



DODD-FRANK ACT STRESS TESTS RESULTS SEVERELY ADVERSE SCENARIO

August 7, 2018



Federal Housing Finance Agency

Table of Contents

- I. Overview 2
- II. Summary of Severely Adverse Scenario Results 3
- III. Description of Severely Adverse Scenario..... 4
- IV. FHFA Guidance 5
- V. Severely Adverse Scenario Results Detail 6
 - Table 1: DFAST Severely Adverse Scenario Results – Combined 6
 - Table 2: DFAST Severely Adverse Scenario Results – Fannie Mae 7
 - Table 3: DFAST Severely Adverse Scenario Results – Freddie Mac 8

November 2022 Update:
Fannie Mae is reevaluating its 2018 stress test results and associated reporting due to the recent identification of errors in an underlying model. Once this evaluation is complete, an update will be posted. Until that update is posted, you should not rely on the information in this report for any purpose.



I. Overview

Fannie Mae and Freddie Mac (the “Enterprises”) are required to conduct annual stress tests pursuant to Federal Housing Finance Agency (FHFA) rule 12 CFR § 1238, which implements section 165(i)(2) of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”). Section 165(i)(2) of the Dodd-Frank Act requires certain financial companies that have total consolidated assets of more than \$10 billion and are regulated by a primary federal financial regulatory agency to conduct annual stress tests to determine whether the companies have the capital necessary to absorb losses as a result of adverse economic conditions. This is the fifth implementation of the Dodd-Frank Act Stress Tests (DFAST) for the Enterprises.

In September 2008, FHFA suspended capital requirements after placing Fannie Mae and Freddie Mac into conservatorships. The Senior Preferred Stock Purchase Agreements that were established between the Department of the Treasury and each Enterprise limit the amount of capital that each Enterprise can hold to a Capital Reserve Amount. Currently the Capital Reserve Amount is \$3 billion.

Notwithstanding the capital limits stipulated in the Senior Preferred Stock Purchase Agreements, FHFA requires the Enterprises to conduct DFAST annually in order to provide insight into risk exposure and potential sources of losses in the prescribed conditions. This report provides updated information on possible ranges of future financial results of the Enterprises under severely adverse conditions. The severely adverse conditions assumed are identical for both Enterprises.

The projections reported here are not expected outcomes. They are modeled projections in response to “what if” exercises based on assumptions about Enterprise operations, loan performance, macroeconomic and financial market conditions, and house prices. The projections do not define the full range of possible outcomes. Actual outcomes may be different.

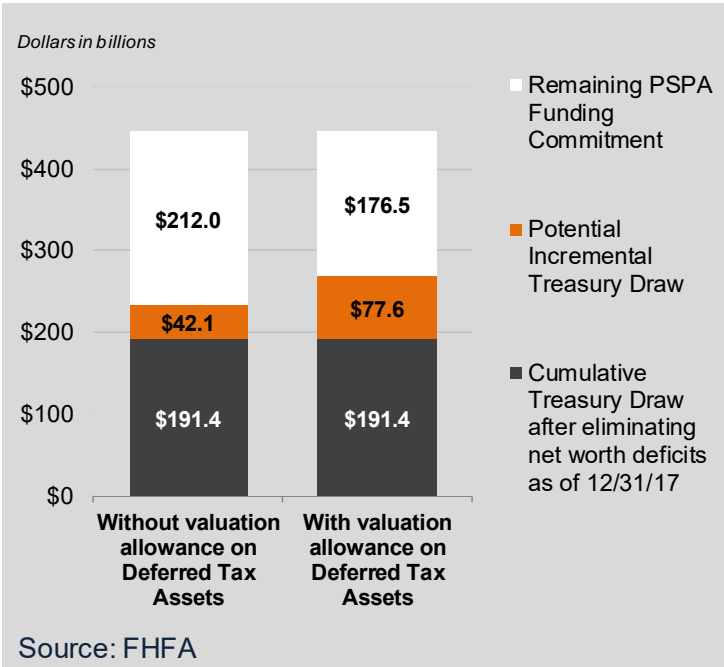
In prior years, the Enterprises applied a standard effective tax rate of 35 percent, consistent with the prevailing corporate tax rate. For the 2018 DFAST reporting cycle the standard effective tax rate was lowered to 21 percent, consistent with the current corporate tax rate under the Tax Cuts and Jobs Act signed into law on December 22, 2017.

The DFAST Severely Adverse scenario is described on page 4. The Enterprises used their respective internal models to project their financial results based on the assumptions provided by FHFA. While this results in a degree of comparability between the Enterprises, it does not eliminate differences in the Enterprises’ respective internal models, accounting differences, or management actions.



II. Summary of Severely Adverse Scenario Results

The Enterprises had drawn a combined \$191.4 billion from the Department of the Treasury under the terms of the Senior Preferred Stock Purchase Agreements (PSPAs), after receiving funds to eliminate the net worth deficits as of December 31, 2017. The combined remaining funding commitment under the PSPAs was \$254.1 billion. In the Severely Adverse scenario incremental Treasury draws are projected to range between \$42.1 billion and \$77.6 billion, depending on the treatment of deferred tax assets. The remaining funding commitment under the PSPAs after these projected draws would be \$212.0 billion without establishing valuation allowances on deferred tax assets, or \$176.5 billion if both Enterprises established valuation allowances on deferred tax assets.



