## FEDERAL HOUSING FINANCE AGENCY



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# FHFA Updates Projections of Potential Draws for Fannie Mae and Freddie Mac

**Washington, DC** –The Federal Housing Finance Agency (FHFA) today released updated projections of the financial performance of Fannie Mae and Freddie Mac, including potential draws under the Senior Preferred Stock Purchase Agreements (PSPAs) with the U.S. Department of the Treasury. These updated projections show cumulative Treasury draws that are reduced and more stable compared to previous projections. The key drivers of those results include an overall reduction in actual and projected credit-related expenses and changes in the dividend structure contained in the PSPAs, which eliminates the need to borrow from Treasury to pay dividends.

FHFA first released financial projections in October 2010, and has provided updates of those projections on an annual basis. Through the FHFA Conservator's Report, FHFA reports actual performance versus projections on a quarterly basis.

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 \$5.7 trillion in funding for the U.S. mortgage markets and financial institutions.



## Federal Housing Finance Agency

Projections of the Enterprises' Financial Performance

October 2012

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#### Introduction

- This report provides updated information on possible ranges of future financial results of Fannie Mae and Freddie
  Mac (the "Enterprises") under specified scenarios, using consistent assumptions for both Enterprises. FHFA worked
  with the Enterprises to develop forward-looking financial projections across three possible house price paths.
- FHFA published updated projections of the Enterprises' financial performance in October 2011, which can be found in <a href="FHFA's Projections">FHFA's Projections of the Enterprises' Financial Performance</a>, October 2011. The projections have been updated to reflect the current outlook for house prices, interest rates, trends in borrower behavior and amendments to the terms of the Senior Preferred Stock Purchase Agreements (PSPAs) between the Treasury and each of the Enterprises. The projection period has been extended an additional year to 2015.
- 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 very different. This effort should be interpreted as a sensitivity analysis of future financial results to
  possible house price paths.
- FHFA provided the Enterprises with key assumptions for each scenario. The assumptions used in each of the three scenarios are described on page 14. The Enterprises used their respective internal models to project their financial results based on the assumptions provided by FHFA. 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.

## Summary

#### **Projected Treasury Draws and Dividends**

To date, the Enterprises have drawn \$187.5 billion from Treasury under the terms of the PSPAs. **Under the three scenarios used in the projections, cumulative Treasury draws (including draws required to pay dividends) at the end of 2015 range from \$191 billion to \$209 billion.** If dividend payments were subtracted from the projected cumulative draws, the net combined amounts for both Enterprises would range from \$67 billion to \$138 billion. In the previous projections released in October 2011, cumulative Treasury draws (including draws required to pay dividends) at the end of 2014 ranged from \$220 billion to \$311 billion.

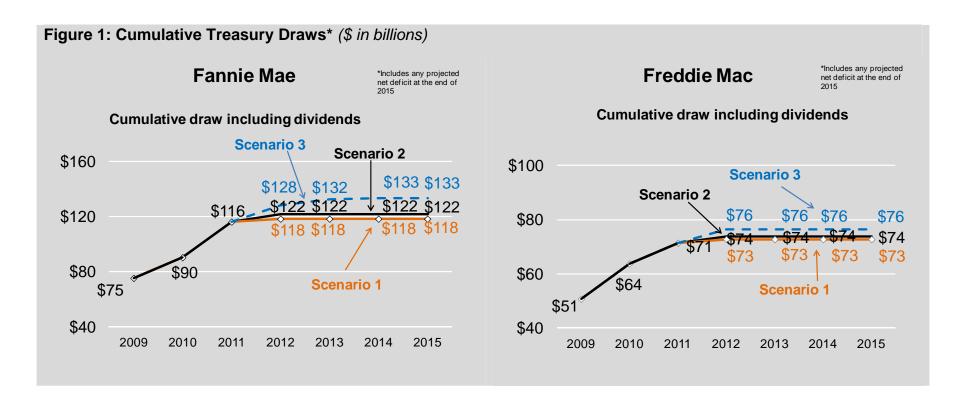
For the selected scenarios, in the current projections, an additional \$3 to \$22 billion would be required to support the Enterprises over the projection period. Freddie Mac would not require additional Treasury draws after 2012 in any of the three scenarios. Fannie Mae would not require additional Treasury draws after 2012 in two of the three scenarios. Furthermore, over the projection period the Enterprises pay additional dividends of \$78 billion in Scenario 1 to \$32 billion in Scenario 3.

