

Morgan Stanley



2016 Dodd-Frank Act Annual Stress Test (DFAST)

Company-Run Dodd-Frank Stress Test Submitted to the Federal Reserve Bank on April 5, 2016

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

Table of Contents

Sections

Page

A	Disclaimer	3
B	Requirements for Dodd-Frank Stress Test	4-5
C	Company-Run Dodd Frank Stress Test – Holding Company	6-10
D	Forecast Methodologies – Supervisory Severely Adverse Scenario	11-13
E	Company-Run Dodd-Frank Stress Test – Morgan Stanley Bank, N.A.	14
F	Company-Run Dodd-Frank Stress Test – Morgan Stanley Private Bank, National Association	15-16

A Disclaimer

The results summarized in sections C, E, and F of the document herein contain forward-looking projections that represent estimates based on the hypothetical, severely adverse economic scenario prescribed by the Board of Governors of the Federal Reserve System (the “Federal Reserve”). The estimates also reflect certain required assumptions regarding Morgan Stanley’s (the “Company’s”) capital actions, which are described on page 4. 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 Dodd-Frank 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 test 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, 2015 and includes a nine quarter forecast beginning with the first quarter of 2016 and ending with the first quarter of 2018.
- Each Covered 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; and
 - No redemption or repurchase of any capital instrument eligible for inclusion in the numerator of a regulatory capital ratio.

B Requirements for Dodd-Frank 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 6, 2016⁽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 6, 2016⁽¹⁾.
- 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 C "Company-Run Dodd-Frank Stress Test – Holding Company" included herein.
- The results of MSBNA's stress test, under the Supervisory Severely Adverse Stress Scenario, are documented under section E "Company-Run Dodd-Frank Stress Test – MSBNA" included herein.
- The results of MSPBNA's stress test, under the Supervisory Severely Adverse and Supervisory Adverse stress scenarios, are documented under section F "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 2016 supervisory instructions.

1. Consistent with the Federal Reserve requirement to use a business day during the week of January 4, 2016 that corresponds to a BHC's weekly internal risk reporting cycle.

© Company-Run Dodd-Frank Stress Test – Holding Company (1 of 5)

Capital Ratios, Actual Q4 2015 and Projected Q1 2016 – Q1 2018 Under the Supervisory Severely Adverse Scenario

Regulatory Ratio	Actual Q4 2015 ⁽²⁾	Projected Stressed Capital Ratios ^{(1) (2)} (Q1 2016 - Q1 2018)	
		Ending ⁽³⁾	Minimum
Common Equity Tier 1 Capital Ratio	16.4%	9.4%	9.4%
Tier 1 Risk-Based Capital Ratio	18.4%	11.0%	11.0%
Total Risk-Based Capital Ratio	22.0%	14.1%	14.1%
Tier 1 Leverage Ratio	8.3%	5.8%	5.8%

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 all quarters 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 modelled 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.

© Company-Run Dodd-Frank Stress Test – Holding Company (2 of 5)

Risk-Weighted Assets, Actual Q4 2015 and Projected Q1 2018 Under the Supervisory Severely Adverse Scenario

Item	Actual Q4 2015	Projected Q1 2018
Risk-Weighted Assets ⁽¹⁾	\$363	\$406

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

© Company-Run Dodd-Frank Stress Test – Holding Company (3 of 5)

Projected Losses, Revenues, and Net Income before Taxes through Q1 2018 Under the Supervisory Severely Adverse Scenario

Item	Billions of Dollars	Percent of Average Assets ⁽¹⁾
Pre-Provision Net Revenue ⁽²⁾	\$6.0	0.8%
Other Revenue ⁽³⁾	-	
<i>Less</i>		
Provisions	\$3.8	
Realized Losses/Gains on Securities (AFS / HTM) ⁽⁴⁾	\$0.1	
Trading and Counterparty Losses ⁽⁵⁾	\$11.9	
Other Losses/Gains ⁽⁶⁾	\$3.4	
<i>Equals</i>		
Net Income before Taxes	(\$13.2)	(1.7)%
Memo Items		
Other Comprehensive Income ⁽⁷⁾	\$0.5	
<i>Other Effects on Capital</i>	Q4 2015	Q1 2018
AOCI Included in Capital (Billions of Dollars) ⁽⁸⁾	(\$1.2)	(\$1.2)

