Fannie Mae™

2018 Annual Stress Testing Disclosure

Results of the FHFA Supervisory Severely Adverse Scenario

As Required by the Dodd-Frank Wall Street Reform and Consumer Protection Act

Executive Summary

- Fannie Mae is required to conduct an annual stress test to assess capital adequacy under the Federal Housing Finance Agency ("FHFA") rule implementing the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank Act") and to publicly disclose the results of the Dodd-Frank Act Stress Test ("DFAST") Severely Adverse scenario.
  - The 2018 Severely Adverse scenario reflects a severe global recession characterized by home price and commercial real estate price declines of 30% and 40%, respectively.
- Fannie Mae has been operating under conservatorship since September 6, 2008, under the direction of FHFA, as Conservator. Fannie Mae is subject to the Senior Preferred Stock Purchase Agreement ("PSPA") with the U.S. Department of the Treasury ("Treasury").
- Under the PSPA, Treasury has provided Fannie Mae with a funding commitment to eliminate deficits in our net worth. After eliminating the net worth deficit as of December 31, 2017, $113.9B of the funding commitment remained available.
- As instructed by FHFA, Fannie Mae is disclosing two versions of stress testing results, one that does not reflect the establishment of a valuation allowance ("VA") against deferred tax assets ("DTA") and one that does reflect the establishment of a VA in Q1 2018. The 2018 DFAST results over 9 quarters ending March 31, 2020, based on data as of December 31, 2017, indicate:
  - Under the Severely Adverse scenario <u>without</u> establishing a VA on our DTA, Fannie Mae would utilize an additional $19.8B of funding from Treasury, leaving $94.0B of remaining PSPA funding.
  - Under the Severely Adverse scenario <u>with</u> establishing a VA on our DTA, Fannie Mae would utilize an additional $42.6B of funding from Treasury, leaving $71.3B of remaining PSPA funding.

Note: The Severely Adverse scenario is not an expected forecast, but a hypothetical stress scenario using Fannie Mae's internal projections by applying the rules and conditions set forth by FHFA. See appendix for additional information.

2018 Severely Adverse Scenario Overview

- The 2018 Severely Adverse scenario features a severe global recession accompanied by a global aversion to long-term fixed-income assets. The 2018 scenario features a more severe downturn in the U.S. economy as compared to last year's scenario.
- Key economic variables during the 9-quarter forecast horizon, as prescribed by FHFA, include:

Macroeconomic Variables	
Residential House Price Decline	-30%
Commercial Real Estate Price Decline	-40%
Real Gross Domestic Product Decline (Peak-to-Trough)	-7.5%
Unemployment Rate (Peak)	10%
Interest Rate Variables	
Mortgage Rate (Ending)	5.5%
10-year Treasury Yield (Ending)	2.4%
3-month Treasury Rate (Ending)	0.1%

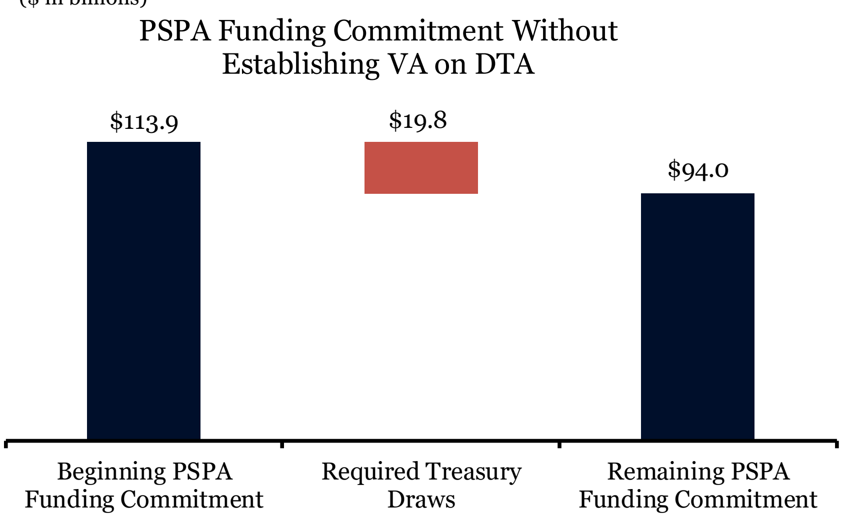
- The Severely Adverse scenario also assumes a global market shock ("GMS") to the economic drivers of asset prices and a counterparty default scenario component ("CDC"). These aspects are viewed as exogenous to the economic environment specified in the scenario.
  - GMS and CDC results are taken as instantaneous losses and reduction of capital in the first quarter of the forecast horizon without any future recoveries.
  - As specified by FHFA, results include the greater fair value loss of either the GMS or the macroeconomic scenario.