#### October 2012 Projections versus October 2011 Projections

- The projection period for the current projections and the previous projections runs three and a half years. The
  current projection period runs through the end of 2015. The prior projection period ran through the end of 2014. The
  difference in the range of ending cumulative Treasury draws between the October 2012 projections and the October
  2011 projections can be attributed to three primary factors:
  - Actual financial results for the first year of the projection period in the October 2011 projections (the second half of 2011 and the first half of 2012) were substantially better than projected.
  - Updated projections of financial results for the remaining two and a half years of the projection period in the October 2011 projections (the second half of 2012; 2013 and 2014) are substantially better than in previous projections.
  - Changes to the PSPAs, effective January 1, 2013, which replace a fixed 10 percent dividend on senior preferred stock with a sweep of net worth, effectively ends the contribution of dividends to projected Treasury draws.

#### Results

In the current projections, Freddie Mac would not require additional Treasury draws after 2012 in any of the three scenarios. Fannie Mae would not require additional Treasury draws after 2012 in two of the three scenarios. The projected combined cumulative Treasury draws for both Enterprises through December 31, 2015 reach \$191 billion under Scenario 1, \$196 billion under Scenario 2, and \$209 billion under Scenario 3. Fannie Mae's cumulative draws are higher than Freddie Mac's in part because Fannie Mae's mortgage book of business is approximately fifty percent larger than Freddie Mac's.



## Results (continued)

The PSPAs do not allow for dividends to reduce prior draws. However, for illustrative purposes, if dividend payments were subtracted from the projected cumulative draws, the net combined amounts for both Enterprises would reach \$67 billion under Scenario 1, \$76 billion under Scenario 2, and \$132 billion under Scenario 3. Prior to 2012, most dividends have been paid from funds acquired with additional draws. Given the changes to the PSPAs, after 2012 all future dividends are projected to be paid out of comprehensive income.

Figure 2: Cumulative Treasury Draws (\$ in billions)								
	Fa	Fannie Mae			Freddie Mac			
	Scenario 1	Scenario 2 Sc	cenario 3	Scenario 1 Sc	enario 2 Sc	enario 3		
Related to operating losses and other*	\$97	\$100	\$109	\$64	\$64	\$66		
Related to senior preferred dividends	<u>21</u>	<u>22</u>	<u>25</u>	<u>8</u>	<u>9</u>	<u>11</u>		
Cumulative Treasury Draw	\$118	\$122	\$133	\$73	\$74	<u>11</u> \$76		
Senior preferred dividends (paid from								
comprehensive income)	\$48	\$46	\$15	\$46	\$41	\$28		
Total senior preferred dividends	\$69	\$69	\$39	\$54	\$50	\$38		
Cumulative Treasury Draw less dividends	\$49	\$53	\$94	\$18	\$23	\$38		

<sup>\*</sup>Operating losses and other refers to net losses reported on the income statement, changes in unrealized losses reported on the balance sheet, and the impact of other accounting changes for consolidation and security impairments. In accordance with the terms of the Senior Preferred Stock Purchase Agreements (PSPAs), the Enterprises are not permitted to paydown the Treasury draw amounts, even if the Enterprises generate positive net income or total comprehensive income. Numbers may not foot due to rounding.

## Results (continued)

From the end of 2008 through the end of 2015, the total combined capital change is projected to range from a reduction of \$131 billion to a reduction of \$150 billion. The primary driver is credit-related expenses, which increase across the scenarios as the house price paths become more pessimistic.

Figure 3: Cumulative Financial Results (2009-2015) (\$ in billions)

