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# FEDERAL HOUSING FINANCE AGENCY



## NEWS RELEASE

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### **FHFA Releases Projections Showing Range of Potential Draws for Fannie Mae and Freddie Mac**

**Washington, DC** – The Federal Housing Finance Agency (FHFA) today released projections of the financial performance of Fannie Mae and Freddie Mac (the Enterprises) including potential draws under the Preferred Stock Purchase Agreements (PSPAs) with the U.S. Department of the Treasury. To date, the Enterprises have drawn \$148 billion from the Treasury Department under the terms of the PSPAs. Under the three scenarios used in the projections, cumulative Enterprise draws range from \$221 billion to \$363 billion through 2013.

FHFA worked with the Enterprises to develop consistent, forward-looking projections across three possible house price paths. The approach taken in developing these projections is based roughly on the approach taken by the federal banking agencies last year in the Supervisory Capital Assessment Program, which produced potential, not expected outcomes.

“These projections are intended to give policymakers and the public useful snapshots of potential outcomes for the taxpayer support of Fannie Mae and Freddie Mac,” said FHFA Acting Director Edward J. DeMarco. “These are not predictions; the results reflect the potential effects of a limited set of hypothetical changes in house prices, a key variable driving credit losses for the Enterprises.”

The projected credit losses in each scenario primarily reflect possible further losses on the Enterprises’ pre-conservatorship mortgage business. As time passes, Enterprise dividend payments on Treasury preferred stock make up larger portions of the draws. Under the scenarios used in the projections, if dividend payments on preferred stock were excluded, cumulative Enterprise draws range from \$142 billion to \$259 billion.

“Much like the recently published Conservator’s Report, FHFA is releasing these projections to enhance public understanding of Fannie Mae’s and Freddie Mac’s financial performance,” DeMarco said.

FHFA will periodically update and refine these projections and will report the updates as part of its Conservator’s Report.

(Attachment follows)

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*The Federal Housing Finance Agency regulates Fannie Mae, Freddie Mac and the 12 Federal Home Loan Banks. These government-sponsored enterprises provide more than \$5.9 trillion in funding for the U.S. mortgage markets and financial institutions.*



Federal Housing Finance Agency

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Projections of the Enterprises' Financial Performance

October 2010

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## Purpose

- The purpose of this report is to provide the public with information on possible future Treasury draws by Fannie Mae and Freddie Mac (the “Enterprises”) under specified scenarios, using consistent assumptions for both Enterprises. FHFA will periodically update and refine these projections and will report such updates as part of its Conservator’s Report.
- To date, the Enterprises have drawn \$148 billion from the U.S. Treasury under the terms of the Senior Preferred Stock Purchase Agreements (PSPAs), as amended, between the Treasury and each of the Enterprises.
- To provide a sense of the Enterprises’ possible future draws under the PSPAs, FHFA worked with the Enterprises to develop consistent forward-looking financial projections. The results do not define the full range of possible outcomes. This effort should be interpreted as a sensitivity analysis of future draws to possible house price paths.

## Approach

- The approach taken in developing these projections is based roughly on the approach taken by the federal banking agencies last year in the Supervisory Capital Assessment Program (SCAP).<sup>1</sup> FHFA provided the Enterprises with key assumptions for each scenario. The Enterprises used their respective internal models to project their financial results based on the assumptions provided by FHFA.
- *As with SCAP, the results here are not expected outcomes. They are modeled projections in response to “what if” exercises based on assumptions about Enterprise operations, financial market conditions, and house prices.*
- While this effort achieves a degree of comparability between the Enterprises, it does not allow for actions that the Enterprises might undertake in response to the economic conditions specified in the scenarios. Those Enterprise-specific business changes could lead to different results across the scenarios than are presented in these projections.

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<sup>1</sup> The Supervisory Capital Assessment Program stress tests were conducted by the Federal Reserve System, the Federal Deposit Insurance Corporation, and the Office of the Comptroller of the Currency to assess the capital adequacy of U.S. domestic bank holding companies with assets above \$100 billion.

## Projection Scenarios

Key factors that influence the Enterprises' financial results are listed in Figure 1. FHFA requested that the Enterprises project financial results for three scenarios. Because changes in house prices have had the largest impact on the Enterprises' financial results, we chose to change only this factor across the three scenarios.

