

Response to HUD on FHA Risk Evaluation, Joe Gyourko, November 21, 2011

HUD recently provided what I believe is its first official response to my report “Is FHA the Next Housing Bailout?” (available at http://real-estate.wharton.upenn.edu/documents/research/FHA-AEI_11%2015_for%20posting-final_jgedits.pdf.) It was written by Dr. Raphael Bostic, the Assistant Secretary for Research and Policy Development and is posted on HUD’s official blog, “The HUDdle” (a link is here: <http://blog.hud.gov/2011/11/18/continued-strength-fha/>). I encourage you to read it, as it provides important insight into the perspective of HUD’s leadership on the issue of the solvency of the FHA insurance fund.

It’s useful to have the key conclusions of my report in mind when reading the Assistant Secretary’s comments. They are as follows: (1) FHA has become a much larger and riskier government entity since the housing crisis began because it has increased its risk exposure without anything close to a commensurate scaling up of its capital base; (2) it is underestimating future default risk and losses on its single-family mortgage guarantee portfolio by at least \$50 billion; and, (3) this should be corrected with an immediate recapitalization of FHA sufficient to compensate for the high risks it faces.

The Assistant Secretary’s response to my first conclusion was straightforward and to the point: in his words, it was “not true”. His most relevant piece of evidence on this point was introducing data from the asset side of FHA’s balance sheet, where he noted that “FHA’s total liquid assets are at their highest point ever, and \$400 million higher than one year ago.” This is true, but it is only half the story, of course. Any conclusion about how risk changed necessarily involves a comparison of how FHA’s potential liabilities grew relative to its capital. It issued just over \$213 billion in new guarantees on single family mortgages in FY2011. Thus, it grew its potential liabilities by well over \$500 for every dollar increase in its total liquid assets ($\$213,000,000,000 / \$400,000,000 \sim \$532$). Stated differently, total liquid assets increased by only 0.19% (or 0.0019) of the increase in new insurance guarantees made in FY2011.¹

This highlights the fact that there are two sides to any balance sheet, and why it is not helpful to reference only one side when talking about the risk associated with the other side. In addition, you should look at the entire balance sheet, not some narrow component. Consequently, here is how I believe you should think about FHA’s aggregate risk position on its single family mortgage insurance portfolio at the end of FY 2011. FHA reports that it has just over \$1 trillion in outstanding insurance-in-force on single family mortgages, and estimates its total capital resources to be \$28.183 billion. That implies a leverage ratio of about 36 ($\$1,009,154,000,000 / \$28,183,000,000 \sim 35.8$), which is at or above the leverage levels employed by Bear Stearns and Lehman before they collapsed. The analogous calculation using numbers from FY 2005 yields a leverage ratio of 16.6. Thus, there has been a sharp increase in FHA’s leverage to a level that is very high by any reasonable standard.

¹ Almost all figures in this blog are taken from Assistant Secretary Bostic’s blog post or the *Actuarial Review of the Federal Housing Administration Mutual Mortgage Insurance Fund Forward Loans for Fiscal Year 2011* that was released last week. Two pieces of data discussed just below come from the 2005 Actuarial Review. FHA’s main fund also includes a much smaller reverse mortgage component. My report focused solely on the single mortgage portfolio, so I only comment on that part of its insurance fund.

Of course, FHA would not need more capital reserves if there were not going to be any material losses on the \$200 billion+ in mortgages it guaranteed in FY2011. That is highly unlikely because the typical borrower whose loan it insures is making less than a 5% down payment in an economic environment of flat to declining house prices and persistently high unemployment. This gets to my second conclusion about underestimation of risk. Of my four critiques of how FHA underestimates future default risk, Assistant Secretary Bostic's most detailed response was to my contention that the \$8,000 tax credit program raised the potential for high future defaults because borrowers might have used the program to fund their down payments, allowing them to become owners with little or no personal equity invested. FHA's experience with various down payment assistance programs has been that these borrowers default at a much higher rate than similar borrowers who have to fund their down payment from their own savings.

My discussion of the tax credit program seems to have struck a nerve, as the Assistant Secretary's response here was that my analysis was "(c)ompletely false and irresponsible". This surprised me because my claim was that we (both FHA and I) do not know how many buyers whose mortgages the FHA guaranteed actually claimed the tax credit, and that they had better find out because the losses could be big (\$10 billion+) if *both* the number of tax credit buyers being financed was large and those purchasers figured out a way to use the credit to fund their down payment. Based on a close reading of the Assistant Secretary's comments, I think that the first part of that chain of logic pertaining to 'we don't know how many households in FHA's 2009 and 2010 guarantee pools claimed the credit' still holds. He cites various statistics regarding the number of first-time homebuyers with visible down payment assistance, but not the number who claimed the tax credit. I presume this is because HUD still does not know the latter number.

