TESTIMONY

Mortgage Insurance:
Comparing Private Sector and Government-Subsidized Approaches

Before The

The Subcommittee on Housing and Insurance
United States House of Representatives

Wednesday, March 13, 2013 at 10:00 a.m.
Room 2128 Rayburn House Office Building

Prepared by:
Milliman, Inc.

Kenneth A. Bjurstrom
Principal and Financial Consultant

March 12, 2013

15800 W. Bluemound Road, Suite 100
Brookfield, WI 53005-6043
TEL +1 262 784 2250
FAX +1 262 923 3686
Milliman.com

TESTIMONY

Mortgage Insurance:
Comparing Private Sector and Government-Subsidized Approaches

Before The

The Subcommittee on Housing and Insurance
United States House of Representatives

OPENING REMARKS

Chairman Neugebauer, Ranking Member Capuano, Members of the Subcommittee: Thank you for the privilege of appearing before you today.

My name is Ken Bjurstrom. I am a Principal at Milliman, Inc., where my practice focuses on mortgage credit risk analysis for the mortgage insurance and mortgage banking industry. In association with Milliman, I have conducted analyses of the private mortgage insurance industry at the request of individual companies and their trade association. At the request of the U.S. Department of Housing and Urban Development's Inspector General, I have conducted several reviews of the actuarial report for the Federal Housing Administration's (FHA) Mutual Mortgage Insurance Fund (MMIF).

You have asked me to discuss and compare the mechanics of the private mortgage insurance business and the FHA, including its operational, structural and regulatory components and include any other legislative and regulatory suggestions that I believe will enhance FHA, protect taxpayers and facilitate the return of private capital. To that end, in my testimony I will recommend that the FHA evaluate and adopt many of the private mortgage insurance statutory accounting provisions, better understand and modify their exposures to those that specifically support their mission and retain the necessary capital that is required to protect the Mutual Mortgage Insurance Fund currently and for the next economic downturn that will most definitely occur again, at some point in the future.

MORTGAGE INSURANCE

Mortgage insurance makes home ownership possible for first time home-buyers with limited credit history and underserved borrowers with limited resources. Without such insurance coverage, mortgage lenders would generally require a borrower to have a downpayment equal to at least 20% of the home's value. With mortgage insurance coverage, mortgage lenders are able to originate loans to borrowers with downpayments of as little as 3%.

To the extent that the losses associated with mortgage defaults tend to vary based on macroeconomic conditions, a mortgage insurer, whether it is a private mortgage insurer or the FHA, is in the business of "insuring the economy." During periods of economic expansion, the credit environment is generally healthy and mortgage default losses tend to moderate or diminish, enabling insurers to realize and retain underwriting earnings to cover potential losses that inevitably arise in the economic contractions that follow. During recessions, the credit environment deteriorates and default-related losses tend to mount, potentially causing mortgage insurers to draw down their stockpiles of retained underwriting earnings to cover claims.

Exhibit 1 illustrates the annual rate of change in the FHFA All Transactions historical and forecasted home price Index and unemployment rate developed by Moody's Analytics as of September 30, 2012. During the early 1980s and again in the early 1990's, as well as over the last few years, the economy has suffered declines in home prices or increases in unemployment resulting in mortgage insurance claims. Subsequent to each of these periods of economic stress the FHA's MMIF experienced substantial losses.

Exhibit 2 illustrates the actual and ultimate forecasted claim rates by endorsement year of the MMIF according to the most recent FHA actuarial review[1]. Both the actual and forecasted claim rates in this exhibit were produced by the FHA's independent actuary. For endorsement year 1981, roughly 22 out of every 100 FHA borrowers defaulted and lost their home resulting in a mortgage insurance claim to the FHA. For endorsement years 1990 through 2003, approximately 8 out of 100 FHA borrowers resulted in a claim to the FHA. For 2007 endorsements, over 30 out of every 100 FHA borrowers are estimated to result in an FHA claim demonstrating the volatility of the mortgage insurance business.

