



# What To Do About Fannie and Freddie?

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In May 2006, the Office of Federal Housing Enterprise Oversight issued a blistering report on Fannie Mae (the Federal National Mortgage Association). The opening two bullet points in the executive summary are:

Fannie Mae senior management promoted an image of the Enterprise as one of the lowest-risk financial institutions in the world and as “best in class” in terms

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of risk management, financial reporting, internal control, and corporate governance. The findings in this report show that risks at Fannie Mae were greatly understated and that the image was false.

During the period covered by this report — 1998 to mid-2004 — Fannie Mae reported extremely smooth profit growth and hit announced targets for earnings per share precisely each quarter. Those achievements were illusions deliberately and systematically created by the Enterprise’s senior management with the aid of inappropriate accounting and improper earnings management.

Perhaps a steady stream of corporate scandals has made us blasé about earnings misstatements,

lavish executive compensation, and understatement of risk. In most cases, economists can at least argue that private scandals require no government intervention since their costs are born mainly by asset holders, who earned a risk premium ex ante to compensate them for just such adverse outcomes.

However, Fannie Mae and Freddie Mac (the Federal Home Loan Mortgage Corporation), hereafter F&F, are different. In this case, there is an implicit government guarantee that backs up their debt. Since the guarantee allows F&F to borrow at artificially low rates, they have borrowed and invested in retained mortgage portfolios now totaling \$1.5 trillion. If they go bankrupt, it seems likely that U.S. taxpayers, not F&F bondholders, will pay the costs. The guarantee creates an externality, where the actions of F&F impose potential costs on the broader

population, and this externality provides a strong rationale for government intervention.

If the externality can't be eliminated by ending the implicit guarantee, the government has two options: a quota that limits the size of F&F portfolios and a tax that charges F&F for the risks they impose on taxpayers. In this case, economics favors a quantity control over a tax, because we are more sure that the optimal size of the F&F portfolio is zero than we are about the exact size of the externality, but political factors strongly favor a tax. To increase political support, the funds from a tax can be targeted towards particular forms of spending that might generate more interest group enthusiasm.

### THE BASIC ECONOMICS OF FANNIE AND FREDDIE

The core business of F&F is securitizing mortgages, but over the past 15 years both firms have created a second business line that now provides the bulk of their profits: an on-balance sheet portfolio invested in mortgage-backed and related securities. F&F borrow money at close to risk free rates and purchase these risky securities enjoying the risk premium they pay. This is certainly good business for F&F, but the ultimate source of value is that

the implicit U.S. government guarantee keeps F&F's borrowing costs artificially low.

The risk associated with mortgage portfolios comes from interest rate swings and the imperfect dynamic strategy used by F&F to hedge some of this risk. The Office of Federal Housing Enterprise Oversight (OFHEO) Report claims "Fannie Mae consistently took a significant amount of interest rate risk and, when interest rates fell in 2002, incurred billions of dollars in economic losses." Results from the OFHEO stress tests and papers by Dwight Jaffee in 2003 and 2006 confirm that F&F are systematically exposed to potentially large losses from interest rate fluctuations in either direction.

This risk imposes costs on the U.S. public through the implicit guarantee of F&F debt. Despite the attempts of the U.S. Government to deny that such a guarantee exists, reasonable observers are not buying it. The Congressional Budget Office stated in 1996: "On the strength of that implied guarantee, investors continued to lend money to Fannie Mae and Freddie Mac at relatively low interest rates even during the early 1980s, when Fannie Mae was economically insolvent." The belief in an implicit guarantee is supported by both history and forward

induction. In the past, the government did bail out Fannie Mae with tax breaks when it got into trouble in the early 1980s. Looking forward, a run on F&F securities could be so catastrophic that the government would feel compelled to intervene.

The market's belief in an implicit guarantee is best seen in the low interest rates paid by F&F. A standard estimate is that F&F pay 40 basis points less than comparable private borrowers on their debt. Furthermore, the spread between F&F securities and treasury bills often seems immune to the financial troubles at these institutions. In an American Enterprise Institute report, Peter Wallison notes that "despite all Fannie's troubles, the spread of its debt over treasuries ... narrowed considerably." Financial irregularities usually cause an increase in the yields associated with debt, but not in the debt of F&F, presumably because the market trusted in the implicit guarantee.

### TWO APPROACHES TO THE EXTERNALITY

The existence of an implicit guarantee means that F&F's borrowing creates an externality on U.S. taxpayers. Ideally, perhaps the government could just eliminate the guarantee, but

changing the guarantee means committing not to bail out F&F, and this seems impossible, at least for now. If the guarantee continues to exist, then an externality continues to exist and there are two natural approaches to the externality. First, the government could adopt a quantity control and limit either the amount of debt that F&F can issue or the size of their retained portfolios. Second, the government could impose a Pigouvian tax on F&F based on the estimated size of the externality. To be effective the tax would need to be tied to F&F interest rate risk, for which the amount of F&F debt is a good proxy.

Following Weitzman's classic analysis of quantity controls and taxes, we think that this represents an almost ideal case for quantity controls. We are far more confident about the optimal quantity than we are about the optimal tax. As we discuss later, it is difficult to accurately assess the externality, and there is a good case that the optimal retained mortgage portfolios for F&F are close to zero. Any social gains from having this portfolio presumably come from the ability of F&F to act like a hedge fund allocating mortgage risk and funding efficiently. The OFHEO Report casts doubt on the ability of F&F

to run a world-class hedge fund, and there is no lack of private competition in this area.