**Figure 1: Scenario Assumptions**

Factor	Scenario 1	Scenario 2	Scenario 3
House prices*	Moody's "Stronger Near-term Recovery" house price path	Moody's "Current Baseline" house price paths	Moody's "Deeper Second Recession" house price paths
Interest rates	Future interest rates are implied by the forward curve for swaps as of June 30, 2010	<i>Same as Scenario 1</i>	<i>Same as Scenario 1</i>
Securities prices	ABS and CMBS prices fall by 5 points at the beginning of the period	<i>Same as Scenario 1</i>	<i>Same as Scenario 1</i>
Agency MBS spreads	Agency MBS spreads to swaps remain unchanged	<i>Same as Scenario 1</i>	<i>Same as Scenario 1</i>
Credit Guarantee growth	Zero growth in credit guarantees through year end 2013	<i>Same as Scenario 1</i>	<i>Same as Scenario 1</i>
Retained Portfolio growth	Additions to retained portfolios are limited to nonperforming loans bought out of pools backing Fannie Mae's MBS and Freddie Mac's PCs	<i>Same as Scenario 1</i>	<i>Same as Scenario 1</i>

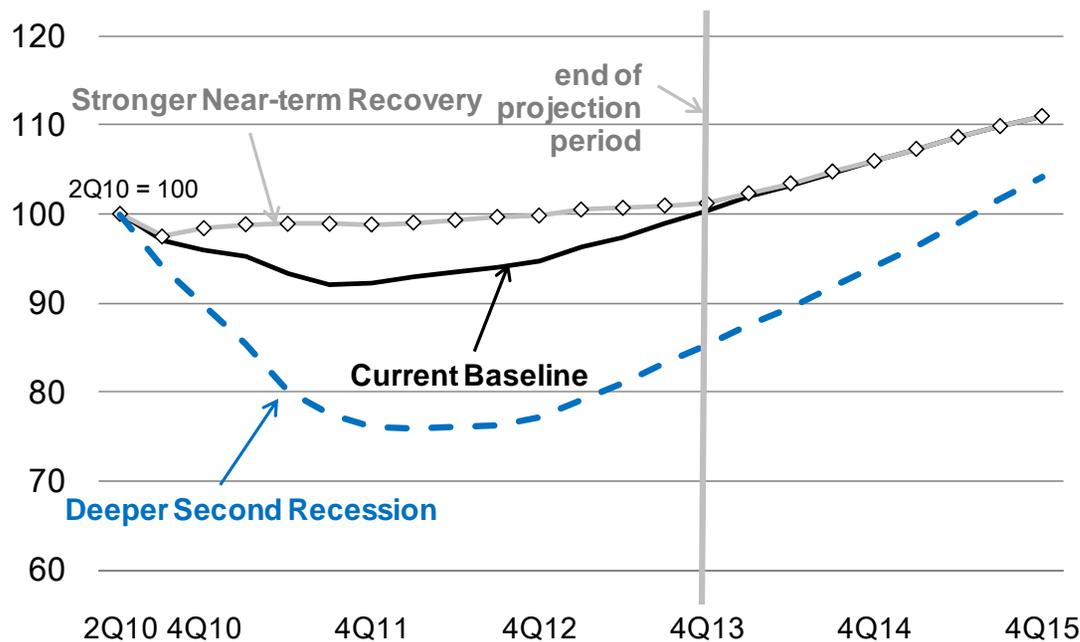
\*Moody's scenarios as of September 2010

## House Price Assumptions

House price changes have been the major driver of credit losses at the Enterprises. A wide range of possible future paths exist for house prices at the national and local levels. Given the high level of uncertainty about overall economic conditions in general and the U.S. housing markets in particular, FHFA directed the Enterprises to project financial results for Moody's current baseline and two additional house price paths. Moody's considers "Deeper Second Recession" to be a downside alternative to the Current Baseline and "Stronger Near-term Recovery" to be an upside alternative to the Current Baseline.

**Figure 2: House Price Assumptions**

Moody's house price paths (Case Shiller National Index; September 2010)



### Moody's House Price Paths

Moody's descriptions are in quotes.

#### Current Baseline (FHFA Scenario 2)

"Small remaining home price declines" contribute to a 34% peak-to-trough decline. From the trough in 3Q11 to the end of the forecast period house prices increase by 8%.

