Morgan Stanley

2017 Dodd-Frank Act Annual Stress Test (DFAST)

Submitted to the Federal Reserve Bank on April 5th, 2017

(Includes Morgan Stanley Bank, N.A. and Morgan Stanley Private Bank, National Association)

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A Disclaimer

The results summarized in section D, G and H of the presentation herein contain forward-looking projections based on the hypothetical, severely adverse economic scenario as prescribed by the Board of Governors of the Federal Reserve System (the “Federal Reserve”) and documented in section C. The estimates also reflect certain required assumptions regarding Morgan Stanley’s (the “Company’s”) capital actions, which are described in section B. The quantitative outputs and qualitative discussion herein should not be viewed as forecasts of expected outcomes or capital ratios or as a measure of the solvency or actual financial performance or condition of the Company or its U.S. bank operating subsidiaries, including Morgan Stanley Bank, N.A. (“MSBNA”) and Morgan Stanley Private Bank, National Association (“MSPBNA”). Instead, the outputs and discussions are estimates from forward-looking exercises that consider possible outcomes based on hypothetical, highly adverse economic scenarios.

The outputs of the analyses and the discussion contained herein may not align with those produced by the Federal Reserve or other financial institutions conducting similar exercises, even if similar hypothetical stress scenarios were used, due to differences in methodologies and assumptions used to produce those outputs. In addition, the results contained herein may not be comparable to results of prior stress tests conducted by the Company, the Federal Reserve or other financial institutions due to the evolving regulatory framework, evolving macro economic and market environment and other factors.

B Requirements for Annual Dodd-Frank Act Stress Test (1 of 2)

- In October 2014, the Federal Reserve issued a final rule to modify the regulations for capital planning and stress testing contained in the existing capital plan and stress testing rules. As amended, this final rule set forth the Supervisory and Company-Run Stress Test Requirements for Bank Holding Companies ("BHCs") with total consolidated assets of $50 billion or more ("Covered Company"), including the Company.

- The rule requires Covered Companies to disclose publicly the results of their run of the Federal Reserve's Supervisory Severely Adverse stress scenario, which describes the hypothetical evolution of certain specific macroeconomic and market variables consistent with a severely adverse recession.

- The planning horizon begins with actual results as of **December 31, 2016** and includes a nine quarter forecast beginning with the **first quarter of 2017** and ending with the **first quarter of 2019.**

- The Company is required to employ the following assumptions (the "Dodd-Frank Act Stress Testing Capital Actions") regarding its projected capital actions beginning with the second quarter of the nine quarter forecast horizon:
  - Payment of common dividends equal to the quarterly average dollar amount of common stock dividends paid over the past four quarters;
  - Payments on any other instrument eligible for inclusion in the numerator of a regulatory capital ratio equal to the stated dividend, interest or principal due on such instrument;
  - No redemption or repurchase of any capital instrument eligible for inclusion in the numerator of a regulatory capital ratio; and
  - No issuances of common stock or preferred stock, except for issuances related to expensed employee compensation or in connection with a planned merger or acquisition.

- The results of the Company's stress test, under the Company's Severely Adverse Stress Scenario assuming the Dodd-Frank Act Stress Testing Capital Actions, are documented under section D "Company-Run Dodd-Frank Act Stress Test – Holding Company" included herein.

B Requirements for Annual Dodd-Frank Act Stress Test (2 of 2)

- Additionally, as one of the six large BHCs with substantial trading and counterparty exposures, the Company was required to apply a hypothetical, instantaneous global market shock to its trading book, private equity positions and counterparty credit exposures as of the market close on January 4, 2017[(1)].
- As one of eight large BHCs with substantial trading or custodial operations, the Company was also required to incorporate the hypothetical, instantaneous and unexpected default of its largest counterparty across its derivatives and securities financing transaction activities into the supervisory stress scenarios. The as-of date for the counterparty default scenario component was also January 4, 2017.
- The results of the Company's stress test, under the Supervisory Severely Adverse Stress Scenario assuming the Dodd-Frank Stress Testing Capital Actions, are documented under section D "Company-Run Dodd-Frank Stress Test – Holding Company" included herein.
- The results of MSBNA's stress test, under the Supervisory Severely Adverse and Supervisory Adverse Stress scenarios, are documented under section G "Company-Run Dodd-Frank Stress Test – MSBNA" included herein.
- The results of MSPBNA's stress test, under the Supervisory Severely Adverse Stress Scenario, are documented under section H "Company-Run Dodd-Frank Stress Test – MSPBNA" included herein.
- The results of the Company, MSBNA, and MSPBNA's stress tests, under the Supervisory Scenarios, are pursuant to the 2017 supervisory instructions.