[1] Actuarial Review of the Federal Housing Administration Mutual Mortgage Insurance Fund Forward Loans for Fiscal Year 2012, November 5, 2012, Integrated Financial Engineering.

MORTGAGE INSURANCE OPERATIONS

As Illustrated, this unique line of insurance exposes mortgage insurers like the FHA to considerable risks. The non-cancelable contracts for extended durations of coverage coupled with the economically correlated individual risks lead to extreme volatility of losses. This, in turn, necessitates mortgage insurers such as the FHA to maintain basic disciplines that govern the financial operations including underwriting and ratemaking, loss reserving and high capital commitments as directed by counter parties, regulators and rating agency requirements.

Underwriting and Rate Making

According to the Statement of Principles Regarding Property and Casualty Ratemaking (SOP-Ratemaking) as adopted by the Board of Directors of the Casualty Actuarial Society (CAS), Ratemaking is defined as "the process of establishing rates used in insurance or other risk transfer mechanisms."

The following four ratemaking principles are specified in SOP-Ratemaking and can be applied to mortgage insurance ratemaking:

- Principle 1: a rate is an estimate of the expected value of future costs;
- Principle 2: a rate provides for all costs associated with the transfer of risk;
- Principle 3: a rate provides for the costs associated with an individual risk transfer;
- Principle 4: a rate is reasonable and not excessive, inadequate or unfairly discriminatory if it is an actuarially sound estimate of the expected value of all future costs associated with an individual risk transfer.

The key objective of the ratemaking process is therefore the estimation of the costs associated with the transfer of risk effected by issuing mortgage insurance policies. Historically, mortgage insurers have generally used the size of the down payment or loan-to-value, product type such as fixed rate or adjustable rate and the amount of coverage in their underwriting and rate making approach. Relatively recently, private mortgage insurers have expanded their premium rate programs to recognize the importance of borrower FICO Scores and other factors.

In contrast, the FHA currently utilizes fewer tools available to them to financially manage mortgage insurance exposures. The FHA insures 100% of the potential claim loss, compared to generally 25% to 35% for private mortgage insurers, and the FHA charges the same premium rates for all loan product types and borrower FICO Scores. Without a more granular approach to ratemaking the FHA may be encouraging adverse selection with respect to obtaining FHA mortgage insurance protection.

Ratemaking for mortgage insurance should take these factors into account and take a long-term view of pricing while also considering the important roles of adverse selection and changes in the underlying insured risks. The adverse selection effects of alternatives to mortgage insurance coupled with the potential for future boom and busts in the housing market add to the operational challenges of mortgage insurance industry.

Statutory Reserve Requirements

Mortgage insurance losses represent the costs of claims arising from defaulting loans insured under mortgage insurance policies. Such losses are incurred when a loan becomes delinquent and ultimately gives rise to a claim by an insured lender or investor. A private mortgage insurer must be licensed in each state where it writes business and insurance laws generally require private mortgage insurers to adequately maintain the following reserves:

- Unearned Premium Reserve:

  - ✓ A reserve on an annual or on a monthly pro rata basis on all unexpired coverage, except that in the case of premiums paid more than one year in advance, the premium shall be earned proportionally with the expiration of exposure;

- Loss Reserve (both a case and incurred but not reported reserves) and Loss Adjustment Reserves:

  - ✓ Case basis loss reserves are based on an estimate of the liability for claims on individual insured loans in various stages of default;
  - ✓ An incurred but not reported reserve is based on an estimate of the liability for future claims on insured loans that are in default but of which the insurer has yet to be notified by the servicer; and
  - ✓ A loss adjustment expense reserve is based on an estimate of the cost of adjusting and settling claims on insured loans in default;

- Contingency Reserve:

  - ✓ A reserve, which consists of fifty percent (50%) of the insurers earned premium and is maintained for ten years. Subject to the approval of the commissioner, withdrawals may be made from the contingency reserve in any year in which the actual incurred losses exceed 35% of the earned premiums.

