

Federal Housing Finance Agency
Office of Inspector General



The Continued Profitability of Fannie Mae and Freddie Mac Is Not Assured



WPR-2015-001

March 18, 2015

Executive Summary

Fannie Mae and Freddie Mac (collectively, the Enterprises) returned to profitability in 2012 after successive years of losses. Their improved financial performance is encouraging; however, their continued profitability is not assured. The mortgage industry is complex, cyclical, and sensitive to changes in economic conditions, mortgage rates, house prices, and other factors. The Enterprises have acknowledged in their public disclosures that adverse market and other changes could lead to additional losses and that their financial results are subject to significant variability from period to period.

Notwithstanding the Enterprises' recent positive financial results, they face many challenges. For example:

- The Enterprises must reduce the size of their retained investment portfolios over the next few years pursuant to the terms of agreements with the U.S. Department of Treasury (Treasury) and additional limits from FHFA. Declines in the size of these portfolios will reduce portfolio earnings over the long term. These portfolios have been the Enterprises' largest source of earnings in the past.
- Core earnings from the Enterprises' business segments—single-family guarantee, multifamily, and investments—comprised only 40% of net income in 2013. Sixty percent of the Enterprises' net income came from non-recurring tax-related items and large settlements of legal actions and business disputes, which are not sustainable sources of revenue. Core earnings comprised 55% of net income in 2014.
- The Enterprises are unable to accumulate a financial cushion to absorb future losses. Pursuant to the terms of agreements with Treasury, the Enterprises are required to pay Treasury each quarter a dividend equal to the excess of their net worth over an applicable capital reserve amount. The applicable capital reserve amount decreases to zero by January 1, 2018.
- Stress test results released by the Federal Housing Finance Agency (FHFA) in April 2014 indicate that the Enterprises, under the worst scenario—a scenario generally akin to the recent financial crisis—would require additional Treasury draws of either \$84.4 billion or \$190 billion, depending on the treatment of deferred tax assets, through the end of the stress test period, which is the fourth quarter of 2015.
- Absent Congressional action, or a change in FHFA's current strategy, the conservatorships will go on indefinitely. The Enterprises' future



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status is beyond their control. At present, it appears that Congressional action will be needed to define what role, if any, the Enterprises play in the housing finance system.

Fannie Mae reports that it expects to remain profitable for the foreseeable future; however, it acknowledges that a decrease in home prices or changes in interest rates, combined with provisions of their agreements with Treasury that require the reduction of their retained asset portfolios, could lead to losses.¹ Thus, if these losses result in an Enterprise reporting a negative net worth, that Enterprise would be obligated to draw on Treasury's funding commitment.

FHFA Office of Inspector General (OIG) prepared this white paper to explain the many challenges faced by the Enterprises that affect their profitability and to caution that the future profitability of the Enterprises is not assured. OIG cannot predict whether there is a reasonable possibility that these challenges and market conditions will adversely affect the Enterprises in the near future and result in losses and further draws on the Treasury.

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This report has been distributed to Congress, the Office of Management and Budget, and others and will be posted on OIG's website, www.fhfaoig.gov.

Kyle D. Roberts
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¹ See Fannie Mae, *2014 Form 10-K*, at 43-47 (Feb. 20, 2015). Freddie Mac does not make a similar statement about anticipated profitability in its public disclosures.

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ABBREVIATIONS

Dodd-Frank Act	Dodd-Frank Wall Street Reform and Consumer Protection Act
Enterprises	Fannie Mae and Freddie Mac, collectively
Fannie Mae	Federal National Mortgage Association
FHA	Federal Housing Administration
FHFA	Federal Housing Finance Agency
FOMC	Federal Open Market Committee
Freddie Mac	Federal Home Loan Mortgage Corporation
MBS	Mortgage-Backed Securities
OIG	Federal Housing Finance Agency Office of Inspector General
PSPA	Senior Preferred Stock Purchase Agreement
Treasury	U.S. Department of Treasury

BACKGROUND.....

The FHFA placed the Enterprises in conservatorship in 2008. Catastrophic losses had depleted the Enterprises' capital and threatened their ability to provide liquidity to the secondary mortgage market. Between 2008 and 2011, the Enterprises incurred combined losses exceeding \$200 billion, and have required \$187.5 billion in financial support from the Treasury in order to avert insolvency and receivership. The Enterprises continue to operate in conservatorship under the direction of FHFA, as conservator.

The Enterprises' conditions have stabilized and market conditions have improved since 2008. They returned to profitability in 2012; however, the level of earnings they experienced in 2013 and 2014 is not sustainable over the long term.² Their 2013 financial results reflected a significant spike in income due to the release of deferred tax asset valuation allowances.³ Their 2013 and 2014 financial results also included settlements of representation and warranty claims and non-agency mortgage related securities litigation, but the Enterprises do not expect settlements to have a significant effect on their financial results in the future.⁴ Going forward, the Enterprises will have to rely on their guarantee fee business segments and mortgage-related investment portfolios for earnings, and those sources are subject to uncertainty.

The Enterprises' financial results are subject to uncertainty due to changes in the fair value of their derivatives portfolios. Both Enterprises use derivative instruments, such as interest rate swaps, as an integral part of their strategy to manage interest rate risk.⁵ Derivative instruments are recorded at fair value and marked-to-market to reflect changes in the value of these instruments due to changes in, for example, short-term and long-term swap rates. The Enterprises report changes in value of their derivatives portfolios as fair value gains or losses, and those changes impact financial performance. For example, Fannie Mae reported fair value gains on derivatives of \$3.3 billion in 2013, and fair value derivative losses of \$5.8 billion in 2014, a swing of more than \$9 billion.

At the time they were placed in conservatorship, the Enterprises executed Senior Preferred Stock Purchase Agreements (PSPAs) with Treasury under which Treasury agreed to provide financial support to them during their conservatorships. As explained in greater detail below, the PSPAs require the Enterprises to wind down their largest source of earnings—their

² See Fannie Mae, *2014 Form 10-K*, at 11 (Feb. 20, 2015); Freddie Mac, *2014 Form 10-K*, at 1-2 (Feb. 19, 2015).