Important contributors to losses in the Severely Adverse Scenario included the following:

- The provision for credit losses was the largest contributor to comprehensive losses at both Enterprises.
- The second largest contributor to comprehensive losses at both Enterprises was the global market shock impact on trading securities and available-for-sale securities.



- Comprehensive losses increased in the 2018 DFAST reporting cycle compared to the 2017 DFAST reporting cycle, mostly driven by the increase in provision for credit losses as a result of the more severe decline in home prices included in the 2018 DFAST Severely Adverse scenario.

III. Description of Severely Adverse Scenario

The 2018 DFAST Severely Adverse scenario is based upon a severe global recession which is accompanied by a global aversion to long-term fixed income assets. As a result, long term rates do not decline and yield curves steepen, leading to a broad based and severe correction in asset prices, including in the corporate bond and real estate sectors. The scenario is not a forecast, but instead is a hypothetical future economic environment designed to assess the strength of the Enterprises and other financial institutions and their resilience to unfavorable market conditions. The planning horizon for the implementation of the 2018 DFAST is over a nine-quarter period from December 31, 2017 through March 31, 2020.

In the 2018 DFAST Severely Adverse scenario, U.S. real GDP begins to decline immediately and reaches a trough in the third quarter of 2019 after a decline of 7.5 percent from the pre-recession peak. The rate of unemployment increases from 4.1 percent at the beginning of the planning horizon to a peak of 10.0 percent in the third quarter of 2019. The annualized consumer price inflation rate falls below 1 percent by the second quarter of 2018 and then rises to approximately 1.5 percent by the end of the planning horizon.

As a result of the severe decline in real economic activity and low inflation levels, short-term Treasury rates decline to near zero and remain there through the end of the planning horizon. However, the 10-year Treasury rate remains unchanged throughout the planning horizon, resulting in a steeper yield curve.

Due to these macroeconomic developments, asset prices decline sharply as financial conditions in corporate and real estate lending markets become severely stressed. Spreads on domestic investment-grade corporate bonds versus long-term Treasury securities increase to 5.75 percent by the beginning of 2019, while the spread between mortgage rates and the 10-year Treasury yield increases to about 3.5 percent over the same period. In addition, equity prices fall by approximately 65 percent from the start of the planning horizon through early 2019, and equity market volatility increases substantially. Home prices decline by 30 percent, and commercial real estate prices fall by 40 percent through the third quarter of 2019. These declines represent a more severe downturn in real estate



markets compared to the 25 percent home price decline and 35 percent commercial real estate price decline that applied in the 2017 DFAST reporting cycle.

The 2018 DFAST Severely Adverse scenario also includes a global market shock component that impacts the Enterprises' retained portfolios. The global market shock involves a sudden sharp increase in risk premiums and credit risk; an increase and steepening of the domestic yield curve; and a general selloff of U.S. assets. Markets that are closely linked to interest rates such as corporate debt, RMBS, and CMBS are impacted more severely compared to domestic equity markets. The major differences in the global market shock for this DFAST cycle compared to 2017 include the yield curve steepening, a weaker U.S. dollar compared to other advanced countries, and less severe price shocks on credit-sensitive assets such as non-agency MBS.

The global market shock also includes a counterparty default component that assumes the failure of each Enterprise's largest counterparty. The global market shock is treated as an instantaneous loss and reduction of capital in the first quarter of the planning horizon, and the scenario assumes no recovery of these losses by the Enterprises in future quarters. For those positions subject to the global market shock, FHFA directed the Enterprises to report the greater of the global market shock losses or the losses attributable to the macroeconomic scenario for the identical positions.

IV. FHFA Guidance

FHFA instructed the Enterprises to extrapolate any scenario variables beyond the projection date as required. FHFA provided a year of scenario assumptions beyond the nine-quarter planning horizon to be used by the Enterprises as needed. Additionally, FHFA provided historical data on scenario variables in the event that models required that information.

FHFA instructed the Enterprises to comply with the terms of the PSPAs, as amended, to determine the level of dividends to be paid during each quarter of the planning horizon.

FHFA communicated specific instructions to address particular issues relevant to the Enterprises' unique lines of business. FHFA required the Enterprises to use aligned regional house price paths to improve the comparability of stress test results. Additionally, FHFA broadened the definition of counterparties to be considered in the largest counterparty default component of the global market shock to include mortgage insurers and providers of multifamily credit enhancements.



V. Severely Adverse Scenario Results Detail

The following tables reflect the Enterprises’ results on the Dodd-Frank Act Stress Tests.