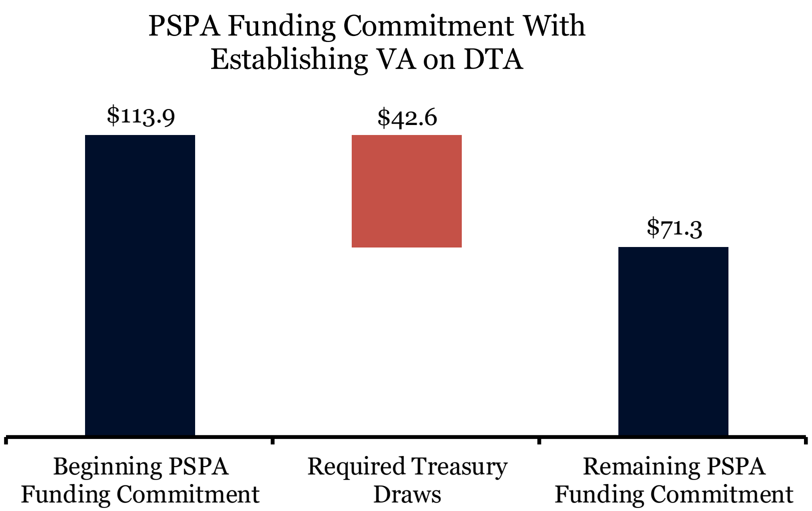
Note: The Severely Adverse scenario is not an expected forecast, but a hypothetical stress scenario using Fannie Mae's internal projections by applying the rules and conditions set forth by FHFA. See appendix for additional information.

Capital and PSPA Funding Commitment

- The FHFA-prescribed stress test assesses capital adequacy through the sufficiency of the remaining funding commitment under the PSPA.
  - As a result of our agreements with the Treasury and directives from FHFA, we are not permitted to retain more than $3.0 billion in capital reserves or to pay dividends or other distributions to stockholders other than Treasury.
  - After receiving funds to eliminate Fannie Mae's net worth deficit as of December 31, 2017, the amount of funding available under the PSPA is $113.9B.
- Results of the 2018 Severely Adverse scenario show substantial funding available under the PSPA.

($ in billions)





Note: Numbers may not sum due to rounding.

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2018 Severely Adverse Scenario Stress Test Results

		Cumulative Projected Financial Metrics (Q1 2018 - Q1 2020)				
		Results without establishing valuation allowance on deferred tax assets		Impact of establishing valuation allowance on deferred tax assets	Results with establishing valuation allowance on deferred tax assets	
		$ in billions	% of avg assets[6]		$ in billions	% of avg assets[6]
1	Pre-provision net revenue[1]	$10.5	0.33%	-	$10.5	0.34%
2	(Provision) benefit for credit losses	(41.1)		-	(41.1)	
3	Mark-to-market gains (losses)[2]	9.3		-	9.3	
4	Global market shock impact on trading securities and counterparty	(3.2)		-	(3.2)	
5	Net income before taxes	($24.4)	-0.77%	-	($24.4)	-0.78%
6	(Provision) benefit for taxes	5.3		(22.8)	(17.4)	
7	Other comprehensive income (loss)[3]	(0.7)		-	(0.7)	
8	Total comprehensive income (loss)	($19.8)	-0.63%	($22.8)	($42.6)	-1.36%
9	Dividends paid	-		-	-	
10	PSPA funding commitment as of December 31, 2017	113.9		-	113.9	
11	Required Treasury draws	19.8		22.8	42.6	
12	Remaining PSPA funding commitment	$94.0		($22.8)	$71.3	
13	Credit losses[4]	(13.9)			(13.9)	
14	Credit losses (% of average portfolio balance)[5]	0.43%			0.43%	