	F	annie Ma	е	F	reddie Ma	die Mac		
	Scenario 1	Scenario 2	Scenario 3	Scenario 1	Scenario 2	Scenario 3		
Revenues	\$147	\$146	\$143	\$121	\$121	\$119		
Provision for credit losses	(119)	(123)	(159)	(63)	(68)	(82)		
Other credit-related expenses <sup>1</sup>	<u>(35)</u>	<u>(35)</u>	<u>(38)</u>	<u>(26)</u>	<u>(26)</u>	(27)		
Total Credit-related Expenses/Losses	(155)	(158)	(197)	(90)	(95)	(108)		
Other expenses <sup>2</sup>	<u>(42)</u>	<u>(42)</u>	<u>(43)</u>	<u>(35)</u>	<u>(35)</u>	<u>(35)</u>		
Net Income (Loss)	(50)	(55)	(96)	(4)	(9)	(24)		
Capital Change								
Net Income	(50)	(55)	(96)	(4)	(9)	(24)		
Dividends	(69)	(69)	(39)	(54)	(50)	(38)		
Other <sup>3</sup>	<u>17</u>	<u>16</u>	<u>17</u>	<u>30</u>	<u>30</u>	<u>30</u>		
Total Capital Change	(103)	(107)	(118)	(28)	(29)	(32)		
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 (2009-2015)	(118)	(122)	(133)	(59)	(60)	(63)		
Senior Preferred Treasury Draw (2009-2015)	118	122	133	59	60	63		
Cumulative Senior Preferred Treasury Draw <sup>4</sup>	\$118	\$122	\$133	\$73	\$74	\$76		
Cumulative Draw less Dividends <sup>4</sup>	\$49	\$53	\$94	\$18	\$23	\$38		

<sup>&</sup>lt;sup>1</sup>Consists of foreclosed property expenses, SOP 03-3 losses, net, and other than temporary impairments.

Numbers may not foot due to rounding.

<sup>&</sup>lt;sup>2</sup>Consists of mark-to-market gains/losses, administrative expenses, tax expense/benefit and other expenses.

<sup>&</sup>lt;sup>3</sup>Consists of change in accumulated other comprehensive income, and other accounting changes for consolidation and security impairments, less positive net worth as of 12/31/15, if any.

<sup>&</sup>lt;sup>4</sup>Freddie Mac's cumulative draw includes \$13.8 billion of Treasury draw received in 2008.

#### Results (continued)

The Enterprises have received \$187.5 billion from Treasury to maintain positive net worth. For the selected scenarios an additional \$3 to \$22 billion would be required to support the Enterprises over the projection period. For Freddie Mac the additional Treasury draws occur only in 2012 for all three scenarios. For Fannie Mae the additional Treasury draws occur only in 2012 for Scenario 1 and Scenario 2, and in multiple years in Scenario 3. Furthermore, over the projection period the Enterprises pay additional dividends of \$78 billion in Scenario 1 to \$32 billion in Scenario 3. The majority of the additional dividends are projected to be paid out of comprehensive income in the current projections.

Figure 4: Additional Treasury Draws and Dividends (Jul 2012 through Dec 2015) (\$ in billions)								
	Current Draw as of 06/30/12		Scenario 1		Scenario 2		Scenario 3	
	Total Draw	Total Dividends	Additional Draw	Additional Dividends	Additional Draw	Additional Dividends	Additional Draw	Additional Dividends
Fannie Mae	\$116	\$26	\$2	\$44	\$6	\$43	\$17	\$14
Freddie Mac	<u>71</u>	20	<u>1</u>	34	2	30	<u>5</u>	<u>18</u>
Total	\$187	\$46	\$3	\$78	\$8	\$73	\$22	\$32

### Comparison of October 2012 Projections to October 2011 Projections

Several factors contributed to lower projected Treasury draws in the current projections.

#### **Credit-related expenses**

- The projected provision for credit losses for all three scenarios is lower in the current projection than in the previous projection due to improvements in projected house price paths and in the number of delinquent loans at the start of the projection period.
- The actual house price path over the past year was more positive than the house price paths used in the Baseline (Scenario 2) and Deeper Second Recession (Scenario 3) house price paths in the previous projections.
- o Moody's projected house price paths are more optimistic in the current projections for almost all the projection period.
- o Recent observed trends indicate higher REO sales prices than previously projected.

#### **Dividends**

- In previous projections, dividends on senior preferred stock outstanding contributed substantially to projected Treasury draws. Changes to the PSPAs, effective in 2013, that replace a fixed 10 percent dividend on senior preferred stock outstanding with a variable dividend based on net worth above a defined threshold effectively ends the contribution of dividends to Treasury draws.
- o In contrast to previous projections, after 2012, the Enterprises do not draw from the Treasury to pay dividends.