#### Stronger Near-term Recovery (FHFA Scenario 1)

"Increased access to credit supports the above-baseline growth. As a result, the recent increases in house prices are sustained, although additional increases are minimal in 2010 and 2011." The peak-to-trough decline is 31%. From the trough in 1Q09 to the end of the forecast period house prices increase by 5%.

#### Deeper Second Recession (FHFA Scenario 3)

"As a result of restricted access to credit and continuing high unemployment, the moderate rebound in housing construction that occurred over the first half of 2009 not only pauses but reverses course." The peak-to-trough decline is 45%. From the trough in 1Q12 to the end of the forecast period house prices increase by 11%.

## House Price Assumptions (continued)

### **Selection of House Price Assumptions**

Figure 2 shows national-level paths for the Case-Shiller house price index associated with the selected Moody's house price paths. Scenario 2 uses house price paths associated with Moody's "Current Baseline (September 2010)." That house price path is derived from Moody's assumptions regarding monetary and fiscal policy, U.S. dollar, and energy prices. Scenario 1 and Scenario 3 use house price paths associated with better and worse economic performance relative to Moody's "Current Baseline (September 2010)."

Moody's describes the house price paths associated with "Stronger Near-term Recovery," as being consistent with "a 10% probability that the economy will perform better than in this scenario, broadly speaking, and a 90% probability that it will perform worse." Conversely, Moody's describes the house price paths associated with "Deeper Second Recession" as being consistent with "a 90% probability that the economy will perform better, broadly speaking, and a 10% probability that it will perform worse." As with the SCAP exercise, FHFA chose the "Deeper Second Recession" house price path to ensure a stringent test that would provide information tied to a continued severe weakening in housing.

### **Use of Moody's Localized Forecasts**

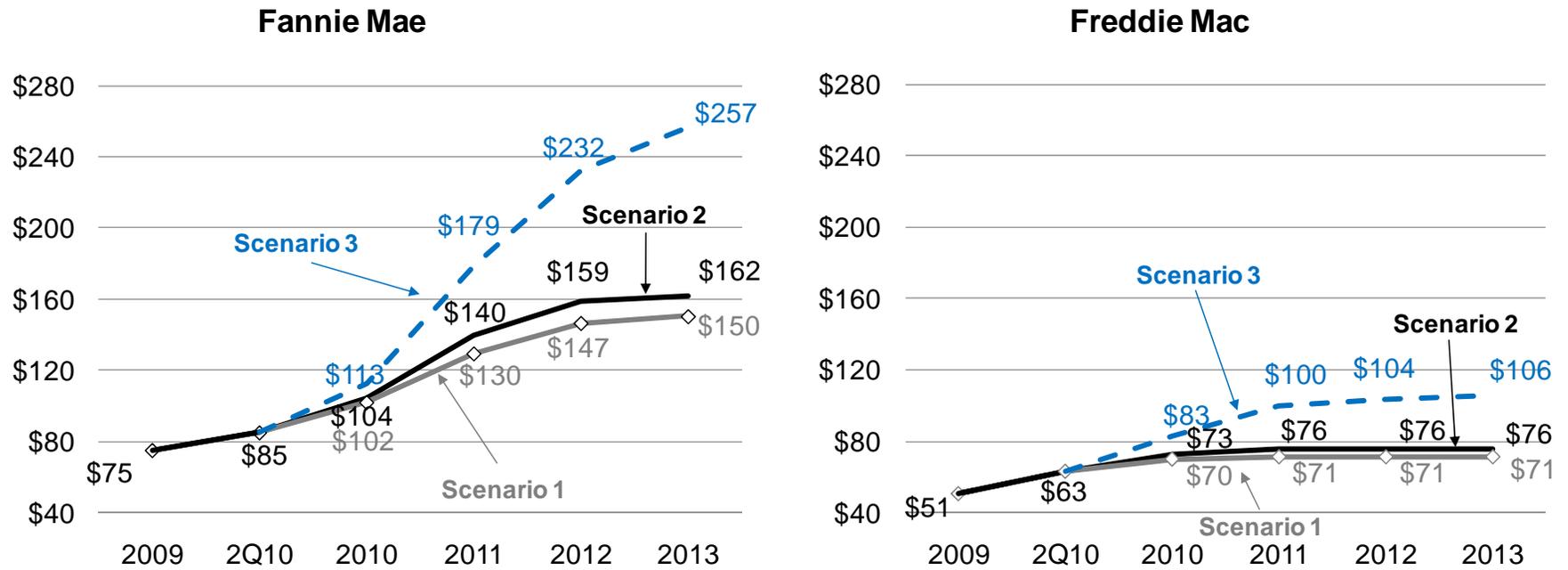
FHFA chose to base the scenarios on Moody's house price paths because Moody's is a widely used benchmark. Moody's provides a full set of quarterly, forward-looking house price paths for each of the 384 Metropolitan Statistical Areas (MSAs) and Divisions for which FHFA publishes a historical house price index. FHFA does not forecast house prices. Such localized forecasts enable the Enterprises to project credit losses on a more comparable basis as opposed to a simple national projection of peak-to-trough change in house prices, which would require each Enterprise to translate that house price path into its own local house price index.