³ *Id.*

⁴ *Id.*

⁵ See, e.g., Fannie Mae, *2014 Form 10-K*, at 3 and 79-80 (Feb. 20, 2015).

respective investment portfolios—to \$250 billion by 2018. The mandatory reduction in the size of the investment portfolios will reduce earnings from these portfolios in the future.⁶

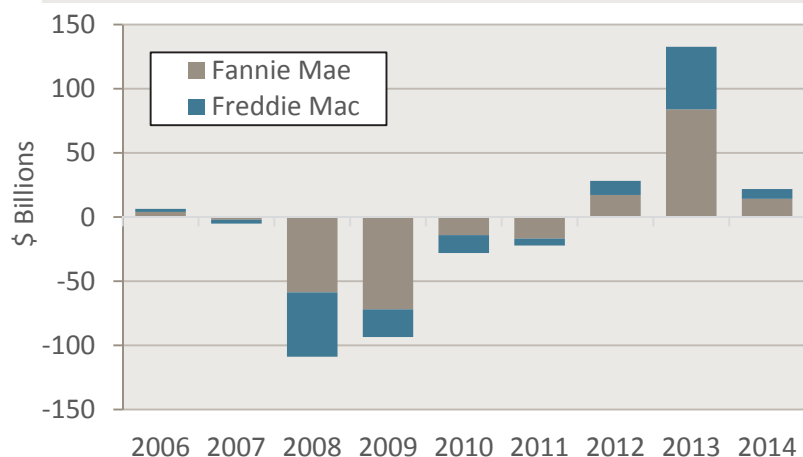
The PSPAs also prevent the Enterprises from accumulating a financial cushion against future losses.⁷ The Enterprises are required to pay Treasury a quarterly dividend equal to the excess of their net worth over an applicable capital reserve amount. The capital reserve amount is \$1.8 billion for each quarter of 2015 and it decreases by \$600 million annually until reaching zero in 2018. Thus, by 2018, the Enterprises will pay all of their quarterly net worth to Treasury as a dividend.

THE ENTERPRISES' SOURCES OF EARNINGS

The Enterprises' income is generated by their single-family, multifamily, and portfolio investment business segments. After successive years of incurring heavy losses from 2008-2011, the Enterprises returned to profitability in 2012 (see Figure 1). In 2013, they reported record profits of \$132.6 billion in net income; this was followed by lesser—but still heightened—profits of \$21.9 billion in 2014.

The Enterprises benefitted from improvements in the housing market and declines in their delinquent loans. During these two years, the Enterprises' profitability was significantly generated by non-recurring sources, events that they do not expect to occur again in the future; specifically, the release of valuation allowances against deferred tax assets, settlements

FIGURE 1. THE ENTERPRISES' ANNUAL NET INCOME (LOSS) (2006-2014)



Source: FHFA, *2013 Report to Congress*, at 73 and 90 (June 13, 2014) (online at www.fhfa.gov/AboutUs/Reports/Pages/Annual-Report-to-Congress-2013.aspx). Fannie Mae, *2014 Form 10-K*, at 74 (Feb. 20, 2015) and Freddie Mac, *2014 Form 10-K*, at 54 (Feb. 19, 2015).

⁶ See Fannie Mae, *2014 Form 10-K*, at 11-12 (Feb. 20, 2015); and Freddie Mac, *2014 Form 10-K*, at 31 (Feb. 19, 2015).

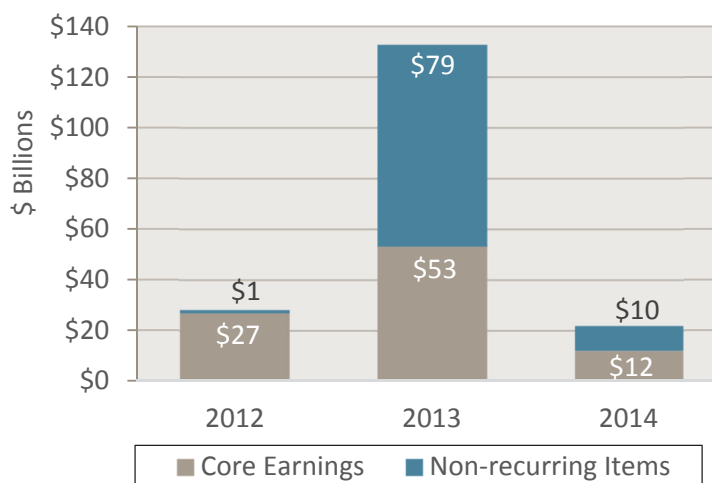
⁷ For more information describing the PSPAs, see OIG, *Analysis of the 2012 Amendments to the Senior Preferred Stock Purchase Agreements* (Mar. 20, 2013) (WPR-2013-002) (online at www.fhfa.gov/Content/Files/WPR-2013-002_2.pdf).

of disputed representation and warranty claims, and settlements of legal claims relating to non-agency mortgage-backed securities.

Earnings from Non-Recurring Events

To meaningfully discuss the sustainability of future earnings by the Enterprises, OIG separated non-recurring events out of the income from the single-family, multifamily, and portfolio investment business segments. Analyzing the earnings reported by the Enterprises in 2012, OIG found that non-recurring earnings contributed \$1 billion—3.6%—of the \$28 billion in net income. OIG found that, for 2013, non-recurring events accounted for \$79 billion—60%—of the \$132.6 billion in net income. Results for 2014 reflect that non-recurring sources comprise 45% of net income. Figure 2 illustrates that non-recurring sources contributed significantly to the Enterprises’ financial performance in 2013 and 2014.

FIGURE 2. THE ENTERPRISES’ CORE EARNINGS AND NON-RECURRING ITEMS (2012-2014)



Source: OIG analysis of information contained in the Enterprises’ Annual Report filings with the Securities and Exchange Commission on Form 10-K.

Earnings from Business Segments

Because future profitability of the Enterprises will be driven significantly by income from their business segments, we now discuss the elements of the income generated from these segments. For purposes of this discussion, we label such income as “core earnings” to distinguish it from income from non-recurring events.