1. Average assets reflect the nine-quarter average of total assets.
2. Pre-provision net revenue includes losses from operational risk events, mortgage put-back expenses and other real estate owned (“OREO”) costs.
3. Other revenue includes one-time income and (expense) items not included in pre-provision net revenue.
4. Represents available-for-sale (“AFS”) securities and held-to-maturity (“HTM”) securities.
5. 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.
6. Other losses/gains include projected stress losses on loans measured at fair value.
7. 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.
8. Represents the inception-to-date balance of all other comprehensive income (“AOCI”) as of Q4 2015 and Q1 2018, 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 Q1 2018 capital calculations.

© Company-Run Dodd-Frank Stress Test – Holding Company (4 of 5)

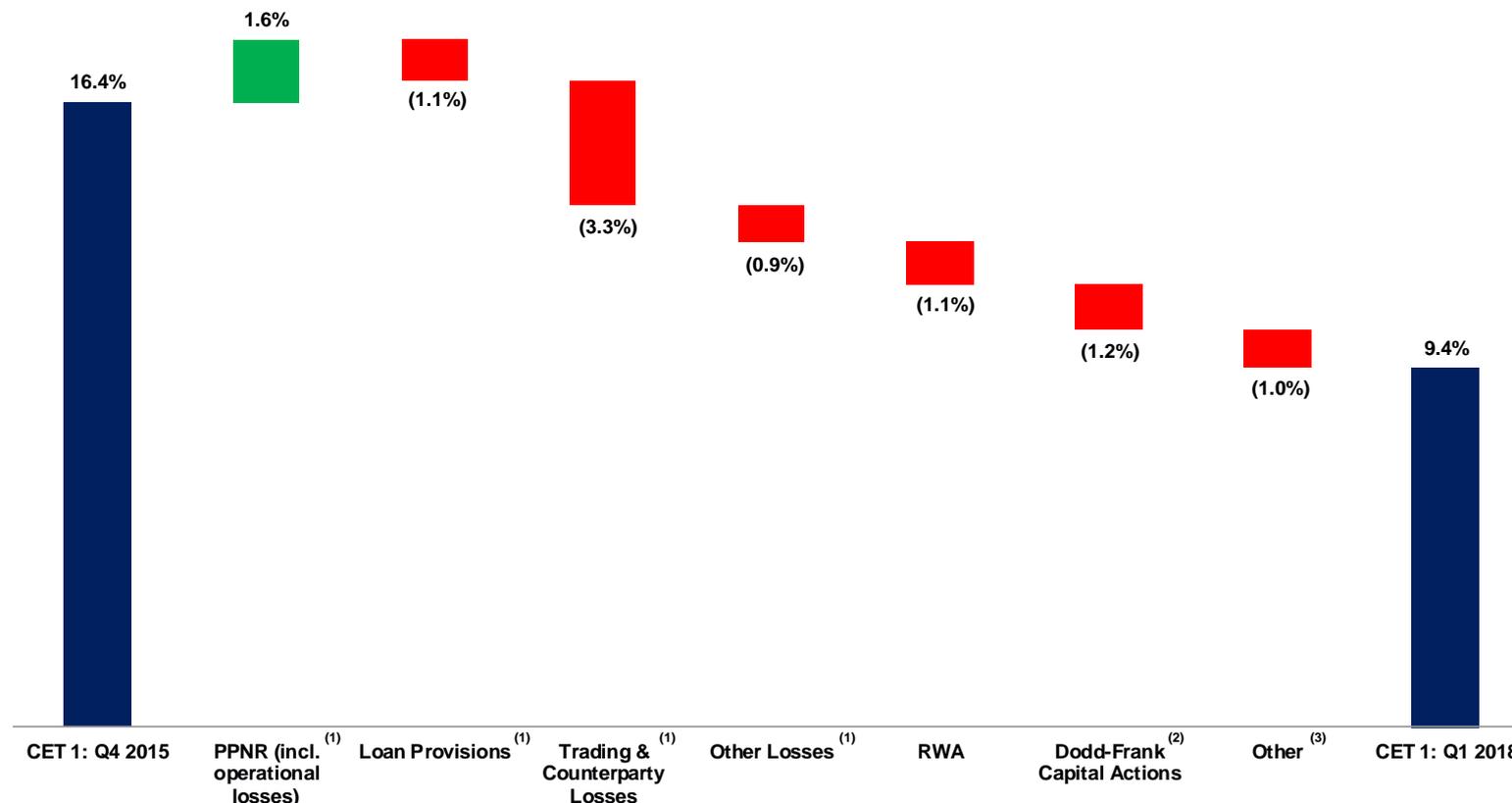
Projected Loan Losses, by Type of Loan, Q1 2016 - Q1 2018 Under the Supervisory Severely Adverse Scenario