1. Consistent with the Federal Reserve requirement to use a business day during the week of January 3, 2017 that corresponds to a BHC's weekly internal risk reporting cycle

C Description of the Company-Run Dodd-Frank Stress Test Scenario

- The Company-Run Dodd-Frank Supervisory Severely Adverse stress scenario (the "Supervisory Severely Adverse Scenario"), assuming the Dodd-Frank Act Stress Testing Capital Actions, is characterized by a severe Global recession that is accompanied by a period of heightened stress in the corporate loan markets and commercial real estate. Specifically, the Supervisory Severely Adverse Scenario reflects a collapse of credit markets, declines in equity markets, and a significant deterioration in the macroeconomic environment. The Supervisory Severely Adverse Scenario stressed several key macroeconomic and market variables including but not limited to those discussed herein.
  - U.S. and Eurozone Real GDP YoY% growth rates are projected to both be negative 5.9% at the trough, compared with the historical annual growth rates of 1 - 2%. Real GDP YoY% growth in both regions remains negative throughout most of the forecasting period, with very slight recovery in Q1 2019 (Euro) and Q4 2018 (US).
  - Equity market indices experience a sharp decline during the first year of the forecast horizon – both S&P 500 and the MSCI World Index decline by approximately 50% at the trough in Q4 2017. The U.S. equity market volatility, as measured by the VIX index, peaks at approximately 69 during Q1 2017. Additionally, oil prices decline by approximately 60% by Q3 2017.
  - Both equity and commodity prices begin to recover during the later quarters of the forecast horizon, but remain below their starting points at the end of the forecast horizon in Q1 2019.
  - Fed Funds rate remains low at 36 bps throughout the later quarters of the forecast horizon (vs. 46 bps in Q1 2017 - Q3 2017). Additionally, BBB credit spreads widen to ~620 bps at the peak and recover to about 325 bps by Q1 2019.

D Company-Run Dodd-Frank Stress Test – Holding Company (1 of 6)

Capital Ratios, Actual Q4 2016 and Projected Q1 2017 – Q1 2019
Under the Supervisory Severely Adverse Scenario

Regulatory Ratio	Actual Q4 2016	Projected Stressed Capital Ratios [1] [2]		Regulatory Minimum
		Ending[3]	Minimum	
Common Equity Tier 1 Capital Ratio	17.8%	11.8%	11.8%	4.5%
Tier 1 Risk-Based Capital Ratio	20.0%	14.1%	14.1%	6.0%
Total Risk-Based Capital Ratio	23.2%	17.3%	17.3%	8.0%
Tier 1 Leverage Ratio	8.4%	6.8%	6.8%	4.0%
Supplementary Leverage Ratio[4]	6.4%	5.4%	5.4%	3.0%

1. The capital ratios are calculated based on the Dodd-Frank Act Stress Testing Capital Actions described on page 4. These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. These estimates are not forecasts of expected losses, revenues, net income before taxes, or capital ratios.
2. With respect to the Common Equity Tier 1, Tier 1 and Total Risk-based Capital ratios, the U.S. Basel III standardized approach is used to calculate risk-weighted assets (“RWA”) for credit risk and market risk. In addition, the numerator for 2016 and 2017 reflects the U.S. Basel III transitional rules.
3. The most significant cause of reduction in capital ratios under the Supervisory Severely Adverse Scenario resulted from trading and counterparty losses that were modeled to occur in the first quarter of the forecast horizon. Ending capital ratios under the Supervisory Severely Adverse Scenario reflected the ongoing accretion of earnings, net of operational risk and credit losses, the phase-in of numerator deductions, as well as the level of assets and RWAs projected through the forecast horizon.
4. Compliance with the SLR minimum is required starting January 1, 2018. Accordingly, the projected ending and minimum capital ratios are reflective of Q1 2018 – Q1 2019.