Additionally, general insurance requirements may also require a premium deficiency reserve. A statutory premium deficiency exists if future paid losses and expenses on unexpired business as of an evaluation date exceed the related premium revenue for such business (on a present value basis), along with the current loss reserves, unearned premium reserve and contingency reserve.

The reserve requirements for private mortgage insurance require the company to account for near-tem expected losses, restrict shorter-term dividends and measure the company's ability to write new business. The FHA in contrast does not have a comparable reserving methodology.

Statutory and Industry Capital Commitment

Private mortgage insurers are generally subject to a maximum risk-to-capital ratio of 25:1 (i.e., the ratio of insured loan risk exposure [coverage times original loan balance] to the sum of policyholders' surplus and contingency reserves). Taken together, the contingency reserve and risk-to-capital ratio requirements have the effect of requiring the private mortgage insurer to build reserves and surplus during periods of economic growth and stability so that they are in position to cover substantial levels of claims during periods of economic downturn.

In addition, Fannie Mae and Freddie Mac (the GSEs) have developed a rigorous set of eligibility requirements for their approved private mortgage insurers. Private mortgage insurers must comply with these requirements in order to maintain approval to insure mortgage loan business purchased or securitized by the GSEs. The requirements have been periodically updated over time as the mortgage lending environment has evolved and the GSEs' needs have changed.

The three major credit rating agencies also monitor the financial safety and soundness of the mortgage insurers. In part, the agencies have assumed this role in conjunction with GSE private mortgage insurer eligibility requirements.

The FHA MMIF is not subject to the statutory reserve requirements or comparable capital requirements as those that apply to private mortgage insurers.

The 1990 Cranston-Gonzalez National Affordable Housing Act requires an independent actuarial analysis of the economic net worth and financial soundness of the FHA MMIF. The primary purpose of this actuarial review is to estimate (excluding Home Equity Conversion Mortgages):

- The economic value of the MMIF, defined as the sum of existing capital resources, total assets less total liabilities of the MMIF, plus the net present value of the current books of business; and
- The total insurance-in-force (IIF) of the MMIF.

The FHA is required to maintain a 2 percent ratio of the economic value of the MMIF to IIF (capital ratio). This ratio requirement and the economic valuation from which it is derived is the FHA's only gauge of its ability to withstand losses

The economic value calculation for the FHA has several inherent weaknesses. The calculation is based on a 30-year time horizon and is subject to a forecast of the United Sates economy. Exhibit 1 attached to my testimony highlights the actual and forecasted rates of home prices and unemployment since 1979 and the assumptions currently used by the FHA in assessing its actuarial soundness. Although the current financial crisis is generally reflected beginning in 2007 and recovering in 2013, the longer-term forecasts generally assume a return to a 6% unemployment rate and home prices appreciating at greater than 3%. This long-term forecast results in significant positive economic value for the most recent endorsement years as if these economic forecasts were certain. Because the more recent endorsement years have the potential for significant variability over the long-term the calculation should consider the risk associated with economic outcomes and insurance liabilities, particularly given the size of the more recent endorsement years. In contrast, the private mortgage insurers do not take credit for the economic value reflected in future premiums in terms of their statutory capital requirements.

If we relook at the history and forecasted FHA claim rates (Exhibit 2) and the economic environments (Exhibit 1) that caused them, it is clear that the FHA should establish a capital threshold that reflects a more risk-based probability of stressed losses in the future. Exhibit 3 illustrates the number of endorsement years that are estimated to experience the indicated ultimate claim rate. Over roughly a thirty-year period 13 of the endorsement years have an ultimate claim rate greater than 10%. A simple probability distribution calculation would suggest that FHA should expect an ultimate claim rate greater than 15% more than 20% of the time.

