

GAO

## Testimony

Before the Subcommittee on Capital Markets,  
Securities and Government Sponsored Enterprises  
Committee on Banking and Financial Services  
House of Representatives

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Not to be Released Before  
10:00 a.m. EDT  
Wednesday  
July 31, 1996

# HOUSING ENTERPRISES

## Assessment of OFHEO's Interest Rate Analysis

Statement for the Record  
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Financial Institutions and Markets Issues  
General Government Division



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# Statement

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Mr. Chairman and Members of the Subcommittee:

On July 5, 1996, the Subcommittee on Capital Markets, Securities and Government Sponsored Enterprises of the House Committee on Banking and Financial Services requested that the Office of Federal Housing Enterprise Oversight (OFHEO) analyze the potential effects of a large and rapid increase in interest rates, accompanied by otherwise unfavorable economic conditions, on the financial condition of Fannie Mae and Freddie Mac (the enterprises). The Subcommittee requested that we review OFHEO's analysis and assess the reasonableness of the approach and key assumptions that OFHEO used in its analysis.

OFHEO used two approaches to address the Subcommittee's request. First, OFHEO asked the enterprises to use their own financial models to project the impacts of interest rate changes and credit conditions specified by OFHEO. Second, OFHEO used its financial models, which are under development to respond to a statutory mandate to establish risk-based capital standards for the enterprises. This mandate was contained in the Federal Housing Enterprises Financial Safety and Soundness Act of 1992 (the 1992 Act). OFHEO analyzed two scenarios with each approach, one called a "wind down" scenario with no new business over a period of 10 years and a second scenario with specified projections of new business.

To monitor and assess OFHEO's analysis, we met extensively with OFHEO staff. In these meetings, we discussed the assumptions and the workings of OFHEO's financial models. We also discussed the enterprises' financial models with both OFHEO and enterprise staff. We did not verify the data used in nor the structure of the financial models used by OFHEO, Fannie Mae, or Freddie Mac. To help us judge the reasonableness of assumptions, we also consulted economic and financial literature. We did our work in June and July in Washington, D.C., in accordance with generally accepted government auditing standards.

Both approaches made projections over a 10-year period and required the use of key assumptions. The Subcommittee had specified a 600 basis point<sup>1</sup> increase in interest rates on U.S. Treasury securities over a period of 18 months. OFHEO assumed that after the 18 month increase in interest rates, these Treasury rates would remain constant for the remaining 8-1/2 years of the 10-year stress period.

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<sup>1</sup>A basis point is one one-hundredth of a percentage point.

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In addition to the sustained 18-month interest rate increase, the Subcommittee asked that the analysis assume that credit losses were simultaneously high or severe, as might be the case if the higher interest rates were not accompanied by an increase in the general inflation rate. OFHEO specified which particular credit loss assumptions would be used in the analysis. Generally, the credit loss assumptions OFHEO supplied to the enterprises specified losses on existing mortgages purchased by the enterprises that would exhaust minimum capital, loan loss reserves, and guarantee fee income, on a present-value basis, over the 10-year stress period. Credit losses on any new business over the 10-year period were assumed to be consistent with credit losses on existing business. Both OFHEO and Freddie Mac officials told us that the loss assumptions specified by OFHEO would be equivalent to about 30 basis points in credit losses on purchased mortgages.

OFHEO also directed the enterprises to assume an additional 50 basis point increase in enterprise debt costs, beginning in the third year of the stress period, to reflect potential investor concerns about possible default. In addition, OFHEO specified that annual increases in guarantee fees, starting in the third year of the stress period, could not exceed 2 basis points. Under these assumptions, net interest margins on new enterprise business and the growth of new business could not be the basis for alleviating or reversing the projected impacts of the interest rate increase and credit losses on existing business.

The financial models used by OFHEO, Fannie Mae, and Freddie Mac differed in both the assumptions and the relationships embodied in the models. For example, the three models contain different assumptions about the impact of an interest rate increase on prepayment rates by borrowers.<sup>2</sup> In addition to differences in the three sets of financial models used in OFHEO's two approaches, each approach had its own limitations. The approach that relied on the enterprises' models was constrained because OFHEO was dealing with the enterprises' models through the enterprises rather than directly. This resulted in a significant amount of interchange with enterprise analysts over a short period of time to establish detailed assumptions on items such as general and administrative expenses and net income on short-term investments. OFHEO was limited in the second approach because its own modeling work for the statutory stress test, including the normalization of enterprise accounting data, had not been

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<sup>2</sup>A prepayment occurs when the borrower pays off the remaining principal on a loan before the full term of the loan (e.g., 30 years) has been reached.

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completed. This exercise was the first statistical use of OFHEO's financial models.

Enterprise officials stated that, in their view, the combination of higher interest rates and the credit stress specified by OFHEO in the first approach was not reasonable. In particular, both enterprises believed that the increase in interest rates would likely be accompanied by increased inflation, greater home price appreciation, and subsequent declines in credit losses. For example, Freddie Mac officials told us that a credit stress with 10 basis points in credit losses would be more appropriate for the Subcommittee's request than that specified by OFHEO, which was equivalent to a 30 basis point loss. These officials also told us that current losses from credit risk on Freddie Mac mortgages were equivalent to about 10 to 11 basis points. Fannie Mae officials told us that the OFHEO-specified contraction in earnings on new business was circular; the additional 50 basis point increase in borrowing costs was based on a stressful situation that was not realistic.

We believe, in light of the constraints and limitations discussed above, that the approach undertaken by OFHEO to comply with the Subcommittee request was reasonable. We also believe that the key assumptions on interest rate movements and accompanying credit losses, while severe, appear reasonable for achieving the purpose of a stress test. Such tests are designed to estimate the effects of adverse conditions, which are not necessarily the most probable or likely conditions.

There are at least two reasons why we believe it was reasonable for OFHEO to assume that an interest rate increase need not be accompanied by a general increase in prices. First, past experience has shown that interest rates can rise by more than the inflation rate. Second, home prices do not necessarily increase at the general rate of inflation. In addition, the Subcommittee specifically asked that the interest rate increase not be assumed to result from a general increase in inflation.

We also believe that OFHEO's specification of an additional 50 basis point increase in enterprise debt costs is reasonable because it is consistent with the experiences of Fannie Mae during the early 1980s and the Farm Credit System during the mid-1980s when each experienced financial difficulty.<sup>3</sup> It also appears reasonable for OFHEO to assume that the enterprises could not increase guarantee fees by more than 2 basis points

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<sup>3</sup>See *Government-Sponsored Enterprises: The Government's Exposure to Risks* (GAO/GGD-90-97, Aug. 1990) p. 87.

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annually in response to an increase in credit losses, because of competition from other providers of residential mortgage credit.

We believe the analysis requested by the Subcommittee and carried out by OFHEO should provide useful information about how the enterprises would fare under the specified assumptions. However, we agree with OFHEO and enterprise officials that the combined interest rate and credit stresses specified by OFHEO in this analysis may differ from the statutory stress tests mandated in the 1992 Act. Once the results of those tests are available, OFHEO is to develop capital requirements that are consistent with an acceptable level of taxpayer risk. OFHEO expects to complete its proposed risk-based capital rule in Spring 1997.

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