Company-Run Dodd-Frank Stress Test – Holding Company (2 of 6)

Risk-Weighted Assets, Actual Q4 2016 and Projected Q1 2019 Under the Supervisory Severely Adverse Scenario

(Billions of Dollars)

Item	Actual Q4 2016	Projected Q1 2019
Risk-Weighted Assets[1]	$340	$372

1. Actual and projected RWAs are calculated using the Basel III Standardized approach.

D Company-Run Dodd-Frank Stress Test – Holding Company (3 of 6)

Projected Losses, Revenues, and Net Income before Taxes through Q1 2019 Under the Supervisory Severely Adverse Scenario

Item	Billions of Dollars	Percent of Average Assets[(1)]
Pre-Provision Net Revenue	$5.6	0.7%
Other Revenue[(2)]	N/A	
Less		
Provisions	$4.4	
Realized Losses/Gains on Securities (AFS / HTM)[(3)]	$0.1	
Trading and Counterparty Losses[(4)]	$9.8	
Other Losses/Gains[(5)]	$2.6	
Equals		
Net Income before Taxes	**($11.2)**	**(1.5)%**
Memo Items		
Other Comprehensive Income[(6)]	$0.7	
Other Effects on Capital	*4Q 2016*	*Q1 2019*
AOCI Included in Capital (in Billion Dollars) [(7)]	($2.2)	($1.9)

1. Average assets reflect the nine-quarter average of total assets.
2. Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.
3. Represents available-for-sale (“AFS”) securities and held-to-maturity (“HTM”) securities.
4. Trading and counterparty losses include mark-to-market and credit valuation adjustments (“CVA”) losses and losses arising from the counterparty default component scenario applied to derivatives and securities lending, and repurchase agreement activities.
5. Other losses/gains include projected change in value of loans held for sale and loans measured under the fair-value option.
6. Represents the change over the forecast horizon. Other comprehensive income primarily includes incremental unrealized losses/gains on AFS securities, defined benefit pension plan and projected changes in the Cumulative Translation Adjustment.
7. Represents the inception-to-date balance of accumulated other comprehensive income (“AOCI”) as of Q4 2016 and Q1 2019, adjusted to include 60% of unrealized gains or losses on AFS securities and defined benefit pension plan in the 2016 capital calculations, 80% of unrealized gains or losses on AFS securities and defined benefit pension plan in the 2017 capital calculations and 100% of unrealized gains or losses on AFS securities and defined benefit pension plan in the 2018 and Q1 2019 capital calculations.

D Company-Run Dodd-Frank Stress Test – Holding Company (4 of 6)

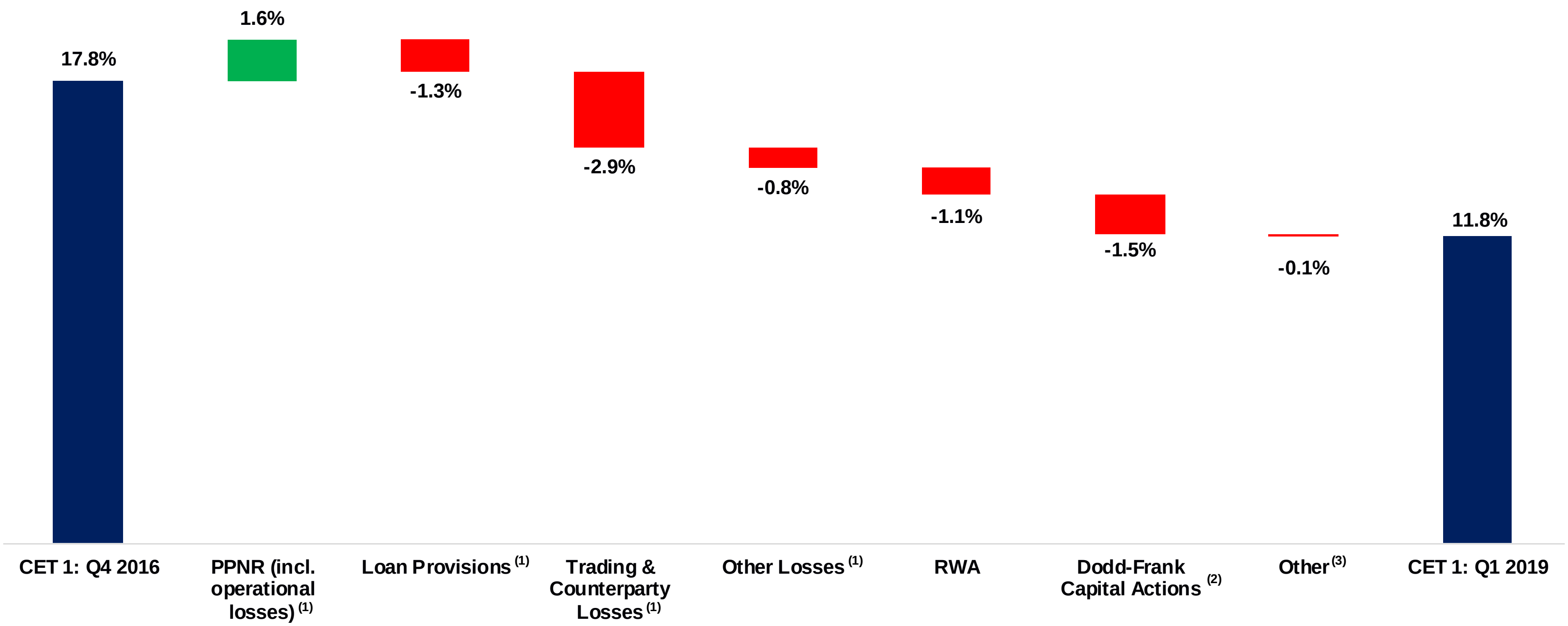
Projected Loan Losses, by Type of Loan, 1Q 2017 – 1Q 2019
Under the Supervisory Severely Adverse Scenario