In addition to reflecting the risk of more adverse economic outcomes, the FHA should be allowed to establish loss reserves and account for estimated loss liabilities prior to determining its capital ratio or other assessment of its financial strength. The establishment of loss reserves for currently delinquent borrowers for example is more transparent to estimate because these reserves are calculated using current market and economic conditions. Loss reserves are a critical part of determining the actuarial health of any insurance fund and should be part of the MMIF capital assessment to give Congress a more accurate view as to the capital adequacy of the FHA's single family operations.

RECOMMENDATIONS AND CONCLUSIONS

The mortgage insurance industry has weathered many storms since 1934 when the National Housing Act was passed in 1934 to create the FHA and make better housing available to low- and moderate-income families and 1957 when the private mortgage insurance industry was established to supplement the financing of affordable housing with private capital put at risk. Since the early 1980s when I began working in this industry I have witnessed multiple economic downturns which created tremendous losses for both private mortgage insurance companies and government run funds at both the state and federal level. It is therefore important to continue to work diligently in protecting this very important housing program. To that end I recommend that the FHA evaluate and adopt many of the private mortgage insurance statutory accounting provisions described above, better understand and modify their exposures to those that specifically support their mission and retain the necessary capital that is required to protect the program now and for the next economic downturn that will most definitely occur again.

QUALIFICATIONS AND LIMITATIONS

For this testimony, I have relied on data and other information provided in the public domain. I have not audited or verified this data and information. If the underlying data or information is inaccurate or incomplete, my testimony may likewise be inaccurate or incomplete. I have significant expertise in the evaluation of mortgage credit risk and mortgage insurance and I have been assisted with my testimony by staff and peer reviewers who are Members of the American Academy of Actuaries, Fellows of the Casualty Actuarial Society and/or also have significant expertise in the evaluation of mortgage insurance.

Additionally, Milliman has not performed an exhaustive review of the FHA's MMIF ultimate claims paying ability and therefore are not expressing an opinion on the MMIF's financial condition.

Any reader of this report must possess a certain level of expertise in areas relevant to this testimony to appreciate the significance of the assumptions and the impact of these assumptions on the illustrated results. The reader should be advised by, among other experts, actuaries or other professionals competent in the area of actuarial projections of the type in this testimony, so as to properly interpret.