Loan Type	Billions of Dollars ⁽¹⁾	Portfolio Loss Rates (Percent)
First-Lien Mortgages, Domestic	\$0.3	1.3%
Junior Liens and HELOCs, Domestic	\$0.0	5.2%
Commercial and Industrial	\$1.6	8.7%
Commercial Real Estate, Domestic	\$0.4	4.9%
Credit Cards	-	-
Other Consumer	\$0.0	0.3%
Other Loans ⁽²⁾	\$0.7	1.8%
Total Projected Loan Losses	\$3.1	2.9%

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.

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

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 2016 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.

D Forecasting Methodologies – Supervisory 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 estimate the impact of the hypothetical assumptions over the forecast time horizon.
- Several of these forecast methodologies were model driven, with certain limitations that are inherent in all types of models. The models contain various assumptions such as the historical relationships between the 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.

D Forecasting Methodologies – Supervisory Severely Adverse (2 of 3)

- Operational risk's methodology comprised of aggregation of Baseline Loss & Incremental Stress Loss:
 - Baseline Loss: Calculated using the average nine-quarter loss using the Company's entire database (10 years of data); and
 - Incremental Stress Loss: Leverages the Company's Scenario Analysis process to select and aggregate Litigation and Non-Litigation scenarios, which stress the Company's operational risk vulnerabilities.

Balance Sheet

- Balance sheet forecasts were developed by each of the business segments and were driven by multiple elements, including the prescribed macroeconomic and market variable paths, historical data and balance sheet limits.
- The Company also applied return on asset calculations in certain cases to evaluate the reasonability and consistency of revenue and balance sheet projections.

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 Company's forecast.

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

Losses

- Market and Credit risk stress loss projections included mark-to-market trading positions, private equity investments, credit valuation adjustments, counterparty default, loans held for investment, loans held for sale, loans carried at fair value, and available for sale securities.
- Stress losses on the Company's mark-to-market trading, private equity and CVA portfolios were estimated by applying the Federal Reserve's prescribed global market shock.
- Losses for counterparty default were computed by applying the prescribed shocks and the prescribed recovery rate to the relevant exposures. The stressed default losses of the counterparties were then rank ordered and the largest counterparty was selected.
- Loan losses for corporate, commercial and residential real estate loans were estimated using stressed Probability of Default, Loss Given Default and Exposure At Default under the Federal Reserve's prescribed hypothetical macroeconomic and market environment.

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.

E Company-Run Dodd-Frank Stress Test – MSBNA

Capital Ratios, Actual Q4 2015 and Projected Q1 2016 – Q1 2018 Under the Supervisory Severely Adverse Scenario

Regulatory Ratio	Actual Q4 2015 ⁽²⁾	Projected Stressed Capital Ratios ^{(1) (2)} (Q1 2016 - Q1 2018)	
		Ending ⁽³⁾	Minimum
Common Equity Tier 1 Capital Ratio	15.1%	13.6%	11.8%
Tier 1 Risk-Based Capital Ratio	15.1%	13.6%	11.8%
Total Risk-Based Capital Ratio	17.1%	15.8%	13.8%
Tier 1 Leverage Ratio	10.2%	11.0%	9.1%

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. The minimum capital ratios do not necessarily occur in the same quarter of the planning horizon.
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 all quarters reflects the U.S. Basel III transitional rules.
3. The most significant cause of change in capital ratios under the Supervisory Severely Adverse Scenario resulted from loan and operational risk losses and planned dividends over the planning horizon, as well as counterparty losses that were modelled to occur in the first quarter of the forecast horizon. Ending capital ratios under the Supervisory Severely Adverse Scenario reflected the planned capital actions, 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.