Loan Type	Billions of Dollars[1]	Portfolio Loss Rates (Percent)
First-Lien Mortgages, Domestic	$0.3	1.2%
Junior Liens and HELOCs, Domestic	$0.0	4.2%
Commercial and Industrial	$1.3	9.2%
Commercial Real Estate, Domestic	$0.4	4.2%
Credit Cards	N/A	N/A
Other Consumer	$0.0	0.2%
Other Loans[2]	$0.6	1.6%
Total Projected Loan Losses	**$2.7**	**2.5%**

1. Average loan balances used to calculate portfolio loss rates exclude loans held for sale and loans measured at fair value and are calculated over nine quarters. Portfolio loss rates represent cumulative portfolio losses as a percentage of the average loan portfolio balance.
2. Other loans include loans to depositories and other financial institutions and loans for purchasing or carrying securities.

D Company-Run Dodd-Frank Stress Test – Holding Company (5 of 6)

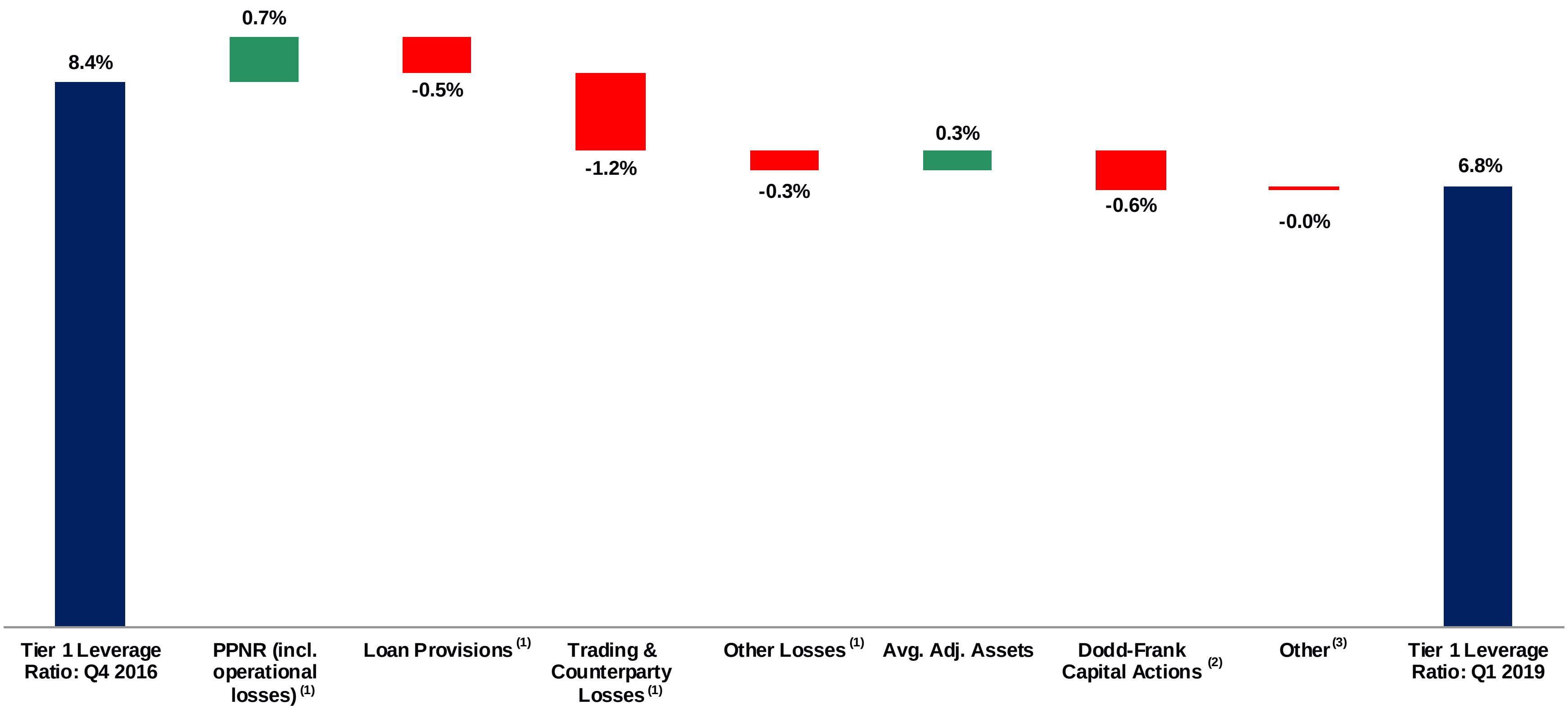
Key Drivers of Common Equity Tier 1 Capital Ratio ("CET 1") Under the Supervisory Severely Adverse Scenario



