2023 Dodd-Frank Act Stress Test Disclosure

Results of the FHFA Supervisory Severely Adverse Scenario

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

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Fannie Mae®

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Executive Summary

Fannie Mae is required by FHFA to complete stress testing in accordance with the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act).

- Fannie Mae conducted the annual Dodd-Frank Act Stress Test (DFAST) to assess capital adequacy over a nine-quarter projection period from Q1 2023 to Q1 2025. This document summarizes the stress test results based on the Severely Adverse scenario prescribed by FHFA. 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).

- Fannie Mae discloses the impact of the Severely Adverse scenario in two ways: without the establishment of a valuation allowance (VA) on deferred tax assets (DTA) and with the establishment of a VA in Q1 2023.

Without establishing a VA on DTA	**With** establishing a VA on DTA
Fannie Mae would recognize **$6.0B** of cumulative comprehensive *income* over the hypothetical stress scenario.	Fannie Mae would recognize **$7.8B** of cumulative comprehensive *loss* over the hypothetical stress scenario.

- Our 2023 DFAST results include our required common equity tier 1 (CET1) capital position under the Enterprise Regulatory Capital Framework (ERCF).

2023 Severely Adverse Scenario Overview

The 2023 Severely Adverse scenario features a severe global recession with prolonged declines in both residential and commercial real estate prices.

Key economic variables during the nine-quarter forecast horizon, as prescribed by FHFA, include:

	2023
Macroeconomic Variables	
Residential House Price Decline	-38%
Commercial Real Estate Price Decline	-40%
Real Gross Domestic Product Decline (Peak-to-Trough)	-9%
Unemployment Rate (Peak)	10%
Interest Rate Variables	
Mortgage Rate Decrease	-3.4%
10-year Treasury Yield Decline (Peak-to-Trough)	-3.1%
3-month Treasury Rate Decline (Peak-to-Trough)	-3.9%
Global Market Shock	
Residential Mortgage-Backed Security Price Shock	Up to -85%

In addition to the macroeconomic stress environment, the Severely Adverse scenario incorporates a global market shock (GMS) to asset prices and a counterparty default component (CDC). Both the GMS and the CDC are assumed to occur independent of the economic environment specified in the scenario and are assumed to occur in the first quarter of the forecast horizon without any future recoveries.

The GMS-affected positions are also forecasted under the macroeconomic scenario. FHFA guidance directs the inclusion of the greater loss (or smaller gain) from either the GMS or macroeconomic scenario forecast approach in the results.

4 *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).*

2023 Severely Adverse Scenario Results

| | Cumulative Projected Financial Metrics (Q1 2023 - Q1 2025) | | | | |
| | 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[7]		$ in billions	% of avg assets[7]
1 Pre-provision net revenue[1]	$ 32.4	0.74%		$ 32.4	0.74%
2 (Provision) benefit for credit losses	(16.6)			(16.6)	
3 Mark-to-market gains (losses)[2]	(6.2)			(6.2)	
4 Global market shock impact on trading securities and counterparty	(2.3)			(2.3)	
5 Net income before taxes	$ 7.3	0.17%		$ 7.3	0.17%
6 (Provision) benefit for taxes	(1.3)		(13.8)	(15.1)	
7 Other comprehensive income (loss)[3]	0.0			0.0	
8 Total comprehensive income (loss)	$ 6.0	0.14%	$ (13.8)	$ (7.8)	(0.18%)
9 Net Worth	66.2			52.5	
10 CET1 Capital[4]	(87.5)			(87.5)	
11 Credit losses[5]	(21.3)			(21.3)	
12 Credit losses (% of average portfolio balance)[6]	0.51%			0.51%	

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] Represents the Enterprises' hypothetical common equity tier 1 capital deficit as of March 31, 2025.

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

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

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

[5]

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 Risks – Definitions and Methodologies

Severely Adverse Scenario – Key Prescribed Variables

General Information

The 2023 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.

- Stress test 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.

- Fannie Mae's future financial results and condition will be influenced by actual economic and financial conditions and various other factors as described in reports filed with the Securities and Exchange Commission and available on Fannie Mae's website, including Fannie Mae's Annual Report on Form 10-K for the year ended December 31, 2022, and Quarterly Report on Form 10-Q for the quarter ended June 30, 2023.

- The 2023 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, 2023.

- The key risks assessed in the Severely Adverse scenario are Credit Risk (Mortgage and Counterparty), Market Risk, Liquidity and Funding Risk, and Operational Risk.

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.

Key Risks Assessed in Stress Test

The below risks are important to Fannie Mae's business and are projected using Fannie Mae's internal stress testing processes and methodologies, which are summarized on the following pages.