Note: The forecast methodologies for MSBNA DFAST Stress Test results are similar to those utilized for the Company (described on pages 11-13) – except for the continued use of the Basel III methodologies for Operational Risk loss estimates, which involve a loss distribution approach rather than historical average.

F Company-Run Dodd-Frank Stress Test – MSPBNA

Capital Ratios, Actual Q4 2015 and Projected Q1 2016 – Q1 2018 Under the Supervisory Severely Adverse Scenario

Regulatory Ratio	Actual Q4 2015 ⁽²⁾	Projected Stressed Capital Ratios ^{(1) (2)} (Q1 2016 - Q1 2018)	
		Ending ⁽³⁾	Minimum
Common Equity Tier 1 Capital Ratio	26.5%	26.5%	26.5%
Tier 1 Risk-Based Capital Ratio	26.5%	26.5%	26.5%
Total Risk-Based Capital Ratio	26.7%	26.8%	26.8%
Tier 1 Leverage Ratio	10.5%	9.6%	9.1%

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. The minimum capital ratios do not necessarily occur in the same quarter of the planning horizon.
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 all quarters reflects the U.S. Basel III transitional rules.
3. Ending capital ratios under the Supervisory Severely Adverse Scenario reflected the planned capital actions, 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.

Note: The forecast methodologies for MSPBNA DFAST Stress Test results are similar to those utilized for the Company (described on pages 11-13) – except for the continued use of the Basel III methodologies for Operational Risk loss estimates, which involve a loss distribution approach rather than historical average. The largest counterparty default and global market shock components are not applicable to MSPBNA.

F Company-Run Dodd-Frank Stress Test – MSPBNA

Capital Ratios, Actual Q4 2015 and Projected Q1 2016 – Q1 2018 Under the Supervisory Adverse Scenario

Because certain of MSPBNA's capital ratios under the Supervisory Adverse Scenario are lower than those under the Supervisory Severely Adverse Scenario, capital ratios under the Supervisory Adverse Scenario are documented below. The lower risk-based ratios are driven by increased RWAs from higher business growth under the Supervisory Adverse Scenario. Unlike MSPBNA, the Holding Company and MSBNA capital ratios under the Supervisory Adverse Scenario are higher than those under Severely Adverse and therefore not documented herein.

Regulatory Ratio	Actual Q4 2015 ⁽²⁾	Projected Stressed Capital Ratios ^{(1) (2)} (Q1 2016 - Q1 2018)	
		Ending ⁽³⁾	Minimum
Common Equity Tier 1 Capital Ratio	26.5%	25.8%	25.8%
Tier 1 Risk-Based Capital Ratio	26.5%	25.8%	25.8%
Total Risk-Based Capital Ratio	26.7%	26.0%	26.0%
Tier 1 Leverage Ratio	10.5%	9.2%	9.2%

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. The minimum capital ratios do not necessarily occur in the same quarter of the planning horizon.
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 all quarters reflects the U.S. Basel III transitional rules.
3. The most significant cause of change in capital ratios under the Supervisory Adverse Scenario resulted from loan and operational risk losses. Ending capital ratios under the Supervisory Adverse Scenario reflected the planned capital actions, 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.

Note: The forecast methodologies for MSPBNA DFAST Stress Test results are similar to those utilized for the Company (described on pages 11-13) – except for the continued use of the Basel III methodologies for Operational Risk loss estimates, which involve a loss distribution approach rather than historical average. The largest counterparty default and global market shock components are not applicable to MSPBNA.