Guarantee Fees

Guarantee fees are the primary source of revenue for the Enterprises’ single-family guarantee business segment.⁸ The Enterprises receive guarantee fees in exchange for their agreement to

⁸ The Enterprises use different terms in their financial statements and other materials when referring to this fee. Fannie Mae uses the term “guaranty fee,” and Freddie Mac uses the term “management and guarantee fee.” This report adopts FHFA’s convention and uses the term “guarantee fees.”

guarantee the timely payment of principle and interest to investors that purchase their mortgage-backed securities (MBS). The guarantee fee covers projected credit losses from borrower defaults over the life of the loans, administrative costs, and a return on capital.⁹ To calculate the guarantee fee, the Enterprises use proprietary costing models to estimate expected credit losses based on selected loan attributes (such as borrower credit score and loan-to-value ratio) and to estimate required capital based on a desired rate of return.¹⁰

Legislation from Congress and directives by FHFA, as the Enterprises' conservator, have raised the Enterprises' guarantee fees. In 2012, the Enterprises increased guarantee fees by 20 basis points (or 30% of the guarantee fee level at that time) in response to legislation and conservator requirements,¹¹ not solely as a result of higher expected credit losses. As policy perspectives change, the Enterprises' fees could be reduced in the future. The Federal Housing Administration's recent 50 basis point reduction of its annual insurance premiums is an example of a guarantee fee being reduced to meet public policy objectives.¹² FHFA requested public input on guarantee fee pricing in June 2014 and continues to evaluate further price changes.¹³

⁹ See FHFA, *Fannie Mae and Freddie Mac Single-Family Guarantee Fees in 2010 and 2011*, at 4 (Revised Sep. 28, 2012) (online at www.fhfa.gov/AboutUs/Reports/Pages/Fannie-Mae-and-Freddie-Mac-Single-Family-Guarantee-Fees-in-2010-and-2011-Report.aspx), and FHFA, *Fannie Mae and Freddie Mac Single-Family Guarantee Fees in 2012*, at 14-15 (Dec. 2013) (online at www.fhfa.gov/AboutUs/Reports/Pages/Fannie-Mae-and-Freddie-Mac-Single-Family-Guarantee-Fees-in-2012.aspx).

¹⁰ FHFA, *Fannie Mae and Freddie Mac Single-Family Guarantee Fees in 2010 and 2011*, at 4-5 (Revised Sep. 28, 2012) (online at www.fhfa.gov/AboutUs/Reports/Pages/Fannie-Mae-and-Freddie-Mac-Single-Family-Guarantee-Fees-in-2010-and-2011-Report.aspx).

¹¹ The *Temporary Payroll Tax Cut Continuation Act of 2011*, Pub. L. 112-78, directed FHFA to increase guarantee fees charged by the Enterprises by 10 basis points from the average guarantee fees charged in 2011. See the Act at section 401, as codified in 12 U.S.C. 4547(b)(1)(B). The fees collected from the increase are remitted directly to the U.S. Treasury. *Id.* § 4547(b)(3). The 10 basis point increase went into effect on April 1, 2012, and will continue until October 1, 2021. *Id.* § 4547(f).

FHFA instituted a second 10 basis point guarantee fee increase in 2012 to support its strategic goals for the Enterprises of encouraging greater participation in the mortgage market by private firms. The increase was targeted at making guarantee fees paid by larger and smaller lenders more uniform and reducing cross subsidization between higher-risk and lower-risk mortgages. See FHFA, *FHFA Announces Increase in Guarantee Fees* (Aug. 31, 2012) (online at www.fhfa.gov/Media/PublicAffairs/Pages/FHFA-Announces-Increase-in-Guarantee-Fees.aspx).

¹² The Federal Housing Administration (FHA) provides mortgage insurance on loans made by FHA-approved lenders. We illustrate for purposes of this discussion that guarantee fees are susceptible to policy-related pressures. See FHA, *FHA to Reduce Annual Insurance Premiums* (Jan. 8, 2015) (online at http://portal.hud.gov/hudportal/HUD?src=/press/press_releases_media_advisories/2015/HUDNo_15-001).

¹³ See FHFA, *FHFA Seeks Input on Fannie Mae and Freddie Mac Guarantee Fees* (June 5, 2014) (online at www.fhfa.gov/Media/PublicAffairs/Pages/FHFA-Seeks-Input-on-Fannie-Mae-and-Freddie-Mac-Guarantee-Fees.aspx), and U.S. House of Representatives Committee on Financial Services, Statement of Melvin L. Watt,

Figure 3 illustrates movements in the level of Fannie Mae's guarantee fees from 2000 to 2014.¹⁴

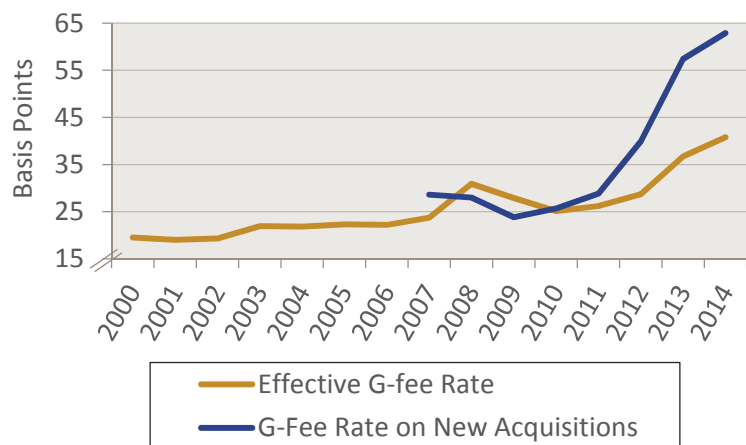
Net Interest Income from the Retained Portfolio

Historically, net interest income from the Enterprises' retained portfolios has been their primary source of revenue (see Figure 4).¹⁵

Net interest income is the difference, or spread, between the interest income earned on the assets in the retained portfolio and the interest expense associated with the debt that funds those assets. The

Enterprises' retained portfolios grew over 700% between 1992 and 2008, and net interest income became the largest source of earnings. The Enterprises' combined retained portfolios were \$192 billion as of the end of 1992, and grew to \$1.6 trillion as of 2008.

FIGURE 3. FANNIE MAE'S AVERAGE ANNUAL GUARANTEE FEES (2000-2014)



Source: Fannie Mae's Annual Reports filed with the Securities and Exchange Commission on Form 10-K.

Director, Federal Housing Finance Agency, at 14 (Jan. 27, 2015) (online at <http://financialservices.house.gov/UploadedFiles/HHRG-114-BA00-WState-MWatt-20150127.pdf>).