Risk Type	Definition
Mortgage Credit Risk	Risk of loss resulting from the failure of a borrower to make required mortgage payments.
Counterparty Credit Risk	Risk of loss resulting from the failure of an institutional counterparty to fulfill its contractual obligations.
Market Risk	Risk of loss resulting from changes in the economic environment, arising from fluctuations in interest rates, exchange rates, and other market rates and prices.
Liquidity and Funding Risk	Risk associated with the inability to meet contractual obligations, access funding, or manage fluctuations in funding levels.
Operational Risk	Risk of loss resulting from inadequate or failed internal processes, people and systems, or disruptions from external events.

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.

Mortgage Credit Risk

Definition: Risk of loss resulting from the failure of a borrower to make required mortgage payments.

Methodologies

- Fannie Mae uses macroeconomic and behavioral models that 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, loan-to-value ratio, and delinquency status as of the forecast date, and the projected market environment.

- Financial projections include certain offsets from credit enhancements, such as mortgage insurance and credit risk transfer transactions.

Potential impact to financials

Credit risk is reflected through:

- Losses on loans that Fannie Mae guarantees or owns. Loans are written off:
  - At foreclosure or other liquidation event,
  - Redesignation of loans from held-for-investment (HFI) to held-for-sale (HFS), or
  - When deemed uncollectible based on accounting policy and FHFA's Advisory Bulletin 2012-02.

- Improving or deteriorating loan profile and current and expected performance.

- Changes in loan profile that affect ERCF risk-weighted assets and capital requirements.

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.

Counterparty Credit Risk

Definition: Risk of loss resulting from the failure of an institutional counterparty to fulfill its contractual obligations.

Methodologies

- FHFA prescribes the methodology for the DFAST CDC.

- In the CDC, Fannie Mae is required to assess exposure to derivatives and securities financing transactions counterparties , and counterparties related to Single-Family and Multifamily businesses. These include single-family mortgage insurers, providers of multifamily credit enhancement, CRT reinsurance counterparties, and non-bank servicers. The counterparty with the largest exposure after applying the counterparty default guidance is presumed to default without future recoveries.

- In addition to the CDC, counterparty risk is reflected in results through the application of FHFA-prescribed haircuts on single-family mortgage insurers and reinsurer claims.

Potential impact to financials

Fannie Mae faces counterparty risk from lenders, mortgage insurers, reinsurers, and other financial institutions that could impact financial results through:

- Failures of credit enhancement providers, including mortgage insurers, mortgage reinsurers, and recourse providers, to satisfy their contractual obligations to cover losses.

- Inability of a counterparty to sufficiently cover losses through payment or collateral.

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.

Market Risk

Definition: Risk of loss resulting from changes in the economic environment, arising from fluctuations in interest rates, exchange rates, and other market rates and prices.

Methodologies

- Fannie Mae uses valuation models that incorporate mortgage performance and term rate structure behavioral models.

- To determine the impact of the GMS, the company applies price and spread shocks prescribed by FHFA. These shocks are characterized by large and sudden changes in asset prices, interest rates, and spreads.

- GMS shocks are applied to available-for-sale (AFS) and trading securities and held-for-sale (HFS) loans as of December 31, 2022, and as required, are taken as an instantaneous loss and reduction of capital in Q1 2023 without future recoveries.

- As specified by FHFA, results include the greater fair value loss (or smaller gain) of either the GMS or the macroeconomic scenario; for 2023, the GMS generated the smaller gain.

Potential impact to financials

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 trading securities, derivatives, debt held at fair value, HFS loans, and AFS securities.

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Liquidity and Funding Risk

Definition: Risk associated with the inability to meet contractual obligations, access funding, or manage fluctuations in funding levels.

Methodologies

- Fannie Mae uses models to forecast cash flow needs, including those associated with mortgage assets and debt obligations.

- Projected debt issuances in the DFAST Severely Adverse scenario align with continued adherence to Fannie Mae's liquidity objectives while remaining in compliance with regulatory constraints and limits. Cost of funding in the stress scenario is driven by the prescribed rate path and a spread-widening assumption.

Potential impact to financials

Funding and liquidity risk is reflected through changes in interest income on assets and interest expense on debt.

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.

Operational Risk

Definition: Risk of loss resulting from inadequate or failed internal processes, people or systems, or from external events.

Methodologies

- Fannie Mae uses methods drawn from the Basel II standardized framework by applying factors to average annual gross income from the trailing three years.

- The industry standard event types for operational risk, per the Basel Committee on Banking Supervision, are:
  - Internal fraud
  - External fraud
  - Employment practices and workplace safety
  - Clients, products, and business practice
  - Damage to physical assets
  - Business disruption and systems failures
  - Execution, delivery, and process, management

Potential impact to financials

Operational risk losses are recognized as an expense.

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

Pre-provision net revenue

- Fannie Mae estimates net interest income over the nine quarters by projecting portfolio balances and yields, as well as guaranty book size and pricing, using the hypothetical macroeconomic variables and scenario elements prescribed, such as house prices, mortgage rates, and debt spread widening.