♦ ♦ ♦ ♦ ♦

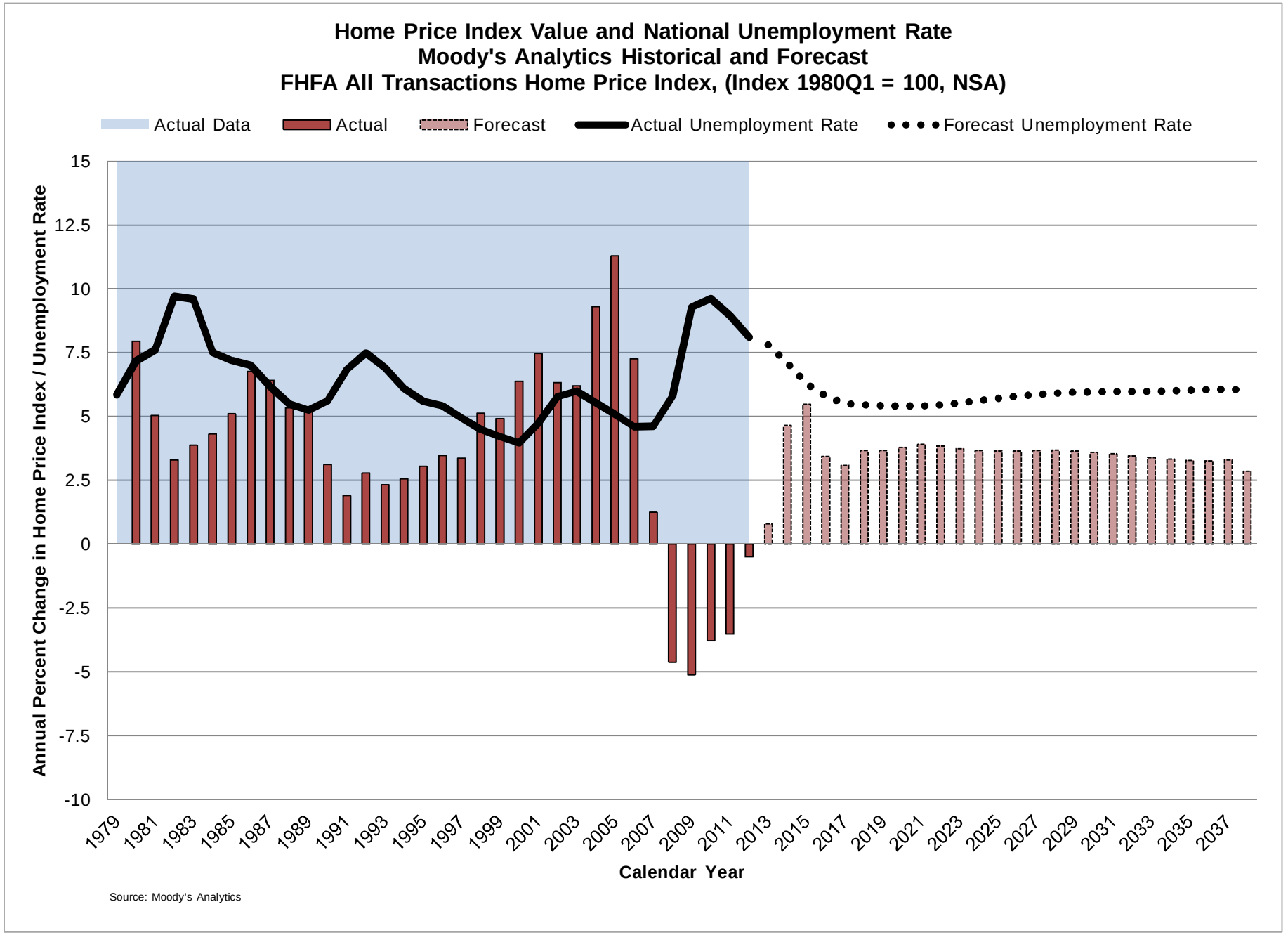
Thank you for inviting me and for your consideration of my views. I would be pleased to answer any questions from the Subcommittee membership.