Note: Numbers may not sum due to rounding.

[1] Includes net interest income, security impairments, operational risk losses, foreclosed property income (expense), and other non-interest income/expenses.

[2] Includes fair value gains (losses) on derivative and trading securities and other gains (losses) on investment securities not captured in the global market shock impact.

[3] Includes global market shock impact on available-for-sale securities.

[4] Credit losses are defined as charge-offs, net plus foreclosed property expenses.

[5] Average portfolio balance over the nine-quarter planning horizon.

[6] Average total assets over the nine-quarter planning horizon and affected by establishment of DTA.

Note: The Severely Adverse scenario is not an expected forecast, but a hypothetical stress scenario using Fannie Mae's internal projections by applying the rules and conditions set forth by FHFA. See appendix for additional information.

Appendix

- General Information
- Key Risk Methodologies
- Severely Adverse Scenario – Key Prescribed Variables

General Information

- Fannie Mae's projections under the Severely Adverse scenario comply with the instructions provided by FHFA, using Fannie Mae's internal stress testing process and methodologies, which are summarized on the following pages.

- The 2018 Severely Adverse scenario stress test results, as disclosed in this document or otherwise, should not be viewed as forecasts of expected or likely outcomes for Fannie Mae. Rather, these projections are based solely on FHFA's hypothetical Severely Adverse scenario and other specific conditions required to be assumed by Fannie Mae. These include model assumptions necessary to project and assess the impact of the Severely Adverse scenario on the results of operations and capital position of Fannie Mae.

- The 2018 Severely Adverse scenario stress test results included within this document have not been prepared under generally accepted accounting principles ("GAAP").

- Fannie Mae's financial information, prepared under GAAP, is available in reports filed with the Securities and Exchange Commission and on Fannie Mae's website, including Fannie Mae's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018.

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Mortgage Credit Risk Methodologies

- Mortgage credit risk is the risk of loss resulting from the failure of a borrower to make required mortgage payments. It impacts Fannie Mae's financial results through:
  - credit losses to reflect recently recognized losses on loans that Fannie Mae guarantees or owns, and
  - reduction or build in the loss allowance to reflect deteriorating or improving loan performance.
- Fannie Mae assesses mortgage credit risk through the use of macroeconomic and behavioral models.
  - These models project the likelihood of different borrower behaviors for prepayment, default, or modification at the loan level.
  - These projected behaviors vary according to the contractual terms of the mortgage, the borrower's characteristics, property types, current loan-to-value ratio and delinquency status as of the forecast date, and the projected market environment.

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Market Risk Methodologies

- Market risk is the risk of loss resulting from changes in the economic environment, arising from fluctuations in interest rates, available liquidity, and market rates or prices.
- Fannie Mae's retained mortgage portfolio and debt, derivative, and non-mortgage asset portfolio, while economically hedged, contain market risk that primarily impacts Fannie Mae's financial results through:
  - market value changes of held-for-trading ("HFT") securities, derivatives, and held-for-sale ("HFS") loans, recognized through net income, and
  - market value changes of available-for-sale ("AFS") securities, recognized through other comprehensive income ("OCI").
- Fannie Mae assesses market risk through the use of valuation models which incorporate behavioral models of mortgage performance and term structure models of the behavior of rates.
- We apply price and spread shocks prescribed by FHFA for the GMS to produce market value changes for our HFT and AFS security and HFS loan positions.
  - These shocks, characterized by large and sudden changes in asset prices, interest rates, and spreads, reflecting general market distress and heightened uncertainty, are applied to Fannie Mae's securities and HFS loans as of December 31, 2017, and, as required, are taken as an instantaneous loss and reduction of capital in Q1 2018, without future recoveries.
  - As instructed by FHFA, results reflect only the impact of the GMS, as it produced greater fair value losses than those produced by the macroeconomic scenario.