1. Reflects pre-tax impact.
2. Reflects share repurchases (Q1 2017 only) and cash dividends declared on common stock and preferred stock in accordance with the assumptions prescribed in the Dodd Frank Act Stress Testing Capital Actions, which are discussed on page 4.
3. Other includes changes in Common Equity Tier 1 deductions over the forecast horizon, employee incentive plan share issuance, AOCI, tax provisions, realized gains/losses on AFS / HTM Securities, Discontinued Operations, and Earnings Attributable to Non-Controlling Interests.

Company-Run Dodd-Frank Stress Test – Holding Company (6 of 6)

Key Drivers of Tier 1 Leverage Ratio
Under the Supervisory Severely Adverse Scenario



1. Reflects pre-tax impact.
2. Reflects share repurchases (Q1 2017 only) and cash dividends declared on common stock and preferred stock in accordance with the assumptions prescribed in the Dodd Frank Act Stress Testing Capital Actions, which are discussed on page 4.
3. Other includes changes in Tier 1 Capital deductions over the forecast horizon, employee incentive plan share issuance, AOCI, tax provisions, realized gains/losses on AFS / HTM Securities, Discontinued Operations, and Earnings Attributable to Non-Controlling Interests.

E Key Risks Captured in Dodd-Frank Stress Test (1 of 2)

The below risks are those inherent in Morgan Stanley's business activities and included in the Supervisory stressed scenario.

Credit Risk	Risk of loss arising when a borrower, counterparty or issuer does not meet its financial obligations to the Firm. This risk arises from a variety of business activities, including but not limited to lending commitments, over-the-counter derivatives, securities financing transactions, listed derivatives, and prime brokerage margin lending.
Market Risk	The risk caused by a change in the level of one or more market prices, implied volatilities (the price volatility of the underlying instrument imputed from option prices), correlations or other market factors, such as market liquidity, which will result in losses for a position or portfolio owned by the Firm. Market risks impacting the Firm include the level and volatility of equity prices, debt and commodity prices, interest rates, currency values and other market indices.
Funding / Liquidity Risk	Liquidity and funding risk refers to the risk that the Firm will be unable to finance its operations due to a loss of access to the capital markets or difficulty in liquidating its assets. Liquidity and funding risk also encompasses the Firm's ability (or perceived ability) to meet its financial obligations without experiencing significant business disruption or reputational damage that may threaten its viability as a going concern.