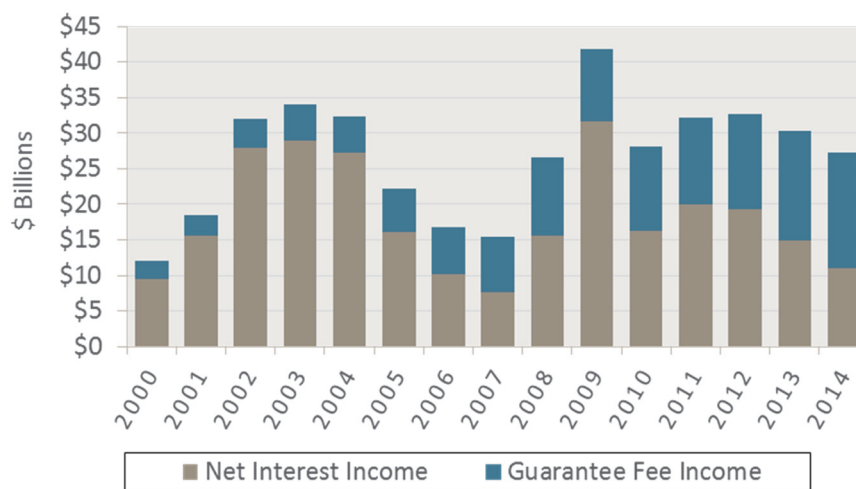
¹⁴ For the years 2000-2007, Fannie Mae's effective guarantee fee rate shown is guarantee fee income as a percentage of average outstanding MBS and other guarantees. For 2008-2014, the effective guarantee fee rate is calculated based on single-family guarantee fee income divided by the average single-family guarantee book of business. The guarantee fee rate charged on new acquisitions is a calculation of the average contractual fee rate for new acquisitions during each year plus the recognition of any up-front cash payments over the estimated average life of the acquisitions. See Fannie Mae, 2007 Form 10-K, at 47 (Feb. 27, 2008) and Fannie Mae, 2014 Form 10-K, at 87 (Feb. 20, 2015).

¹⁵ With the adoption of accounting guidance related to transfers of financial assets and consolidation of variable interest entities, effective January 1, 2010, guarantee fee income associated with the securitization activities of consolidated trusts is reflected in net interest income and no longer reported separately. See Fannie Mae, 2010 Form 10-K, at 82 (Feb. 24, 2011); Freddie Mac, 2010 Form 10-K, at 193 (Feb. 24, 2011).

While in conservatorship, the Enterprises are required to reduce the size of their retained portfolios in accordance with a designated schedule, and these mandatory reductions will reduce earnings from these portfolios in the future. The PSPAs require the Enterprises to reduce the size of their retained portfolios by 15% per year until they reach \$250 billion by 2018.¹⁶ Since the conservatorships began in 2008, the size

of the Enterprises' retained portfolios has declined dramatically. Fannie Mae's total mortgage related investment portfolio was \$413.3 billion as of December 31, 2014; Freddie Mac's comparable portfolio was \$408.4 billion. The Enterprises have cautioned that any income growth from guarantee fees may not completely offset the loss in income from the retained portfolios.

FIGURE 4. THE ENTERPRISES' COMBINED GUARANTEE FEE AND NET INTEREST INCOME (2000-2014)



Source: OIG analysis of information contained in the Enterprises' Annual Report filings with the Securities and Exchange Commission on Form 10-K.

Changes in Rates and Other Factors that Result in Changes to the Fair Value of the Derivatives Portfolio

The Enterprises, like many financial institutions, use derivatives to hedge against various risks, such as fluctuating interest rates. They use a variety of derivative instruments, including interest rate swaps, as an integral part of their interest rate risk management strategies. Derivative instruments are recorded at fair value and marked-to-market in the Enterprises' financial statements to reflect changes in the value of these instruments due to changes in, for example, short-term and long-term swap rates.¹⁷ The Enterprises report changes in the value of their derivatives portfolios as fair value gains or losses, and the impact of those changes affects financial performance. For example, Fannie Mae reported fair value gains on derivatives of

¹⁶ See OIG, *Analysis of the 2012 Amendments to the Senior Preferred Stock Purchase Agreements*, at 12 (Mar. 20, 2013) (WPR-2013-002) (online at http://fhfaoig.gov/Content/Files/WPR-2013-002_2.pdf).

¹⁷ The fair value of derivatives is also sensitive to changes, for example, in interest rates, yield curves, implied volatility, and mortgage spreads.

\$3.3 billion in 2013, and fair value losses of \$5.8 billion in 2014, a swing of more than \$9 billion.

Under the PSPAs, losses from derivatives could require a draw if they cause an Enterprise's liabilities to exceed the assets on its balance sheet and the Enterprise's losses exceed the applicable capital reserve amount. Stated differently, if derivatives losses, expenses, and other adjustments exceed revenues and applicable capital reserve amount, a draw from Treasury would be required to cover the negative net worth amount.

MARKET FACTORS AND CONDITIONS THAT CAN IMPACT THE SUSTAINABILITY OF FUTURE EARNINGS.....

As we have explained, there is significant uncertainty concerning the future performance of the Enterprises' business segments. This uncertainty is attributable to:

- The winding down of their investment portfolios and loss of interest income;
- The level of guarantee fees they will be able to charge;
- The elimination of a capital cushion to buffer losses;
- The changes in rates that can cause fair value losses or fair value gains on the Enterprises' derivatives portfolios; and
- The elimination of non-recurring events will affect the profitability of the Enterprises.

There are a number of other factors, which we now discuss, that can also affect Enterprise profitability.

The housing finance industry is inherently sensitive to fluctuations in key economic variables, such as interest rates, home prices, and unemployment levels. Such drivers generally follow cyclical patterns that can lead to boom and bust periods in the industry and affect the volume of mortgage prepayments and new mortgage originations. Further, the credit standards applied by lenders to the mortgages they originate expand and contract, impacting both the volume of new originations and the potential losses for mortgage creditors and guarantors, such as the Enterprises. Trends in prepayments and mortgage originations have a direct influence on their income.