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Counterparty Risk Methodologies

- Counterparty risk is the risk that the parties with which we do business fail to meet their contractual obligations to us. Fannie Mae faces counterparty risk from our lender customers, mortgage insurers, derivative counterparties, and other financial institutions. Counterparty risk primarily impacts Fannie Mae's financial results through:
  - failures of credit enhancement providers, including mortgage insurers, mortgage reinsurers, financial guarantors, and recourse providers, to satisfy their contractual obligations to cover losses, and
  - inability of a counterparty to sufficiently cover losses through payment or collateral.
- The methodology for measuring losses from counterparty exposure is prescribed by FHFA in the DFAST counterparty default component ("CDC") guidance.
  - We are required to assess Fannie Mae's exposure to single-family mortgage insurers, multifamily credit enhancement counterparties, and derivatives and securities financing transactions counterparties.
  - The counterparty with the largest exposure after applying the counterparty default guidance is presumed to default.
- For the 2018 Severely Adverse scenario's CDC, a single-family mortgage insurer is determined to have the largest counterparty exposure, and the loss from default is recorded as expense in Q1 2018, without future recoveries.
- In addition to the CDC, counterparty risk is reflected in results through the application of FHFA-prescribed haircuts on the remaining single-family mortgage insurers.

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Operational Risk Methodologies

- Operational risk is the risk of loss resulting from inadequate or failed internal processes, people or systems, or from external events.
- Operational risk can impact Fannie Mae's financial results in a variety of ways, including:
  - errors,
  - fraudulent acts,
  - business interruptions,
  - inappropriate behavior of employees, and
  - business partners that do not perform in accordance with their arrangements.
- For the 2018 Severely Adverse scenario, operational risk is assessed across Fannie Mae's business activities using methods drawn from the Basel II standardized framework, by applying a factor to average annual gross income from 2015 through 2017.

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Other Methodologies

- Pre-provision net revenue
  - Fannie Mae determines net interest income over the 9 quarters by projecting portfolio balances and guaranty fee pricing and using the hypothetical macroeconomic variables provided, such as house prices, mortgage rates and debt spreads.
  - Non-interest income and expense are determined at the business level using relevant macroeconomic variables and appropriately conservative management assumptions.
- (Provision) benefit for credit losses
  - Fannie Mae estimates the provision or benefit for credit losses using the approaches described under Mortgage Credit Risk Methodologies.
  - Fannie Mae estimates the total loss reserves and related build or release by assessing the adequacy of the reserves based on the profile and performance of the loan portfolio under the hypothetical macroeconomic conditions specified in the Severely Adverse scenario.
- Mark-to-market gains (losses) and other comprehensive income (loss)
  - Fannie Mae estimates fair value gains (losses) using the approaches described under Market Risk Methodologies.
  - The impact of the GMS applied to Fannie Mae’s AFS positions is reflected in OCI and impairment gains (losses) during the first quarter of the forecast period, without subsequent recoveries. No other AFS losses are incorporated, as instructed by FHFA, since losses from the GMS are greater than those from the macroeconomic environment.

Note: The Severely Adverse scenario is not an expected forecast, but a hypothetical stress scenario using Fannie Mae’s internal projections by applying the rules and conditions set forth by FHFA.