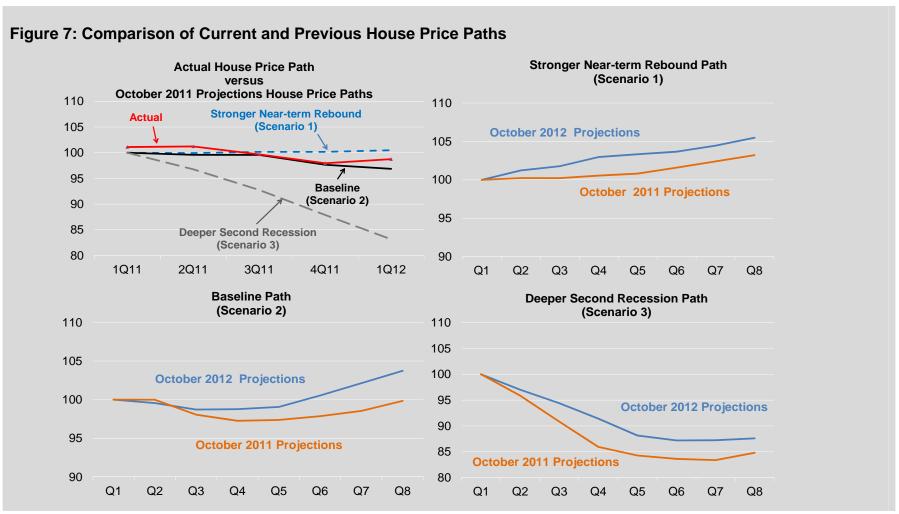
## Comparison of October 2012 Projections to October 2011 Projections (continued)

Actual financial results for the first year of the projection period in the October 2011 projections (the second half of 2011 and the first half of 2012) were substantially better than projected. Additionally, updated projections of financial results for the remaining two and a half years of the projection period in the October 2011 projections (the second half of 2012; 2013 and 2014) are substantially better than in previous projections. Furthermore, the extension of the projection period through 2015 resulted in no additional Treasury draws.

Figure 5: Comparison of Oct 2012 Projections to Oct 2011 Pro	jections (\$	in billions)	
	Scenario 1	Scenario 2	Scenario 3
October 2011 Projections			
Beginning Cumulative Draw June 30, 2011	\$169	\$169	\$169
Projected Treasury Draws			
Year 1 (2 <sup>nd</sup> half of 2011 and 1 <sup>st</sup> half of 2012)	36	41	91
Years 2-3 <sup>1</sup> / <sub>2</sub> (2 <sup>nd</sup> half of 2012; 2013 and 2014)	<u>15</u>	<u>15</u>	<u>52</u>
Ending Cumulative Draw December 31, 2014	\$220	\$226	\$311
October 2012 Projections			
Beginning Cumulative Draw			
Beginning Cumulative Draw June 30, 2011	\$169	\$169	\$169
Actual Treasury draw - Year 1 (2 <sup>nd</sup> half of 2011 and 1 <sup>st</sup> half of 2012)	<u>19</u>	<u>19</u>	<u>19</u>
Beginning Cumulative Draw June 30, 2012	187	187	187
Projected Treasury Draws			
Years 2-3 <sup>1</sup> / <sub>2</sub> (2 <sup>nu</sup> half of 2012; 2013 and 2014)	3	8	22
Year 3'/ <sub>2</sub> -4'/ <sub>2</sub> (2015)	<u>0</u>	<u>0</u>	<u>0</u>
Ending Cumulative Draw December 31, 2015	\$191	\$196	\$209
Difference in ending Cumulative Draw			
Actual versus Projection - Year 1	(\$17)	(\$23)	(\$72)
Difference in Projections - Years 2-3 <sup>1</sup> / <sub>2</sub>	(12)	(7)	(30)
Additional year of Projection (2015)	<u>0</u>	<u>0</u>	<u>0</u>
Total difference in ending cumulative draw	(\$29)	(\$30)	(\$10 <u>2</u> )
Numbers may not foot due to rounding			

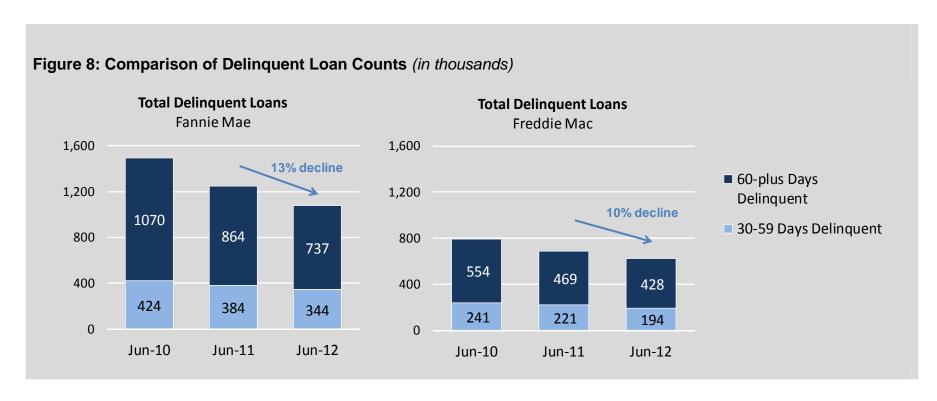
#### Comparison of October 2012 Projections to October 2011 Projections (continued)