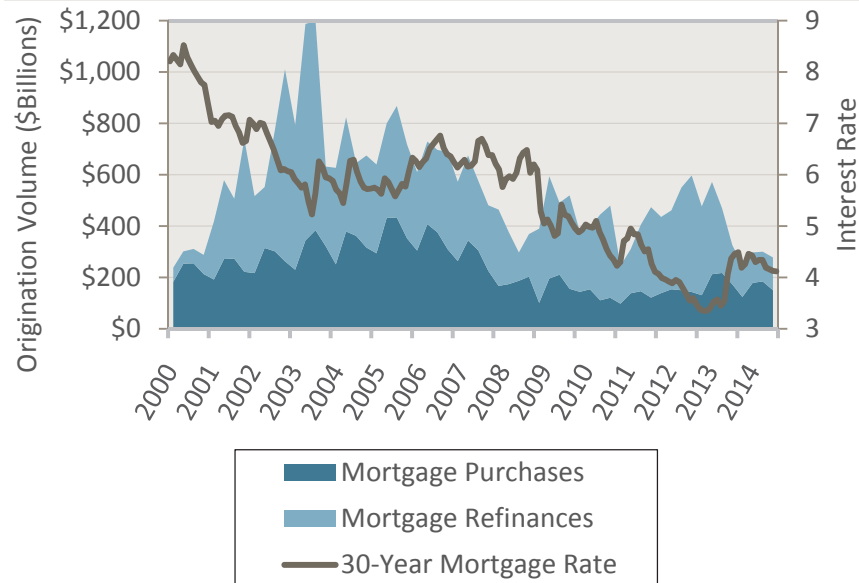
30-year Mortgage Rates and Volatility

As shown in Figure 5, interest rates for 30-year fixed-rate mortgages, the most commonly available mortgage in the United States, are subject to volatility. Mortgage rate volatility occurs because of many factors relating to housing finance and the broader U.S. economy, including the investor demand for MBS, the monetary policy of the Board of Governors of the Federal Reserve System and the Federal Open Market Committee (FOMC), and the general demand for credit in the United States.

Volatility in mortgage rates can have a significant impact on the level of mortgage prepayments and new originations. Generally speaking, falling interest rates provide incentive to borrowers to purchase new homes or refinance existing mortgages.¹⁸ Figure 5 illustrates that when mortgage interest rates fell by over three hundred basis points between 2000 and 2003, the mortgage industry originated record high volumes of new mortgages.

Conversely, mortgage origination volumes in a rising rate environment typically decline. As rates currently hover near historical lows, it is likely that their future trajectory will trend upwards. Freddie Mac forecasts that mortgage interest rates will climb to 5.1% by the end of 2016. It predicts \$1.275 trillion in mortgage originations that year, a decline of almost \$850 billion from 2012 levels.¹⁹

FIGURE 5. MORTGAGE ORIGINATIONS AND THE THIRTY-YEAR MORTGAGE RATE (2000-2014)



Source: Mortgage Bankers Association, *Quarterly Origination Estimates* (Feb. 2015) and Freddie Mac Primary Mortgage Market Survey (online at www.freddiemac.com/pmms/).

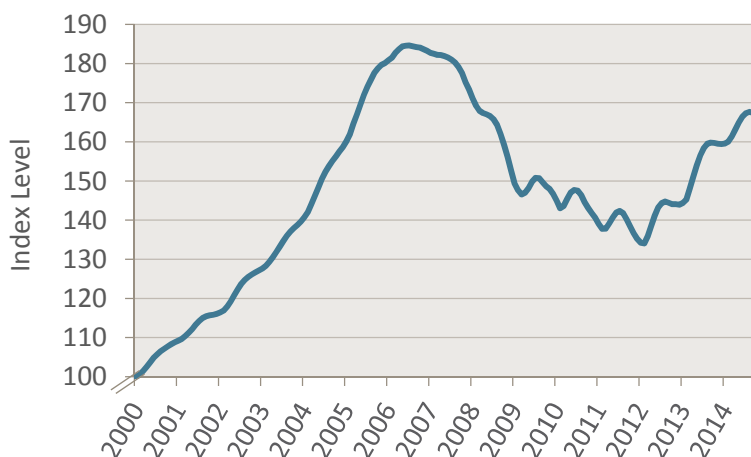
¹⁸ See Daniel K. Tarullo, Governor, Fed. Reserve Board, *Unemployment, the Labor Market, and the Economy*, Speech at the World Leaders Forum, Columbia University, New York, New York (Oct. 20, 2011) (online at www.federalreserve.gov/newsevents/speech/tarullo20111020a.htm).

¹⁹ See Freddie Mac, Office of the Chief Economist, *February 2015 U.S. Economic & Housing Market Outlook* (Feb. 17, 2015) (online at www.freddiemac.com/finance/pdf/february_2015_public_outlook.pdf).

Home Prices

Home prices fluctuate depending on key drivers, such as mortgage interest rates, employment levels, and household formation. Between 2001 and 2005, home prices grew by an annual rate of 10.6% before peaking in 2006 and then dropping precipitously (see Figure 6). As a result of a combination of factors, national home values fell by 27% between July 2006 and February 2012.²⁰ After large price gains since 2012, Freddie Mac predicts slowed growth in prices over the next two years.²¹

FIGURE 6. STANDARD & POORS/CASE-SHILLER U.S. NATIONAL HOME PRICE INDEX (2000-2014)



Source: S&P Dow Jones Indices (online at <http://us.spindices.com/indices/real-estate/sp-case-shiller-us-national-home-price-index>).

Home prices and mortgage interest rates influence borrower behavior and trends in origination volumes and composition, such as refinance activity or purchase money mortgages. For example, refinance activity falls relative to purchase money mortgages in a rising interest rate environment, and total origination activity falls as well.²² Reduced demand for mortgages results in lower origination volumes. Origination activity in 2014 was

²⁰ Home price declines were far greater in certain markets. For example, the Urban Institute, using CoreLogic data, calculated that house prices fell over 53% from peak-to-trough in the Riverside, California metropolitan area. See Urban Institute, *Housing Finance At A Glance: A Monthly Chartbook*, at 17 (Jan. 2015) (online at www.urban.org/publications/2000075.html).

²¹ Freddie Mac forecasts a 3.9% annual increases in U.S. home prices in 2015 and a 3.4% increase in 2016. See Freddie Mac, Office of the Chief Economist, *February 2015 U.S. Economic & Housing Market Outlook* (Feb. 17, 2015) (online at www.freddiemac.com/finance/pdf/february_2015_public_outlook.pdf).