Defining a house price path at just the national level for the Enterprises would limit the usefulness of the results because house prices often behave quite differently in different local markets. The mix of local market price projections associated with a given national average price projection can have a substantial impact on the aggregate loss projection for an Enterprise. Similarly, defining the path with only a peak-to-trough measure is problematic because the timing of the trough and the rate of recovery beyond the trough can also greatly affect expected losses.

Results

The projected combined cumulative Treasury draw for both Enterprises through December 31, 2013 reach \$221 billion under Scenario 1, \$238 billion under Scenario 2, and \$363 billion under Scenario 3. The cumulative projected draw through 2013 for Fannie Mae under each scenario is approximately double the projected draw for Freddie Mac in part because Fannie Mae's mortgage book of business is forty-five percent larger than Freddie Mac's.

**Figure 3: Cumulative Treasury Draws\* (\$ in billions)**



Includes any projected net deficit at the end of 2013

## Results (continued)

Credit-related expenses, particularly the provision for credit losses, are the primary driver of projected Treasury draws across all three scenarios. Fannie Mae's credit-related expenses increase by \$85 billion from Scenario 1 to Scenario 3, and for Freddie Mac that increase amounts to \$28 billion. Thus \$113 billion of the projected \$142 billion difference in Treasury draws across those scenarios is directly related to credit-related expense projections.

**Figure 4: Cumulative Financial Results (2009-2013) (\$ in billions)**

	Fannie Mae			Freddie Mac		
	Scenario 1	Scenario 2	Scenario 3	Scenario 1	Scenario 2	Scenario 3
Revenues	\$86	\$86	\$81	\$77	\$77	\$73
Provision for credit losses	(140)	(148)	(219)	(56)	(61)	(83)
Other credit-related expenses	<u>(30)</u>	<u>(31)</u>	<u>(37)</u>	<u>(21)</u>	<u>(21)</u>	<u>(22)</u>
Total Credit-related Expenses/Losses	(170) → 9	(179) → 76	(255)	(77) → 5	(82) → 23	(105)
Other expenses <sup>1</sup>	<u>(26)</u>	<u>(27)</u>	<u>(27)</u>	<u>(20)</u>	<u>(20)</u>	<u>(20)</u>
Net Income (Loss)	(\$110)	(\$119)	(\$202)	(\$21)	(\$26)	(\$52)
<b>Capital Erosion</b>						
Net Income	(110)	(119)	(202)	(21)	(26)	(52)
Dividends	(49)	(51)	(65)	(31)	(33)	(39)
Other <sup>2</sup>	24	24	25	25	27	30
Total Capital Erosion	(135)	(147)	(242)	(27)	(31)	(61)
Beginning Net Worth (12/31/2008)	<u>(15)</u>	<u>(15)</u>	<u>(15)</u>	<u>(31)</u>	<u>(31)</u>	<u>(31)</u>
Capital Deficit (2009-2013)	(150)	(162)	(257)	(57)	(62)	(92)
Senior Preferred Treasury Draw (2009-2013)	\$150 → 12	\$162 → 95	\$257	\$57 → 5	\$62 → 30	\$92
Cumulative Senior Preferred Treasury Draw <sup>3</sup>	\$150	\$162	\$257	\$71	\$76	\$106
Cumulative Draw excluding Dividends <sup>3</sup>	\$102	\$111	\$192	\$40	\$43	\$67

<sup>1</sup>Consists of mark-to-market gains/losses, administrative expenses, tax expense/benefit and other expenses.