- Non-interest income and expense are determined at the business segment level using relevant macroeconomic variables and appropriate management assumptions.

Provision for credit losses

- Fannie Mae estimates the provision 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)

- Fannie Mae estimates fair value gains (losses) using the approaches described under Market Risk Methodologies.

- Asset value gains from the GMS were smaller than those from the macroeconomic environment in the 2023 Severely Adverse scenario. Accordingly, line 4 ("Global Market Shock impact from trading securities and counterparty") on slide 5 includes the impact from gains (losses) on trading securities.

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 (DTA)

- As instructed by FHFA, Fannie Mae is disclosing two versions of stress testing results, one with and one without the establishment of a VA on DTA in Q1 2023.

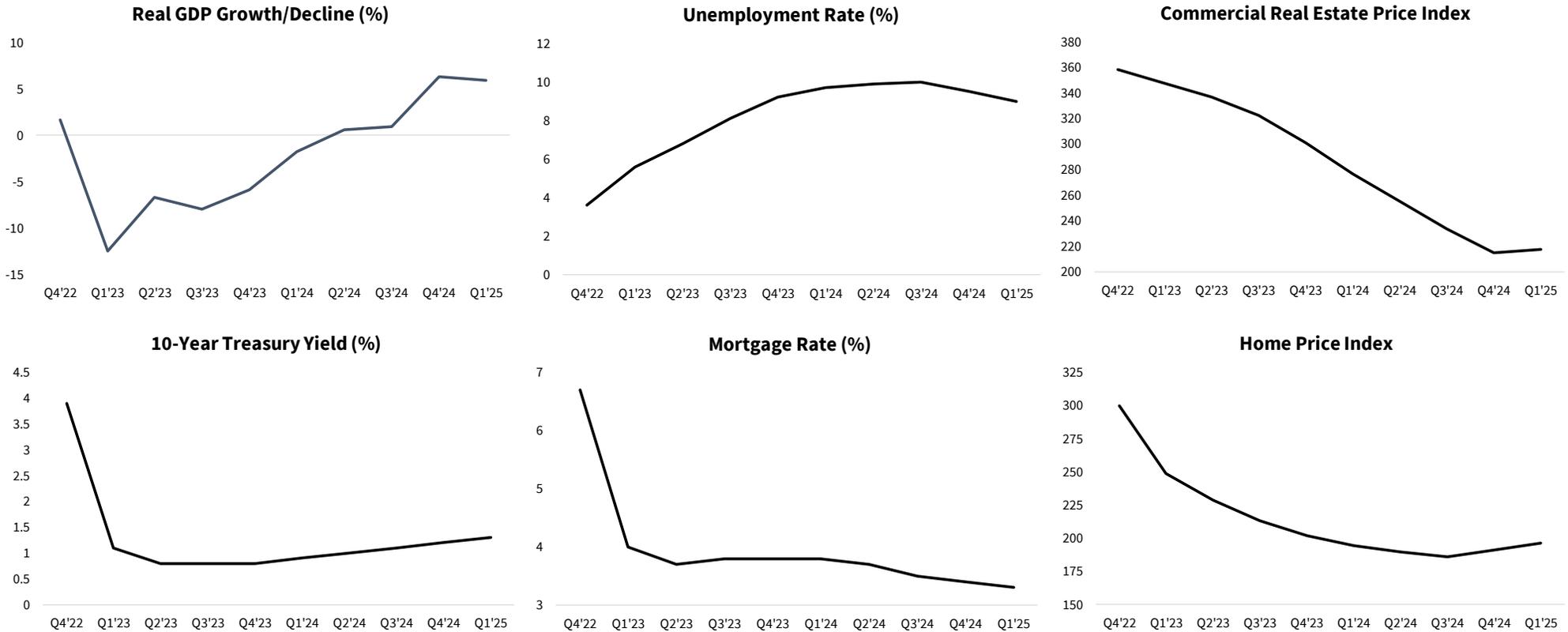**Enterprise Regulatory Capital Framework (ERCF)**

- FHFA's enterprise regulatory capital framework determines Fannie Mae's leverage and capital requirements.

- Fannie Mae calculates the ERCF's capital requirements, including prescribed capital conservation buffers, utilizing the standardized approach.

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 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.

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.

2023 Severely Adverse Scenario – Key Prescribed Variables

Real GDP Growth/Decline (%)

Unemployment Rate (%)

Commercial Real Estate Price Index

10-Year Treasury Yield (%)

Mortgage Rate (%)

Home Price Index

Additional Key Prescribed Variables

- Yields on short-term and long-term Treasuries
- Market shocks to securitized products and municipal and agency bonds
- Certain FHFA alignment guidance items (e.g., mortgage insurer haircuts)

- Prime rate
- Consumer Price Index (CPI) inflation rate
- Disposable income growth

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