E Key Risks Captured in Dodd-Frank Stress Test (2 of 2)

Earnings at Risk	Risks to baseline earnings that can arise from stressed macroeconomic conditions, departure of key revenue generators, significant loss of customer base, reduced standing amongst competitors, idiosyncratic or industrywide factors, significant changes to expected expenses and shifting of business/product mix.
Reputational Risk	Risk of baseline earnings degradation due to change in the Firm's perception in the marketplace driven by activities of third parties affiliated with the Firm or by actions of the Firm, its officers or employees, creating negative publicity and damage to the Firm's reputation.
Strategic Risk	Risk that threatens the effective and efficient execution of the Firm's strategic business initiatives or could pose a material risk to the Firm's capital adequacy, reputation or regulatory standing.
Capital and RWA Risk	Risks to the Firm's spot or projected capital ratios due to adverse movement in the drivers of capital (numerator) and RWA, balance sheet or off-balance sheet items (denominator).
Operational Risk	The risk of loss, or of damage to the Firm's reputation, resulting from inadequate or failed processes, people and systems or from external events (e.g., fraud, theft, legal and compliance risks, cyber attacks or damage to physical assets).

F Forecasting Methodologies – Dodd-Frank Severely Adverse (1 of 3)

Overview

- The Company's capital ratios under the Company-Run Supervisory Severely Adverse Scenario reflect the effect of the hypothetical macroeconomic and market environment on the revenues, expenses and the resources (e.g., assets and headcount) available to the Company's business segments as well as market, credit and operational risk loss projections.
- Under the Company-Run Supervisory Severely Adverse Scenario, the Company employed appropriate forecast methodologies to project the impact of the hypothetical assumptions over the forecast time horizon.
- Several of these forecast methodologies were partially regression driven, with certain limitations that are inherent in all types of regression models. The models contain various assumptions such as the historical relationships between Company performance and relevant macroeconomic and market variables as well as expectations of customer behavior. Changes to these assumptions can materially affect forecast results.

Pre-Provision Net Revenue ("PPNR")

- The Company's forecast reflects a detailed process in which each major business developed a projection of PPNR over the nine-quarter forecast horizon. The projection considered:
  - Key macroeconomic and market variables that historically demonstrated the highest correlation to the level and growth rate of industry and Company business volumes and net revenues;
  - The business' expectations of customer behavior and industry dynamics under the scenario; and
  - The impact of reduced market activity on operating costs, including projected headcount reductions and lower brokerage and clearing expenses, partially offset by an increase in operational risk losses.

Forecasting Methodologies – Supervisory Severely Adverse (2 of 3)

- Operational Risk's Methodology is comprised of Baseline Loss & Incremental Stress Loss:
  - Baseline Loss: Calculated through a Regression Model based on the correlation of internal loss data to select macroeconomic variables or the average nine-quarter loss using the Company's loss history (11 years)
  - Incremental Stress Loss: Calculated through the aggregation of stressed outcomes of all material pending litigation matters in the Firm's Litigation Docket and leverages the Company's Scenario Analysis process to select and aggregate idiosyncratic scenarios.

Balance Sheet

- Balance sheet forecasts were developed with each of the business segments and were analytically driven by multiple elements, including the prescribed macroeconomic and market variable paths and historical data.

Risk-Weighted Assets

- The Company's RWA forecast reflects the application of the Standardized Approach under US Basel III for the Common Equity Tier 1, Tier 1 Capital and Total Capital Ratios.
- The Company's methodology aligned projections of standardized market and credit risk calculations to projected movements in the balance sheet and tied projections of model-driven market RWAs to the macroeconomic and market variables included in the forecast.

F Forecasting Methodologies – Supervisory Severely Adverse (3 of 3)

Losses

- Market and Credit risk stress loss projections included trading positions, private equity investments, counterparty exposures, loans held for investment, held for sale, or carried at fair value, and available for sale securities.
- Stress losses on the Company's mark-to-market trading, private equity and counterparty risk portfolios were estimated by applying the Supervisory Severely Adverse Scenario global market shock.
- Losses for counterparty default were computed by applying the prescribed shocks and the prescribed recovery rate to the relevant exposures, and assuming the default of the largest counterparty. Additionally, losses arising from the impact of issuer defaults on trading positions were also captured.
- Default losses on corporate, commercial and residential real estate loans were estimated using stressed probability-of-default, loss-given-default and exposure-at-default under the Supervisory Severely Adverse Scenario macroeconomic and market environment. Additionally, mark-to-market stress losses were calculated on loans held for sale and carried at fair value, and losses due to increases in allowance for credit loss were projected for loans held for investment.

Capital Position

- The Company's capital position was projected by aggregating revenue and loss estimates as outlined above and deriving their respective impacts on the levels of Common Equity Tier 1 Capital, Tier 1 Capital and Total Capital on a quarterly basis over the nine-quarter forecast horizon.

