal Technology Workforce Center; Designated as a MSE
Morgan Stanley Services Group	MSSG	U.S. Support Services Provider; Designated as a MSE
Morgan Stanley Services Holdings	MSSH	U.S. Payroll Company; Designated as a MSE
Morgan Stanley Smith Barney FA Notes Holdings LLC	MSSBFA	U.S. FA Notes Financing Company; Designated as a MSE
Morgan Stanley Smith Barney Financing LLC	MSSBF	U.S. Real Estate and Procurement Company; Designated as a MSE
Morgan Stanley Smith Barney LLC	MSSB	U.S. Broker-Dealer, FCM; Designated as a MOE

TERM	ACRONYM	DEFINITION
Morgan Stanley Solutions India Private Limited	MSSIPL	India Workforce Center; Designated as a MSE
Morgan Stanley UK Group	MSUKG	UK Real Estate Company; Designated as a MSE
Morgan Stanley UK Limited	MSUKL	UK Support Services Provider; Designated as a MSE
MSEHSE Group		Group of entities, consisting of Morgan Stanley Europe Holding SE, MSESE and MSBAG, established for purposes of managing certain business activities within the EU
MS Financing LLC	MSFL	U.S. Real Estate and Procurement Company; Designated as a MSE
MS Parent		The Firm's stand-alone parent holding company on an unconsolidated basis
MS Parent Resolution Minimum Liquidity		A reserve maintained by the Firm to maintain flexibility and support the Firm's financial resiliency to meet unanticipated liquidity outflows or capital losses
MSE Network		Refers broadly to the Firm's MSEs, which provide resolution resilient services to MOEs
Multiple Point of Entry	MPOE	Resolution strategy in which more than one of a firm's legal entities files for bankruptcy while the remainder are sold or wound down
National Futures Association	NFA	
National Securities Clearing Corporation	NSCC	Central counterparty that provides clearing, settlement, risk management, central counterparty services and a guarantee of completion for certain transitions
Near-Term RCEN		Estimates of RCEN over the forecast horizon used in resolution
Near-Term RLEN		Estimates of RLEN over the forecast horizon used in resolution
Office of the Comptroller of the Currency	OCC	
Operating Entities		Entities that conduct external facing businesses (i.e. Home Company of front office cost center)
OTC derivatives		Derivatives that are not listed and are executed bilaterally between two parties
Over-The-Counter	OTC	
Pay Company		The entity that maintains the legal employment relationship with an employee, responsible for the payment of all remuneration and benefits and typically organized geographically
Payment, Clearing and Settlement	PCS	
PCS Data Repository		Repository to house and centralize key dynamic data supporting the Firm's PCS Framework
PCS Framework		Framework that contains the Firm's capabilities for continued access to PCS services essential to an orderly resolution
PCS Providers		FMUs and agent banks used by the Firm to facilitate the clearing and settlement of cash and securities transactions in various markets globally