Other Methodologies (continued)

- Deferred tax assets
  - As instructed by FHFA, Fannie Mae is disclosing two versions of stress testing results, one with and one without the establishment of a VA against the DTA in Q1 2018. The impact of the establishment of the VA is reflected in higher Treasury draws and a smaller remaining funding commitment under the PSPA.
- Management judgment and governance
  - Modeled projections and definitions of key business assumptions may be supplemented with management judgment in cases where data and historical relationships are insufficient to produce reliable results or model limitations require further adjustment to output.
  - Consistent application of judgment is governed through a cross-functional control and governance structure incorporating multiple levels of review, challenge, and approval.
  - Senior management and the Board of Directors review DFAST stress testing results. The Risk Policy and Capital Committee, a committee of the Board of Directors, reviews DFAST stress testing results and key assumptions, and also evaluates process and methodology weaknesses, limitations, and uncertainties.

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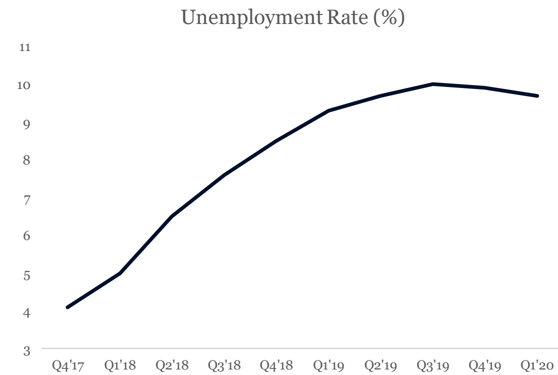
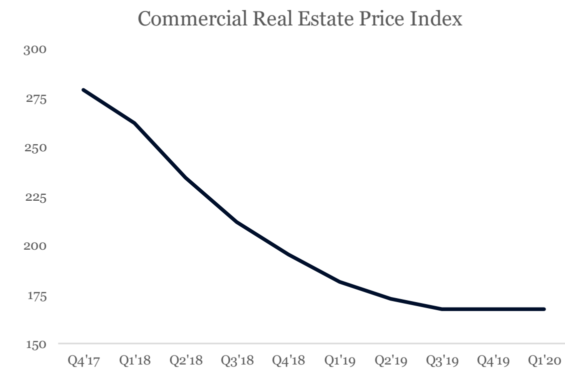
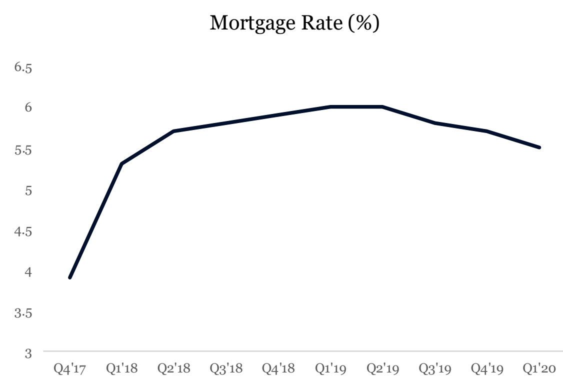
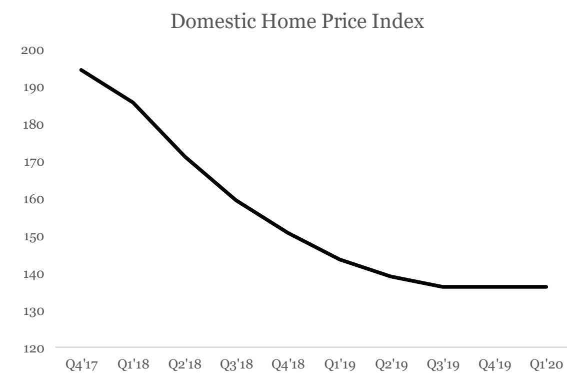
Severely Adverse Scenario – Key Prescribed Variables









Additional Prescribed Variables

- Market volatility index
- Yields on 3-month and 5-year Treasuries
- Market shocks to securitized products and municipal and agency bonds
- BBB corporate yield
- Prime rate
- Consumer Price Index (CPI) inflation rate

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