

Section VII: Qualifications and Limitations

The actuarial models used for this analysis are based on a theoretical framework and certain assumptions. This framework relates the rates of claims and prepayments to a number of individual loan characteristics and certain key macroeconomic variables. The model is calibrated using econometric regression techniques based on data from FHA's actual historical experience regarding the performance of mortgage loans. The calibration identifies the parameters of the model through a statistical optimization technique known as maximum likelihood estimation. The parameters of the model are estimated on a wide variety of economic conditions and mortgage market experience over the past 30 years. The calibrated model is used together with assumptions about future loan portfolios and certain key economic assumptions for future projections.

The financial estimates presented in this Review require projections of events more than 30 years into the future. These projections are dependent upon the validity and robustness of the underlying model and the assumptions about future economic environment and loan characteristics. These assumptions include economic forecasts by Global Insight, Inc. and assumptions concerning FHA's future endorsement portfolios. To the extent that the realized experience deviates from these or other assumptions, the actual results may differ, perhaps significantly, from our current projections.

As of this writing, the U.S. as a whole is experiencing very stressful conditions in the mortgage markets. As noted elsewhere in this Review, the entire country is in the midst of a widespread and very severe house price decline and it is projected that this will continue for the next two years. Such extreme conditions had occurred before in the last thirty years, but were restricted to certain regions of the country, such as Texas in the mid 1980s, or California in the early 1990s. It is necessary to go back to the Great Depression to find a house price recession of the magnitude and scale as that projected by Global Insight, Inc. The model used in this Review takes the future projected house price declines into account when computing claim and prepayment rates.

Given that the current economic conditions and those expected to prevail over the next year or so are extremely stressful, it is worth discussing the ability of the model to perform properly in such an extreme environment. The model assumes that certain general relationships which have been observed over a long historical period and under a wide variety of economic conditions will continue to hold in the future. However, it is possible that under the current extremely stressful environment, some new phenomena may emerge that change these relationships in a significant way that could affect the projected claims and prepayments. At this time we have not been able to obtain any convincing evidence that a change of this nature has occurred, but it is important to

continue to monitor the model to verify its performance and reliability. If such a change does take place, the projected future claims could be either higher or lower.

We now discuss some other limitations and qualifications relating to the results presented in this review.

A. Model Sensitivity to Economic Projections

The main purpose of this Review is to assess the long term financial performance of the MMI Fund. One of the critical economic variables used in making these projections is the future rate of houses price changes. As vividly illustrated in Section II, the changes in this assumption in the current Review from the corresponding assumptions used in the FY 2007 Review have a dramatic impact on the MMI Fund's economic condition. As noted in Exhibit II-4 item (d), the change in the house price forecast this year reduced the Fund's economic value by well over six billion dollars. If the future house price changes on FHA's portfolio are more pessimistic than the Global Insight, Inc. forecast, then the actual claim rates would be higher than those projected in this Review. Conversely, if the future house price changes in FHA's portfolio are more optimistic than the Global Insight, Inc. forecast, the actual claim rates would be lower than those projected in this Review. These two possibilities were explored quantitatively in Section V.

B. Basic Data Inputs

The analysis in this Review uses a data extract from FHA's data warehouse as of March 31, 2008. Forecasts of future economic conditions are based on the July 2008 projection by Global Insight, Inc. Future endorsement volume and composition data are based on FHA's projection as of August 2008. The volume and composition of the existing portfolio are further updated by an extract of FHA data as of June 30, 2008. While we have reviewed the integrity and consistency of these data and believe the data to be reasonable, we have not audited them for accuracy. The information contained in this Review may not correspond exactly with other published analyses that rely on FHA data compiled at a different time or obtained from other data sources.

C. Suitability of Model for Short-Term Predictions

The actuarial model is designed for long-term financial projections and was not designed to optimize the predictability of short-term claims and prepayments. Additional variables and/or alternative modeling approaches would be more effective to project short-term results. Those additional variables would also need to be predicted or modeled. Further study of short-term

forecasts could be included in future annual reports to assess the potential for change in the MMI Fund's capital ratio or other adverse indications that might be predicted by short-term variables.

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