²² The Mortgage Bankers Association forecasts that the share of refinance originations will fall to 32% in 2016, down from 60% in 2013. Freddie Mac predicts that refinance originations will make up 30% of all mortgages in 2016. Refinances made up the majority of mortgage originations between 2000 and 2013. See Mortgage Bankers Association, *Mortgage Finance Forecast* (Dec. 15, 2014) and Freddie Mac, Office of the Chief Economist, *February 2015 U.S. Economic & Housing Market Outlook* (Feb. 17, 2015) (online at www.freddiemac.com/finance/pdf/february_2015_public_outlook.pdf).

significantly lower than 2013; however, Freddie Mac and the Mortgage Bankers Association forecast higher purchase mortgage volumes in 2015 and 2016.²³

Home prices also have an effect on the Enterprises' loss severity when borrowers default on their mortgages. High foreclosure rates result in large inventories of real estate owned, also known as foreclosed properties. When the Enterprises sell real estate owned in depressed housing markets, they receive lower prices on those properties. Correspondingly, their loss severities increase and they incur higher credit losses.

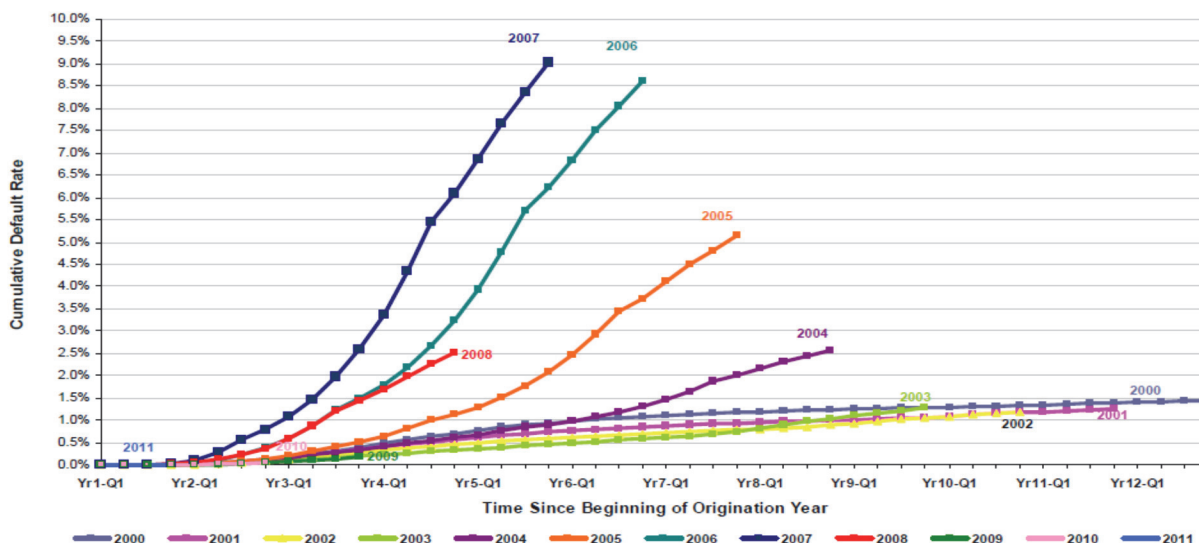
Credit Standards

Historically, credit standards tend to tighten or loosen depending on market conditions, perceptions of risk, and policy pressures. Following the boom in refinances in 2000-2003, lenders expanded their use of nontraditional mortgage products (e.g., subprime, Alt-A, low doc/no doc, stated income, payment option). Credit discipline eroded and market participants adopted reckless practices.²⁴ Relaxed underwriting standards were a contributing factor to the collapse of the housing finance system. Figure 7 below illustrates the cumulative default rates of Fannie Mae single-family mortgage loans by origination year. The higher default rates on loans originated between 2005 and 2007 reflect the impact of loosened credit standards.

²³ See Freddie Mac, Office of the Chief Economist, *December 2014 Economic and Housing Market Outlook* (Dec. 15, 2014) (online at www.freddiemac.com/finance/pdf/December_2014_public_outlook.pdf) and Mortgage Bankers Association, *Mortgage Finance Forecast* (Dec. 15, 2014).

²⁴ See generally, the Financial Crisis Inquiry Commission, *The Financial Crisis Inquiry Commission Report* "Chapter 7: The Mortgage Machine" (Jan. 2011) (online at <http://fcic.law.stanford.edu/report>).

FIGURE 7. CUMULATIVE DEFAULT RATES OF FANNIE MAE'S SINGLE-FAMILY CONVENTIONAL GUARANTEE BOOK OF BUSINESS BY YEAR OF ORIGINATION (AS OF DEC. 31, 2011)



Source: Fannie Mae, *2011 Credit Supplement*, at 15 (Feb. 29, 2012) (online at www.fanniemae.com/resources/file/ir/pdf/quarterly-annual-results/2011/q42011_credit_summary.pdf).

Since 2007, mortgage lenders have significantly tightened their credit standards in response to many factors, including credit losses; new regulation, such as the Consumer Financial Protection Bureau's Ability to Repay Rule;²⁵ and the risk of repurchase requests by the Enterprises for loans sold to them that did not comply with their standards.

Future Demand for MBS

In October 2014, the FOMC announced that it had ended its asset purchase program,²⁶ but would continue its policy of replenishing its MBS portfolio by reinvesting principal payments from its existing holdings.²⁷ It is uncertain when the FOMC will cease investing in MBS. The Mortgage Bankers Association suggests that the Federal Reserve, which has been the single largest purchaser of MBS over the past few years, will likely exit the MBS market in