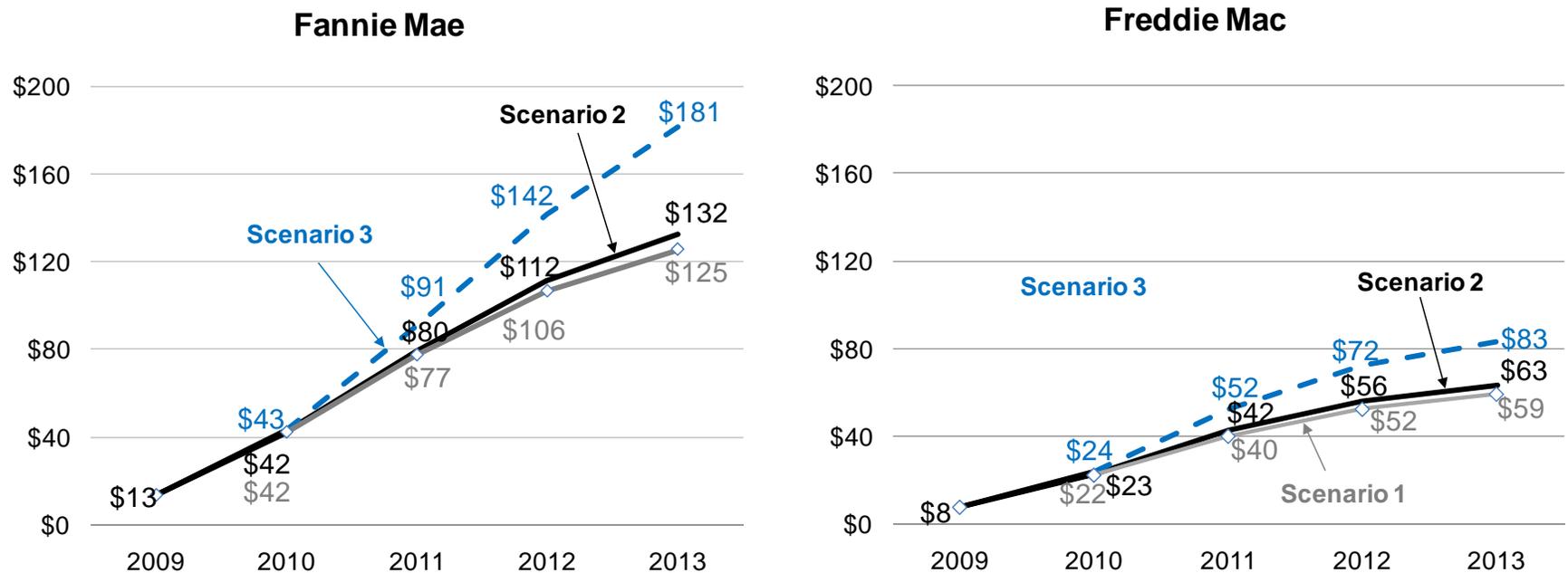
<sup>2</sup>Consists of change in accumulated other comprehensive income, plus FAS 115-2 and consolidation accounting adjustments, less positive net worth as of 12/31/13, if any.

<sup>3</sup>Freddie Mac's cumulative draw includes \$13.8 billion of Treasury draw received in 2008.  
Numbers may not foot due to rounding.

Results (continued)

From 2007 through the second quarter of 2010 the Enterprises' provisions for credit losses have been driven primarily by increases to loan loss reserves. However, charge-offs increase during the latter years of the projection period as non-performing loans are ultimately resolved.

**Figure 5: Single-Family Cumulative Credit Losses (2009-2013) (\$ in billions)**



Credit losses are defined as charge-offs and foreclosed property expenses.

## Results (continued)

The Enterprises have already received \$148 billion from the U.S. Treasury to maintain positive net worth. For the selected scenarios an additional \$73 to \$215 billion would be required to further support the Enterprises over the projection period. Of those amounts \$67 billion to \$91 billion represent dividend payments to Treasury on its holdings of senior preferred stock in the Enterprises. Per the terms of the Senior Preferred Stock Purchase Agreements with the U.S. Treasury, senior preferred stock accrues dividends at 10 percent per year.