Respectfully submitted,

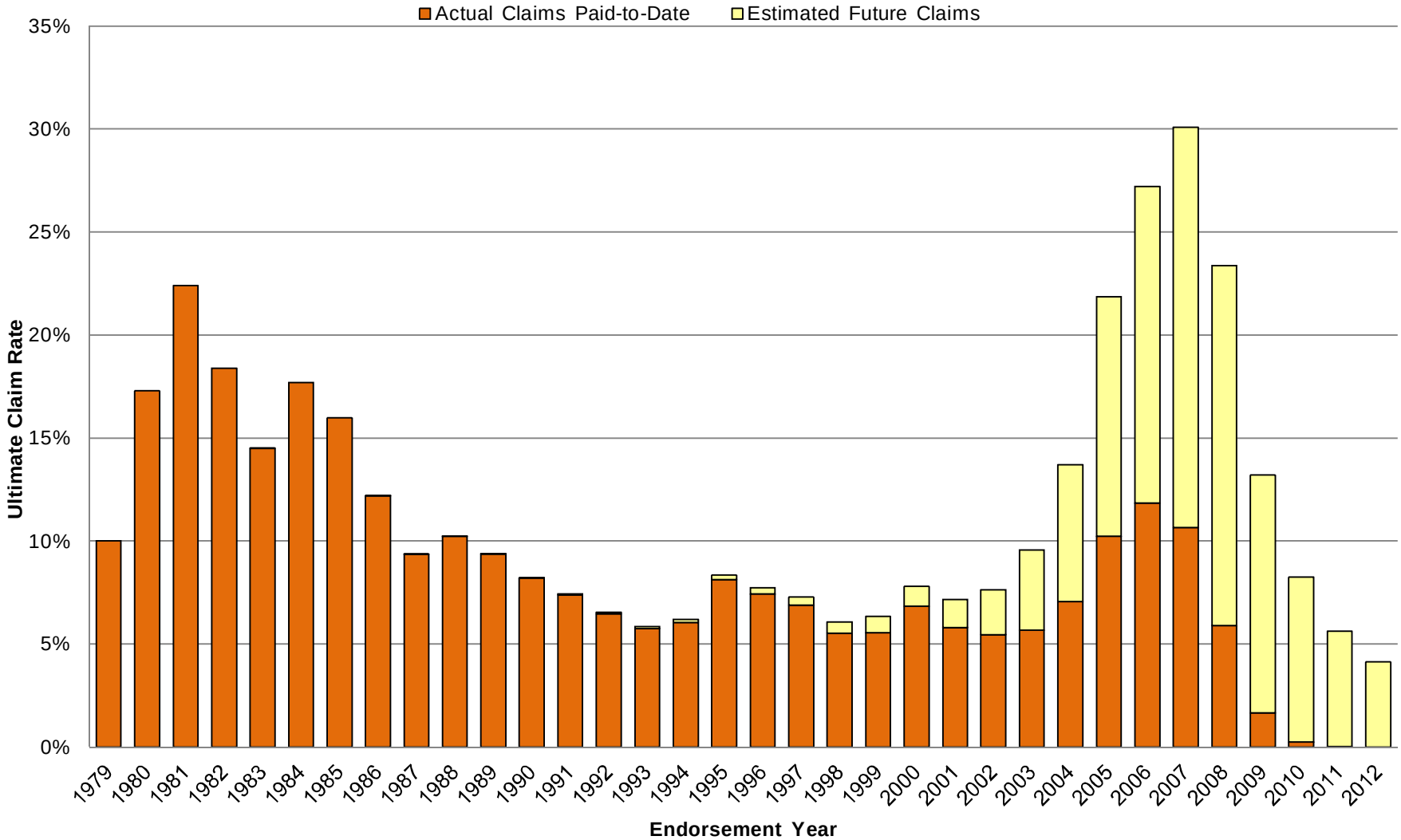
Kenneth A. Bjurstrom
Principal and Financial Consultant
Milliman, Inc.