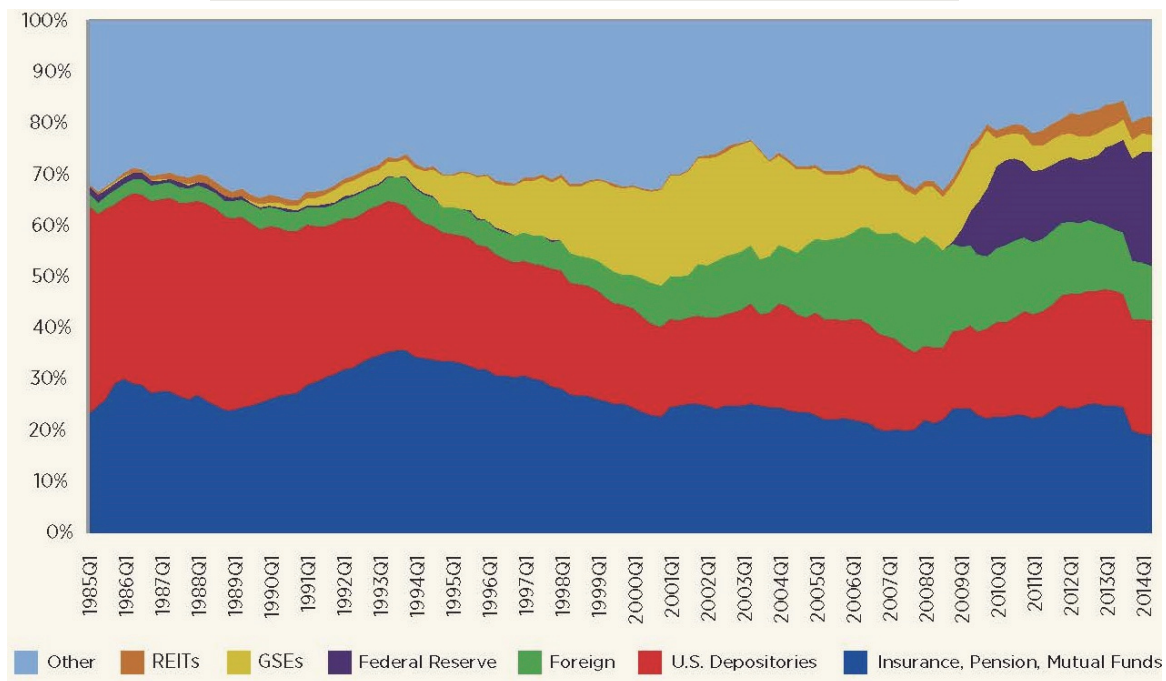
²⁵ See Consumer Financial Protection Bureau, *Ability-to-Repay and Qualified Mortgage Standards Under the Truth in Lending Act (Regulation Z)*, 78 Fed. Reg. 35429 (June 12, 2013) (final rule).

²⁶ The Open Market Trading Desk at the Federal Reserve Bank of New York implements monetary policy on behalf of the FOMC through domestic market operations, such as the now-terminated asset purchase program. For more information, see Federal Reserve Bank of New York, *Domestic Market Operations* (online at www.newyorkfed.org/markets/openmarket.html).

²⁷ See Board of Governors of the Federal Reserve System, *Federal Reserve Issues FOMC Statement* (Oct. 29, 2014) (online at www.federalreserve.gov/newsevents/press/monetary/20141029a.htm).

mid-2015.²⁸ The ramifications of the FOMC’s decision to end the asset purchase program will not be clear until the market adjusts to the changed environment. Figure 8 illustrates the holdings of MBS and mortgage debt among investor type between 1985 and 2014.

FIGURE 8. HOLDERS OF AGENCY MBS AND DEBT (1985-2014)



Source: Federal Reserve data as analyzed by the Mortgage Bankers Association. See Mortgage Bankers Association, *Who Will Own Mortgage Assets?* (Nov. 2014) (online at http://mba.informz.net/MBA/data/images/112014_Mortgage_Assets_White_Paper.pdf).

There is no obvious single player prepared to take over the Federal Reserve’s position as the dominant purchaser. Investors in MBS have different incentives for holding these instruments, and their investment strategies are influenced by a variety of factors, including regulatory capital and liquidity standards (e.g., Basel III and liquidity requirements); risk appetite and return objectives; and access to funding at favorable rates. The Mortgage Bankers Association estimates modest gains in demand for MBS issuance in 2015 and expects total mortgage production to remain low. This lack of production combined with factors beyond FHFA and the Enterprises’ control create uncertainty about the future source of capital to fund the housing mortgage market and who the holders will be of MBS.

²⁸ See Michael Fratantoni, Mortgage Bankers Association, *Who Will Own Mortgage Assets?*, at 3 (Nov. 2014) (online at http://mba.informz.net/MBA/data/images/112014_Mortgage_Assets_White_Paper.pdf). The Mortgage Bankers Association predicts that the Federal Reserve will likely cease investing in MBS after the first increase in its target short-term interest rate, which the Mortgage Bankers Association anticipates will likely occur in mid-2015.

ADDITIONAL LAYERS OF UNCERTAINTY CLOUD THE ENTERPRISES' FUTURE PROFITABILITY

Market Conditions

The housing finance system is in the midst of a period of significant uncertainty, and those uncertainties will have an impact on key market drivers such as home mortgage rates, home prices, credit standards, and other rates (e.g., short-term and long-term swap rates) that impact the Enterprises' financial performance. Future profitability will be determined by how these drivers change and to what degree. The recent housing and economic crisis is proof that certain combinations of these drivers—for example, abrupt, significant, and prolonged drops in home prices, high unemployment, and unexpectedly high mortgage defaults²⁹—will result in substantial losses at the Enterprises. Whether those drivers converge again in the same manner with the same result is unknown.

Congressional Action

Congress and the administration appear to agree that the current housing finance system is not viable and that legislation is needed to address fundamental industry issues. At present, there is no indication that the final resolution of these issues will occur in the near term. FHFA's current expectation is that the conservatorships will continue until legislation is passed and the Enterprises' future is settled.

Other Factors

While it is known that market conditions and the uncertainty of the Enterprises' status will affect future profitability, the next specific source of instability in the Enterprises' financial performance is not known. OIG is currently reviewing a number of issues that may lead to financial losses at the Enterprises. In particular, we will release a white paper surveying the risk posed to the Enterprises by cyber-attacks,³⁰ and we continue to evaluate the risk of losses

²⁹ While the number of the Enterprises' seriously delinquent mortgages—those loans that are 90 days or more past due or in the foreclosure process—has declined in recent years, they remain elevated compared to pre-crisis levels.

³⁰ The Enterprises maintain protected personal information about mortgage borrowers as well as sensitive financial data related to their capital markets operations. The compromise of such data through infiltration could lead to potential loss exposure for the Enterprises.