**Figure 6: Additional Treasury Draws and Dividends (Jul 2010 through Dec 2013) (\$ in billions)**

	Projected Additional Draw and Dividends through 2013							
	Current Draw as of 6/30/10		Scenario 1		Scenario 2		Scenario 3	
	Total Draw	Total Dividends	Additional Draw	Additional Dividends	Additional Draw	Additional Dividends	Additional Draw	Additional Dividends
Fannie Mae	\$85	\$6	\$65	\$43	\$77	\$45	\$172	\$59
Freddie Mac	<u>63</u>	<u>7</u>	<u>8</u>	<u>24</u>	<u>13</u>	<u>26</u>	<u>43</u>	<u>32</u>
Total	\$148	\$13	\$73	\$67	\$90	\$71	\$215	\$91

## Appendix

### Financial Projections Procedures

FHFA directed the Enterprises to project revenue, mark-to-market gains and losses, credit-related expenses, administrative expenses, earnings, capital, and, ultimately, cumulative senior preferred Treasury draws under the three scenarios using their own respective models. Both Enterprises routinely prepare financial forecasts using their respective management assumptions. Modeling assumptions were changed at both Enterprises to conform to the assumptions listed in Figure 1.

FHFA directed that the projection period cover the remainder of 2010 and the next three years, similar to projection periods used by the Enterprises for routine management forecasts. Furthermore for the selected house price paths, by the end of the projection period the bulk of credit losses are recognized.

The Enterprises' models use projections of interest rates to calculate future net interest margins, gains and losses on the retained portfolio and derivatives used for hedging, and prepayment speeds on held or guaranteed mortgages, which influence both credit losses and guarantee fee revenue.

To project revenue, the Enterprises projected the size of the retained portfolios and credit guarantee books using assumptions provided by FHFA on business volume growth. Additions to retained portfolios were limited to nonperforming loans bought out of pools backing Fannie Mae's MBS and Freddie Mac's PCs. The balance of outstanding credit guarantees at each Enterprise remained unchanged over the forecast period.

Net interest income (which includes most of the Enterprises' guarantee fee income) is driven primarily by the size of the retained portfolio and net interest margin (the difference between yield on assets and funding costs). For this exercise, funding costs were influenced by the forward curve for swaps, and asset yields were influenced by the forward curve for swaps and the assumptions about the level of Agency MBS spreads to swaps.

Guarantee fee income is driven by the size of the credit guarantee book and guarantee fee pricing. To project the size of the credit guarantee books the Enterprises used assumptions provided on new business volume and interest rates which influence prepayment speeds on guaranteed mortgages. FHFA did not provide explicit assumptions about

guarantee fee pricing. However, FHFA reviewed the pricing assumptions of each Enterprise for the forecast period for consistency. For both Enterprises, guarantee fee pricing remained relatively unchanged over the forecast period.

Projections of mark-to-market losses reflect changes in the value of securities held in the retained portfolio and changes in the value of derivatives used for hedging. The Enterprises' models use assumptions about future interest rates, securities prices, and spreads to project the future values of securities held in the retained portfolio and resulting gains and losses. Future values of derivatives used to hedge interest rate risk are based on the projections of future interest rates.

To project credit-related expenses, each Enterprise uses a multistep process. First, a statistical loan transition model projects the unpaid principal balance (UPB) of loans expected to default over the projection period. House price projections are used to determine the mark-to-market loan-to-value ratios of the guaranteed mortgages, which in turn influence the probabilities of default, and projections of loss given default. Next, a second model projects the severity of losses associated with defaulted loans resolved through various processes. The projections of distressed UPB are combined with the projections of loss severities to arrive at credit losses for each quarter. Next, each Enterprise projected loan loss reserves based on projections of credit losses, to determine its future provisions for credit losses. Finally, projections of credit-related expenses incorporate projections of future provisions for credit losses, foreclosed property expenses, and expenses incurred after foreclosure on the property.

The Enterprises used their own respective management assumptions to forecast administrative expenses.

FHFA reviews models and methodologies for internal consistency and comprehensiveness as part of the continuing supervision of the Enterprises. However, as with other regulator-driven financial projections that rely on internal models of banks, the internal models of one Enterprise will produce different answers than those of the other given the same set of assumptions and other inputs.

This modeling exercise is not the same as, nor did it follow all the same control procedures as the process followed for formal financial reporting. For instance, the projections did not incorporate management judgment as to how the specific assumptions employed might produce other changes in model assumptions. Nonetheless, FHFA believes that the results of this exercise provide a reasonable indication of plausible future Treasury draws under the specified scenarios, using comparable key assumptions for each Enterprise.