This approach is at least more politically realistic than ending the subsidy altogether. During the past two years, OFHEO has capped the retained portfolios of F&F in response to accounting irregularities, and there is a bill in the Senate (the Shelby Bill) proposing the elimination of discretionary portfolios. However, the fact that the bill has been discussed for the last two years without significant progress illustrates the difficulties of fighting a complex, probabilistic externality. The complexity of this problem means that F&F are quite capable of muddying the waters so that many may truly believe that there is little real cause for government action. Perhaps even more importantly, no interest groups stand to benefit from reducing the size of the F&F portfolios so any action pits a highly organized political lobby against diffuse consumer interests.

The second course of action is to impose a classic Pigouvian tax where F&F would be charged for the costs they impose on taxpayers. From an economic perspective, this course is complicated by the fact that measuring the externality perfectly is difficult. Politically, though,

this course offers greater possibilities. Since a tax on F&F offers the possibility of large revenues—a 40 basis point annual charge on the portfolios would produce over \$6 billion per year—these revenues can be targeted to generate support. This may be the only politically feasible course of action, but, as we discuss next, its implementation is far from trivial.

#### IMPLEMENTING A PIGOUVIAN TAX

The two key issues surrounding a Pigouvian tax on F&F borrowing are the size of the tax and the ways that the money will be spent. A bill passed by the House suggests a tax of between 3.5 and 5 percent on F&F profits that will be used to create an affordable housing fund. This approach is off in three ways: the dollar amounts are too small, the tax is on profits not borrowing, and the affordable housing fund seems like an invitation for egregious waste. F&F have already shown themselves to be adept in manipulating profits, and a modest tax on profits is hardly targeted in a way that will change behavior. A better policy is to target the tax directly on the externality creating behavior: F&F borrowing with an implicit guarantee.

How big should the tax on F&F debt actually be? In principle, F&F should face a tax equal to expected losses from a government bailout. Since calculating those numbers is quite difficult, an alternative approach (which should conceptually be equivalent) is to charge F&F based on the gap between their borrowing costs and the borrowing costs for comparable private sector firms. Many analysts use this borrowing cost differential, which is usually estimated at 40 basis points, as the basis for their estimate of the subsidy to F&F.

Using this borrowing cost differential, the Congressional Budget Office (CBO) in 2004 estimated a total subsidy to F&F of \$23 billion, based on the new debt that F&F issued during that year. There is a debate about how much is passed through to borrowers and how much to shareholders, but that does not affect the appropriate Pigouvian tax. The appropriate Pigouvian tax must match the subsidy.

A reasonable Pigouvian tax might therefore be a charge of 40 basis points per year on all F&F debt or just the debt that was used to fund the retained mortgage portfolio. In principle, the Pigouvian tax might be best applied to the amount of F&F's interest rate risk, but rate risk

is very hard to measure directly while debt provides a very good and accessible proxy measure. The tax could be either a yearly tax on all debt outstanding or imposed at the time of the debt's issuance as a function of the net present value of the subsidy over the life of the loan. In any case, the tax could raise revenue of about \$6 billion (= 0.4% of \$1.5 trillion) if there is no behavioral response. This quantity also almost exactly corresponds to current estimates of F&F's excess profits for 2003, that is, profits above 11 percent return on equity; Fannie Mae has not issued any earnings reports since 2003.

The congruence of numbers is reassuring. Of course, if the tax works properly, then it will raise far less than \$6 billion annually because it will cause the portfolios of F&F to shrink. Even so, a tax geared towards the subsidy is likely to be much larger and better targeted than the house bill's small tax on profits.

#### WHAT IS TO BE DONE WITH THE MONEY?

In standard Pigouvian problems, economists don't worry about the uses of the tax revenues, but in this case the central appeal of the Pigouvian tax is that the revenues can be used to support housing programs. Housing

support, after all, is why F&F were created in the first place. The relative ease with which the house passed its bill, because of support from affordable housing advocates eager for F&F dollars, can be compared with the difficulties facing the Shelby bill in the Senate.

Imposing the Pigouvian tax should generate pure welfare gains by changing F&F's behavior (a classic welfare triangle), but it will also represent a transfer from F&F shareholders and management to some other group (a classic welfare rectangle), and if the losses involved with the transfer are sufficiently large, this could overwhelm the gains from changing behavior. The key is to balance the political gains from appealing to particular interest groups with the waste involved in spending that is attractive to interest groups.

The house bill favors a fund that can be dispersed for general affordable housing causes. This seems like an approach that maximizes political support, at least among housing advocates, but places few checks against rampant waste. The history of wasteful government construction suggests that there is great scope from truly monumental waste with this sort of fund.

A better approach might target the dollars specifically towards Section VIII vouchers. The

vouchers program has been relatively successful, relatively free of waste and scandal, and relatively effective at actually reaching the less advantaged. A slight twist on this proposal might use F&F dollars to create vouchers that could be used either for rental payments (like Section VIII vouchers) or for interest payments on homes. In either case, a tight income requirement would apply.

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