Table 1: DFAST Severely Adverse Scenario Results – Combined

	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	
	Billions of dollars	Percent of average assets ⁷		Billions of dollars	Percent of average assets ⁷
Pre-provision net revenue ¹	\$23.2	0.44%		\$23.2	0.45%
(Provision) benefit for credit losses	(64.6)	-1.23%		(64.6)	-1.24%
Mark-to-market gains (losses) ²	7.3	0.14%		7.3	0.14%
Global market shock impact on trading securities and counterparty ³	<u>(11.0)</u>	-0.21%		<u>(11.0)</u>	-0.21%
Net income before taxes	(45.1)	-0.86%		(45.1)	-0.87%
(Provision) benefit for taxes	9.7	0.18%	(35.5)	(25.8)	-0.50%
Other comprehensive income (loss) ⁴	<u>(6.5)</u>	-0.12%		<u>(6.5)</u>	-0.12%
Total comprehensive income (loss)	(41.9)	-0.80%	(35.5)	(77.4)	-1.49%
Dividends	-			-	
PSPA funding commitment as of December 31, 2017⁵	\$254.1			\$254.1	
Treasury draws required	<u>42.1</u>		<u>35.5</u>	<u>77.6</u>	
Remaining PSPA funding commitment	\$212.0		(35.5)	\$176.5	
Credit losses ⁶	(\$21.2)			(\$21.2)	
Credit losses (% of average portfolio balance)	0.40%			0.40%	

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.

³ Includes global market shock impact on held-for-sale loans.

⁴ Includes global market shock impact on available-for-sale securities.

⁵ Includes requested draws based on net worth deficits as of 12/31/17.

⁶ Credit losses are defined as charge-offs, net plus foreclosed property expenses.

⁷ Average total assets over the nine-quarter planning horizon.

Numbers may not foot due to rounding.



Dodd-Frank Act Stress Tests – Severely Adverse Scenario Results

Table 2: DFAST Severely Adverse Scenario Results – Fannie Mae

	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	
	Billions of dollars	Percent of average assets ⁷		Billions of dollars	Percent of average assets ⁷
Pre-provision net revenue ¹	\$10.5	0.33%		\$10.5	0.34%
(Provision) benefit for credit losses	(41.1)			(41.1)	
Mark-to-market gains (losses) ²	9.3			9.3	
Global market shock impact on trading securities and counterparty ³	<u>(3.2)</u>			<u>(3.2)</u>	
Net income before taxes	(24.4)	-0.77%		(24.4)	-0.78%
(Provision) benefit for taxes	5.3		(22.8)	(17.4)	
Other comprehensive income (loss) ⁴	<u>(0.7)</u>			<u>(0.7)</u>	
Total comprehensive income (loss)	(19.8)	-0.63%	(22.8)	(42.6)	-1.36%
Dividends	-			-	
PSPA funding commitment as of December 31, 2017⁵	\$113.9			\$113.9	
Treasury draws required	<u>19.8</u>		<u>22.8</u>	<u>42.6</u>	
Remaining PSPA funding commitment	\$94.0		(22.8)	\$71.3	
Credit losses ⁶	(\$13.9)			(\$13.9)	
Credit losses (% of average portfolio balance)	0.43%			0.43%	

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.

³ Includes global market shock impact on held-for-sale loans.

⁴ Includes global market shock impact on available-for-sale securities.

⁵ Includes requested draw based on net worth deficit as of 12/31/17.

⁶ Credit losses are defined as charge-offs, net plus foreclosed property expenses.

⁷ Average total assets over the nine-quarter planning horizon.

Numbers may not foot due to rounding.



Dodd-Frank Act Stress Tests – Severely Adverse Scenario Results

Table 3: DFAST Severely Adverse Scenario Results – Freddie Mac

	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	
	Billions of dollars	Percent of average assets ⁷		Billions of dollars	Percent of average assets ⁷
Pre-provision net revenue ¹	\$12.7	0.61%		\$12.7	0.62%
(Provision) benefit for credit losses	(23.5)			(23.5)	
Mark-to-market gains (losses) ²	(2.1)			(2.1)	
Global market shock impact on trading securities and counterparty ³	<u>(7.8)</u>			<u>(7.8)</u>	
Net income before taxes	(20.7)	-1.00%		(20.7)	-1.00%
(Provision) benefit for taxes	4.3		(12.7)	(8.4)	
Other comprehensive income (loss) ⁴	<u>(5.7)</u>			<u>(5.7)</u>	
Total comprehensive income (loss)	(22.1)	-1.06%	(12.7)	(34.8)	-1.68%
Dividends	-			-	
PSPA funding commitment as of December 31, 2017⁵	\$140.2			\$140.2	
Treasury draws required	<u>22.2</u>		<u>12.7</u>	<u>34.9</u>	
Remaining PSPA funding commitment	\$118.0		(\$12.7)	\$105.2	
Credit losses ⁶	(\$7.4)			(\$7.4)	
Credit losses (% of average portfolio balance)	0.34%			0.34%	

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.

³ Includes global market shock impact on held-for-sale loans.

⁴ Includes global market shock impact on available-for-sale securities.

⁵ Includes requested draw based on net worth deficit as of 12/31/17.

⁶ Credit losses are defined as charge-offs, net plus foreclosed property expenses.

⁷ Average total assets over the nine-quarter planning horizon.

Numbers may not foot due to rounding.