For Scenarios 2 and 3, actual and forecasted house price paths through 2012 used in the October 2012 projections are better compared to the corresponding house price paths used in the October 2011 projections. The house price path in Scenario 1 used in the October 2012 projections is slightly worse through 2012 compared to the corresponding house price path used in the October 2011 projections.



## Comparison of October 2012 Projections to October 2011 Projections (continued)

Delinquent loan counts at the beginning of the projection period for both Enterprises are significantly lower compared to previous projections.



## **Projection Scenarios**

Key factors that influence the Enterprises' financial results are listed in Figure 9. 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.

Factor	Scenario 1	Scenario 2	Scenario 3
House prices*	Moody's "Stronger Near-term Rebound" house price paths	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 curves as of June 30, 2012.	Same as Scenario 1	Same as Scenario 1
Securities prices	ABS and CMBS prices fall by 5 points at the beginning of the period	Same as Scenario 1	Same as Scenario 1
Agency MBS spreads	Agency MBS spreads to swaps remain unchanged.	Same as Scenario 1	Same as Scenario 1
Credit Guarantee growth	Zero growth in credit guarantees through year end 2015.	Same as Scenario 1	Same as Scenario 1
Retained Portfolio growth	The size of the retained portfolios are in accordance with the terms of the PSPAs, and additions to the retained portfolios are limited to nonperforming loans bought out of pools backing Fannie Mae's MBS and Freddie Mac's PCs.	Same as Scenario 1	Same as Scenario 1

## **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 Rebound" to be an upside alternative to the Current Baseline.

Figure 10: Moody's House Price Paths (Case-Shiller National Index; July 2012) 120 **Stronger Near-term Rebound** 110 100 **Current Baseline** 90 end of projection 80 period **Deeper Second Recession** 70 60 1Q12 4Q12 4Q13 4Q14 4Q15 4Q16

#### **Descriptions**

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

An expansion of credit supports the above-baseline recovery. As a result, there are no further declines in house prices, although additional increases are minimal in 2012 and 2013. The peak-totrough decline is 34% based on the Case-Shiller National Index. From the trough in 4Q11 to the end of the forecast period house prices increase by 17%. Stronger demand and improving confidence will help propel total new housing permits back above the annual pace of 1 million units by the fourth quarter of 2012, a year earlier than in the baseline.

#### Current Baseline (FHFA Scenario 2)

Remaining home price declines contribute to a 34% peak-totrough decline based on the Case-Shiller National Index. From the trough in 4Q11 to the end of the forecast period, house prices increase by 17%. Given the recent weakening in the job market, the odds of a third round of quantitative easing, QE3, have risen substantially and are now assumed in the baseline outlook. Total new housing permits reach an annual pace above 1 million units by the fourth quarter of 2013.

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

A relatively painful second U.S. recession develops, though it is less severe than the 2008-2009 downturn. Rising unemployment during the recession causes the housing market to weaken further. Housing starts resume their decline, bottoming out in the third quarter of 2013, 75% below their peak in 2005. The peakto-trough house price decline is 43% based on the Case-Shiller National Index. From the trough in 3Q13 to the end of the forecast period house prices increase by 16%.

### House Price Assumptions (continued)

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

Figure 10 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 (July 2012)." 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 (July 2012)."

Moody's describes the house price paths associated with "Stronger Near-term Rebound", 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." 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.

## **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 9.

FHFA directed that the projection period cover the remainder of 2012 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 by FHFA 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 projection period for consistency. For both Enterprises, guarantee fee pricing increased in 2012 as mandated by the Temporary Payroll Tax Cut Continuation Act and FHFA, and remain relatively unchanged over the projection 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 gains and losses on securities held in the retained portfolio and on derivatives used to hedge interest rate risk.

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 project 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.