TERM	ACRONYM	DEFINITION
Point of Non-Viability	PNV	The point at which MS Parent is no longer viable and files for bankruptcy
Portfolio Loan Account	PLA	
Positioning Framework		Framework that the Firm uses to determine the appropriate amount of financial resources (i.e., liquid assets and ILAC) to be positioned at MS Parent and Material Entities
Primary Scenario		The hypothetical financial scenario underpinning the Resolution Plan
Prime Brokerage	PB	
Process Taxonomy		The Firm's method of describing its functions
Profit and Loss	P&L	
Public Section		Public part of 2019 Plan
QFC Remediation Project		A project within the RREP to manage effort to eliminate the ability of third-party and affiliate counterparties to terminate their QFCs upon the insolvency of a different legal entity than their direct Firm counterparty
QFC Stay Rules		The QFC Stay Rules impose certain restrictions on the terms of QFCs entered into with U.S. G-SIBs and the U.S. operations of foreign G-SIBs and require G-SIBs that are subject to the rules to remediate their in-scope QFCs
Qualified Financial Contract	QFC	Contracts that, in many jurisdictions, have bankruptcy safe harbors that allow non-defaulting counterparties to exercise contractual termination rights, value terminated transactions and setoff collateral against outstanding obligations even if their counterparty has filed for bankruptcy. The predominant types of QFC-based Firm transactions are OTC derivatives, repurchase agreements and stock lending
RCAP*		Runway Period losses plus RCEN
Recovery and Resolution Enhancement Program	RREP	A set of projects established by the Firm to further enhance its resolvability capabilities
Recovery and Resolution Planning	RRP	
Recovery Period		The period commencing with an idiosyncratic stress event, during which the Firm is under material stress, but without any actual or perceived significant risk of failure. Calculation Trigger occurrence signals the start of a Recovery Period
Repurchase Agreements		An agreement to sell securities and repurchase them at a later date
Resolution Analytics Platform	RAP	Analytics tool which is used to, among other things, analyze QFCs for resolution planning purposes
Resolution Capital Adequacy and Positioning	RCAP	Resolution planning capability identified by the Agencies, which represents the ability to estimate adequate levels of external total loss absorbing capacity to support the Firm's ability to absorb losses in stress scenarios as well as determine the appropriate positioning of internal loss absorbing capacity between MS Parent and each of the Material Entities
Resolution Capital Execution Need	RCEN	Resolution planning capability identified by the Agencies, which represents the methodology for estimating the capital that each Material Entity requires for the execution of the Firm's Resolution Strategy

TERM	ACRONYM	DEFINITION
Resolution Capital Minimum		Capital required for a Material Entity to remain well-capitalized during the Resolution Period
Resolution Financial Model		The Firm's model that produces pro-forma balance sheets and other quantitative information as well as estimates of funding, liquidity and capital needs over the Runway Period, Stabilization Period and Resolution Period. This model was previously referred to as the Resolution CFP, or R-CFP
Resolution Liquidity Adequacy and Positioning	RLAP	A resolution planning capability identified by the Agencies, which represents the ability to estimate and maintain sufficient available liquidity for Material Entities, while taking into account resolution considerations and inter-affiliate frictions, including ring-fencing
Resolution Liquidity Execution Need	RLEN	A resolution planning capability identified by the Agencies, which represents the methodology for estimating the liquidity needed after the MS Parent's bankruptcy filing to stabilize the surviving Material Entities and to allow those entities to operate post-filing
Resolution Liquidity Stress Test	RLST	The Resolution Liquidity Stress Test is a new component of the Resolution Financial Model and includes enhanced methodologies for liquidity forecasting in resolution.
Resolution Period		Period of time between MS Parent's bankruptcy filing and the completion of the Resolution Strategy
Resolution Plan	2019 Plan	The Firm Resolution Plan, which is one and the same with the 165(d) Plan and accordingly addresses all applicable requirements
Resolution Plan Review and Challenge Framework		Framework to review Resolution Financial Model results
Resolution Strategy		The Firm's resolution strategy under which MS Parent files for bankruptcy and its Material Entitles are sold or wound down
Resolvability		A Firm is resolvable if it is feasible and credible that it can be resolved without excessive disruption to the financial system or interruption to the provision of Critical Functions
Risk Weighted Assets	RWAs	
Royal Bank of Canada	RBC	Canadian bank and diversified financial services company
RRP Steering Committee	RRP Committee	RRP governance committee that ensures sufficiency of planning process, makes key RRP strategy and policy decisions, develops consensus positions on external RRP-related issues and approves the plan and recommends it to the Operating Committee for approval
Runway Period		A resolution preparation interval, signifying Material Financial Distress, between the Distress Trigger and Bankruptcy Filing Date, not to exceed 30 days
Secured Funding		Collateralized forms of lending such as repurchase agreements, securities lending transactions and financing total return swaps. Secured funding liabilities are managed centrally across the Firm by Bank Resource Management together with secured funding assets, such as reverse repurchase agreements and securities borrowing transactions
Securities and Exchange Commission	SEC	
Security Agreement		Agreement creating perfected security interests in assets of MS Parent and the Funding IHC that could be contributed to the Material Entities
Senior Management		Refers broadly to direct reports of the Chairman and Chief Executive Officer of the Firm