KAB/sbs

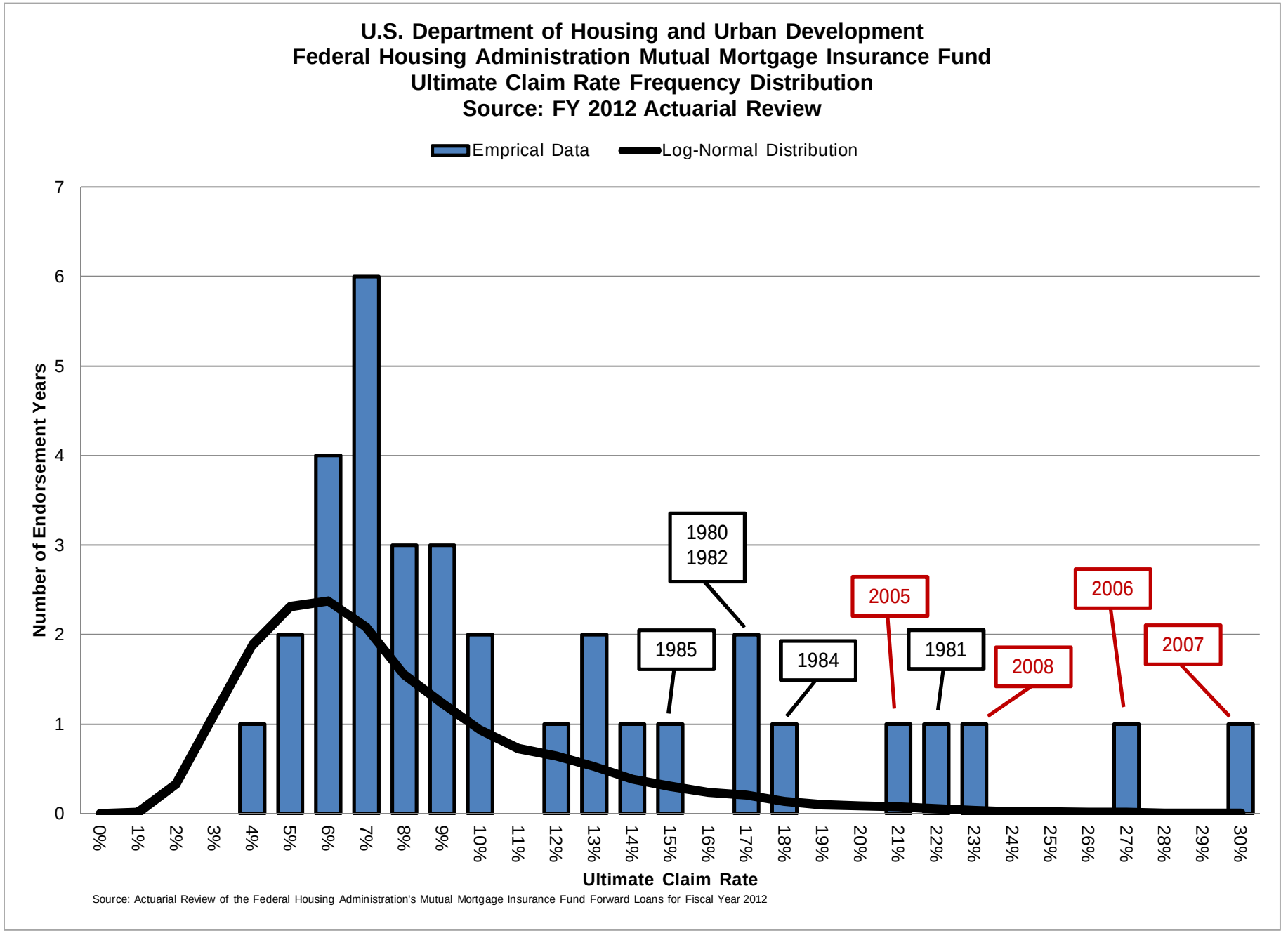
March 12, 2013


Home Price Index Value and National Unemployment Rate
Moody's Analytics Historical and Forecast
FHFA All Transactions Home Price Index, (Index 1980Q1 = 100, NSA)
Actual Data
Actual
Forecast
Actual Unemployment Rate
Forecast Unemployment Rate
Annual Percent Change in Home Price Index / Unemployment Rate
15
12.5
10
7.5
5
2.5
0
-2.5
-5
-7.5
-10
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021
2023
2025
2027
2029
2031
2033
2035
2037
Calendar Year
Source: Moody's Analytics

U.S. Department of Housing and Urban Development
Federal Housing Administration Mutual Mortgage Insurance Fund
Ultimate Claim Rate Estimates by Endorsement Year
Source: FY 2012 Actuarial Review



Source: Actuarial Review of the Federal Housing Administration's Mutual Mortgage Insurance Fund Forward Loans for Fiscal Year 2012


U.S. Department of Housing and Urban Development
Federal Housing Administration Mutual Mortgage Insurance Fund
Ultimate Claim Rate Frequency Distribution
Source: FY 2012 Actuarial Review
Emprical Data
Log-Normal Distribution
Number of Endorsement Years
0
1
2
3
4
5
6
7
1980
1982
1985
1984
2005
1981
2008
2006
2007
0%
1%
2%
3%
4%
5%
6%
7%
8%
9%
10%
11%
12%
13%
14%
15%
16%
17%
18%
19%
20%
21%
22%
23%
24%
25%
26%
27%
28%
29%
30%
Ultimate Claim Rate
Source: Actuarial Review of the Federal Housing Administration's Mutual Mortgage Insurance Fund Forward Loans for Fiscal Year 2012