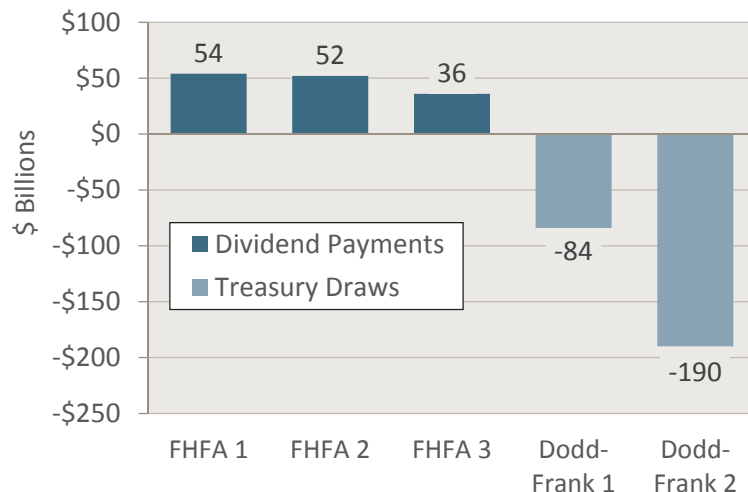
to the Enterprises resulting from the failure of counterparties to meet their contractual obligations.³¹

Dodd-Frank Stress Tests

In 2014, FHFA reported on the results of the Enterprises' series of stress tests conducted in accordance with the Dodd-Frank Wall Street Reform and Consumer Protection Act (the Dodd-Frank Act)³² and FHFA's instructions and stress scenarios. The results varied considerably among the different stress scenarios, as shown in Figure 9.

Under the Dodd-Frank Act severely adverse scenario, which simulates conditions generally comparable to the recent financial crisis, the Enterprises project that they will require combined draws of \$84 billion or \$190 billion,

FIGURE 9. PROJECTED ENTERPRISE DIVIDENDS AND DRAWS UNDER THE FHFA AND DODD-FRANK ACT STRESS TEST SCENARIOS (Q4 2013-Q4 2015)



Source: FHFA, *Projections of the Enterprises' Financial Performance (Stress Tests)*, at 3 (Apr. 30, 2014) (online at www.fhfa.gov/AboutUs/Reports/Pages/Projections%20of%20the%20Enterprises-Financial-Performance-April-30-2014.aspx).

³¹ Fannie Mae's 2013 Annual Report disclosed that: (1) the Enterprise is acquiring an increasing portion of its business volume directly from smaller or non-depository financial institutions, which may not have the same financial strength, liquidity, or operational capacity as its larger depository financial institution counterparties; and (2) this potentially lower financial strength, liquidity, and operational capacity of nonbank sellers may negatively affect their ability to satisfy their repurchase or compensatory fee obligations to the Enterprise. The decrease in the concentration of the Enterprise's business with large depository financial institutions could increase both institutional counterparty credit risk and mortgage credit risk, and could have a material, adverse effect on the Enterprise's business, results of operations, financial condition, liquidity, and net worth. See Fannie Mae, *2013 Form 10-K*, at 38 (Feb. 21, 2014).

³² The Dodd-Frank Act, Pub. L. 111-203, requires large federally-regulated companies—those with \$10 billion or more in assets—to conduct annual stress tests to determine whether they have the capital necessary to absorb losses as a result of adverse economic conditions. 12 U.S.C. § 5365(i)(2). According to FHFA, the Enterprises are required to submit the results of stress tests based on three scenarios: Baseline, Adverse, and Severely Adverse. Only the Severely Adverse results are required to be released publicly. FHFA's scenarios are intended to be consistent with those provided by the Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, and the Office of the Comptroller of the Currency to allow for comparison with other financial institutions' stress test results.

depending on whether they created valuation allowances for deferred tax assets.³³ Under the FHFA's worst case scenario, which is far less severe than the Dodd-Frank Act severely adverse scenario, no required draws are projected.

³³ See FHFA, *Projections of the Enterprises' Financial Performance (Stress Tests)*, at 3 (Apr. 30, 2014) (online at www.fhfa.gov/AboutUs/Reports/Pages/Projections%20of%20the%20Enterprises-Financial-Performance-April-30-2014.aspx).

CONCLUSION.....

Imprudent business practices and unfavorable market conditions led to the Enterprises' financial collapse and conservatorship in 2008. After years of huge losses, the Enterprises have reported net income since 2012. Non-recurring events have been a significant driver of earnings in 2013 and 2014 and are unlikely to drive future earnings. While OIG cannot predict whether additional Treasury investments to either Enterprise is a reasonable possibility in the near future, we recognize that significant uncertainties concerning the level of guarantee fees the Enterprises will be able to charge, when combined with the winding down of their investment portfolios and loss of interest income, and possible losses on the derivatives portfolios, mean that the Enterprises' future profitability is far from assured. The reduction and eventual elimination of the Enterprises' capital reserves increases the likelihood of additional Treasury investment. Changes in market conditions and the uncertainty of the current mortgage securities market can further affect future profitability, as shown by recent Dodd-Frank Act stress tests. For all of these reasons, stakeholders should not presume continued profitability of the Enterprises.

OBJECTIVE, SCOPE, AND METHODOLOGY

The objectives of this white paper were to explain the many challenges faced by the Enterprises that affect their profitability and to caution that the future profitability of the Enterprises is not assured. To address this report’s objectives, we interviewed the Enterprises’ Chief Financial Officers as well as officials responsible for financial reporting and forecasting. We also interviewed FHFA’s Chief Accountant and officials from the Office of the Financial Analysis, Modeling and Simulations and the Office of Risk Analysis.

We also reviewed publicly available data from the Enterprises’ filings with the Securities and Exchange Commission, FHFA’s annual reports to Congress and reports on the Enterprises’ financial performance, the Office of Federal Housing Enterprise Oversight’s reports on mortgage markets and the Enterprises, and the Board of Governors of the Federal Reserve System’s statistical data releases. Additionally, we reviewed non-public information provided by the Enterprises and FHFA. The data used in this report covered the period from 2000 through the end of 2014, when available. We did not independently test the reliability of the Enterprises’ or FHFA’s data. For comparison purposes, we used “Net Income” as reported by the Enterprises and then standardized by FHFA, throughout the paper.³⁴

The preparation of this white paper was conducted under the authority of the Inspector General Act of 1978, and in accordance with *The Quality Control Standards for Inspection and Evaluation* (January 2012), which was issued by the Council of the Inspectors General on Integrity and Efficiency. These standards require OIG to plan and perform evaluations to obtain evidence sufficient to provide a reasonable basis for its findings and recommendations. We believe that this white paper meets these standards. The performance period for this white paper report was from November 2014 to February 2015.

We provided FHFA with the opportunity to respond to a draft of this white paper. We appreciate the efforts of FHFA, the Enterprises, and their staff in providing information and access to necessary documents to accomplish this study.

³⁴ Beginning in 2010, the Enterprises began reporting “Comprehensive Income.” Comprehensive Income is comprised of Net Income and Other Comprehensive Income or Loss, which is defined as the change in equity, net of tax, resulting from transactions that the Enterprises record directly to stockholders’ equity.

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