TERM	ACRONYM	DEFINITION
Service Level Agreement	SLA	A contract between a service provider and a service recipient that defines the service expected from the service provider and the pricing and/or any other consideration provided by the service recipient
Service Taxonomy		Describes the nature of services being provided between a service provider and receiver
Services		Describes the sum of one or more activities between a provider and a receiver, performed to support businesses
Shared Services		Services provided by a support function where the cost of the service is shared across multiple businesses and/or legal entities. Technology and Data, Operations, BRM, Finance, LCD, Risk Management, Administration (including Corporate Services, BCP, and HR) Internal Audit, and Research are all Shared Services
Shared Services Command		Firm function that helps to identify, assess, escalate and mitigate potential risks related to shared services
Single Point of Entry	SPOE	A resolution strategy that involves rapidly recapitalizing the material entities of a top-tier bank holding company prior to the top-tier bank holding company's failure and its commencement of Chapter 11 proceedings. The material entities would then either (i) be transferred to a newly created holding company owned by a trust for the sole and exclusive benefit of the bankrupt top-tier holding company's creditors or (ii) remain under the bankrupt top-tier holding company as debtor-in possession. The Resolution Strategy contemplates the latter
Stabilization Period		Refers to the first portion of the Resolution Period during which Prime Brokerage customers are requesting transfer of their assets to third-party providers and the Firm processes such transfers
Strategic Contract Repository Ecosystem	SCORE	Set of approved repositories for the storage of shared services contracts. Enhanced operational metadata is also captured for Critical Contracts to enable search capabilities across the repositories
Strategic Warehouse of Operational Relationship Data	SWORD	Repository used to manage and maintain the Firm's operational mapping data
Support Agreement		The Firm's 2019 Amended and Restated Support and Subordination Agreement
Support Agreement Framework		Comprised of (i) triggers to escalate information to the MS Parent Board, (ii) a Support Agreement to facilitate the injection of necessary financial resources into Material Entities and (iii) a Security Agreement to secure MS Parent's support obligations to the Material Entities, all designed to facilitate timely execution of required board actions and provision of financial resources in a manner that is resilient to potential MS Parent creditor challenges
Support and Control Function	SCF	Non-revenue generating organizations that facilitate the Firm's BU activities
Support Completion Period		Period of time after a Support Trigger and prior to an MS Parent bankruptcy filing during which MS Parent downstreams its remaining contributable assets to Funding IHC
Support Triggers		Point at which MS Parent would be required to contribute to the Funding IHC its remaining contributable assets
System		A functioning set of technology-related components that together provide a set of capabilities (e.g., applications, business EUC, utilities/tools and vendor products)
Technology		Division of the Firm that supports all of the Firm’s Critical Functions through technical solutions designed and developed specifically for the business. Key activities include: system and application development, data and network security, infrastructure, system operations and disaster recovery.

TERM	ACRONYM	DEFINITION
Three Pillars of Resolution Planning		Strategic and Legal Framework, Financial Adequacy and Operational Continuity and Capabilities
Total Loss Absorbing Capacity	TLAC	
Transitional Services Agreement	TSA	Contract between two parties in a divestiture that provides essential services in a variety of functional areas for the business in transition following its legal separation from the seller
Trigger and Escalation Framework		The Firm's framework containing triggers based on capital and liquidity metrics which prescribe when the Firm must take clearly identified actions and initiate related communications to implement the Resolution Strategy
UK Financial Conduct Authority	FCA	
UK Prudential Regulation Authority	PRA	A UK regulatory agency created as a part of the Bank of England by the Financial Services Act of 2012
Wealth Management	WM	Segment of the Firm that provides investment solutions designed to accommodate individual investment objectives, risk tolerance and liquidity needs
WM Sale Package		Refers to the in-scope business and functional capabilities of WM, including key business processes, personnel, systems, applications, vendors, facilities and intellectual property that would be included within the sales in a resolution scenario.