Company-Run Dodd-Frank Stress Test – MSBNA

Capital Ratios, Actual Q4 2016 and Projected Q1 2017 – Q1 2019 Under the Supervisory Severely Adverse Scenario

Regulatory Ratio	Actual Q4 2016[2]	Projected Stressed Capital Ratios[1][2] (Q1 2017 - Q1 2019)	
		Ending[3]	Minimum[3][4]
Common Equity Tier 1 Capital Ratio	16.9%	18.9%	15.7%
Tier 1 Risk-Based Capital Ratio	16.9%	18.9%	15.7%
Total Risk-Based Capital Ratio	18.7%	20.0%	16.1%
Tier 1 Leverage Ratio	10.5%	11.7%	10.4%
Supplementary Leverage Ratio[5]	7.7%	9.0%	8.4%

1. These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. These estimates are not forecasts of expected losses, revenues, net income before taxes, or capital ratios.
2. With respect to the Common Equity Tier 1, Tier 1 and Total Risk-based Capital ratios, the U.S. Basel III standardized approach is used to calculate risk-weighted assets ("RWA") for credit risk and market risk. In addition, the numerator for 2016 and 2017 reflects the U.S. Basel III transitional rules.
3. The most significant cause of reduction in capital ratios under the Supervisory Severely Adverse Scenario resulted from loan and operational risk losses. Ending capital ratios under the Supervisory Severely Adverse Scenario reflected the ongoing accretion of earnings, net of operational risk and credit losses, as well as the level of assets and RWAs projected through the forecast horizon.
4. The MSBNA Supervisory Adverse Scenario results in immaterially lower ratios in one quarter of the nine quarter projections.
5. Compliance with the SLR minimums is required starting January 1, 2018. Accordingly, the projected ending and minimum capital ratios are reflective of Q1 2018 – Q1 2019.

Note: The forecast methodologies for MSBNA DFAST Stress Test results are similar to those utilized for the Company (described on pages 15-17) – except for the following: The Operational Risk loss estimates involve a Loss Distribution Approach using Scenario Analysis estimates; MSBNA was not required to include the counterparty default scenario or the global market shock component in its Annual DFAST results.

H Company-Run Dodd-Frank Stress Test – MSPBNA

Capital Ratios, Actual Q4 2016 and Projected Q1 2017 – Q1 2019 Under the Supervisory Severely Adverse Scenario

Regulatory Ratio	Actual Q4 2016[2]	Projected Stressed Capital Ratios[1][2] (Q1 2017 - Q1 2019)	
		Ending[3]	Minimum[3]
Common Equity Tier 1 Capital Ratio	26.1%	25.1%	25.1%
Tier 1 Risk-Based Capital Ratio	26.1%	25.1%	25.1%
Total Risk-Based Capital Ratio	26.3%	26.4%	26.4%
Tier 1 Leverage Ratio	10.6%	9.4%	9.4%
Supplementary Leverage Ratio[4]	10.1%	8.9%	8.9%

1. These projections represent hypothetical estimates that involve an economic outcome that is more adverse than expected. These estimates are not forecasts of expected losses, revenues, net income before taxes, or capital ratios.
2. With respect to the Common Equity Tier 1, Tier 1 and Total Risk-based Capital ratios, the U.S. Basel III standardized approach is used to calculate risk-weighted assets ("RWA") for credit risk and market risk. In addition, the numerator for 2016 and 2017 reflects the U.S. Basel III transitional rules.
3. The most significant cause of reduction in capital ratios under the Supervisory Severely Adverse Scenario resulted from loan and operational risk losses, as well as asset and RWA projections. Ending capital ratios under the Supervisory Severely Adverse Scenario reflected the ongoing accretion of earnings, net of operational risk and credit losses, as well as the level of assets and RWAs projected through the forecast horizon.
4. Compliance with the SLR minimums is required starting January 1, 2018. Accordingly, the projected ending and minimum capital ratios are reflective of Q1 2018 – Q1 2019.

Note: The forecast methodologies for MSPBNA DFAST Stress Test results are similar to those utilized for the Company (described on pages 15-17) – except for the following: The Operational Risk loss estimates involve a Loss Distribution Approach using Scenario Analysis estimates; MSPBNA was not required to include the counterparty default scenario or the global market shock component in its Annual DFAST results.