The Assistant Secretary's documentation that only 38,000 borrowers used HUD-approved 'secondary financing' programs for down payment assistance during this time period is comforting, but we still do not know the true level of risk involved until we know precisely which first-time buyers claimed the tax credit. Why not? Because it is possible that the buyers figured out how to borrow against the tax credit refund before they got to closing, which is when FHA records whether there was any down payment assistance. This could have been done with entities ranging from relatives to banks and payday lenders. If this happened, and I would be surprised if it did not to some extent, then there are borrowers coded as making the down payment out of personal funds who did not do so in the relevant economic sense. As my report also notes, it seems likely that the upsurge in borrowers using family assistance during these years also at least partially reflects the influence of the tax credit program.

To be fair, it probably will be difficult to identify these borrowers because it is likely to require access to IRS data on who claimed the credit, but the effort needs to be made precisely because the downside risk is large, as my reported calculated. Absent clearer information that FHA actually has identified all those buyers and then investigated an appropriate sample to determine just where their down payments came from, we should not be convinced by the Assistant Secretary's claim that this is a non-issue. Much more work remains to be done on this issue before it is resolved. This information is not only important for understanding the risk assumed by FHA on these mortgages, but also for a more complete evaluation of the costs and benefits of the tax credit program. This task will be challenging, but is feasible. Some of the most

important work in all of economics on income inequality relies on detailed IRS data, so there is a template for working with that agency to accomplish serious research while maintaining appropriate confidentiality. Presumably, it would be easier for two federal government entities to collaborate.

Two other of my primary critiques of FHA's evaluation of default risk pertain to unobserved credit risk and the underestimation of negative equity. Both are summarily dismissed in a single sentence by the Assistant Secretary: "There are several other "methodology" arguments made by AEI that are spurious -- from arguing the actuary didn't use unemployment rates as a factor determining default potential (home prices are historically a far more valuable indicator), to arguing that the actuary used a different (though widely respected) home price index." The Assistant Secretary and I will have to agree to disagree on these points. Surely, neither is spurious in nature and need to be dealt with by HUD in a much more serious and professional manner, given the magnitude of the downside risk to taxpayers if my arguments are even partially correct.

I believe the first of these conclusions by the Assistant Secretary to be wrong for the same reasons outlined in my original report. Very briefly, if only home prices matter and not unemployment, then FHA's model should have accurately predicted the increased losses from its 2007 and 2008 vintages especially, because it included FICO scores and updated loan-to-value ratios. That it did not is shown by the huge influence of an indicator variable for whether the loan was originated after 2006. Essentially, FHA's model using house prices and other easily measured traits substantially under-predicted default risk in the absence of this control for unobserved credit risk. The most obvious omitted risk factor is unemployment, and as my report noted, the reason it is not statistically influential in FHA's model estimation is because of measurement error, not because unemployment truly has no effect on the probability of default. It clearly does and is so indicated by HUD's own reporting that unemployment or other income shock is the number one reason that servicers list as the cause of default on a FHA-guaranteed mortgage. This clearly indicates is that it is the combination of high loan-to-value ratios and unemployment that matters, not just loan-to-value alone. This could change over time if strategic default comes to dominate default by necessity as a reason for stopping payment on a loan. That is not inconceivable as my report notes, but it has not happened yet. Thus, the available evidence (including that from the external audit model's own estimates) indicates that the Assistant Secretary is mistaken about there being no underestimation of default risk from unobserved and uncontrolled for factors such as unemployment.

The Assistant Secretary's comment regarding use of the FHFA price index is even more perplexing because it seems to indicate that I do not understand what a good job FHFA does in creating its index. Let me be clear here, in case I was not in my original report. My critique is not of FHFA or its price index. It is, indeed, a widely respected index, as the Assistant Secretary notes. Rather, my criticism is of FHA for its use of this index, which is based on the prices of homes bought with conforming loans. FHA does not insure such loans, nor are the loans insured by FHA captured in FHFA's index. As my report notes in some detail, there is abundant evidence that FHA insures mortgages backed by a selected sample of homes that are of lower than average quality compared to conventionally-financed homes and that appreciate at lower rates on average compared to conventionally financed homes. This necessarily implies that the

use of the FHFA index will understate the amount of negative equity on the pool of FHA-guaranteed mortgages. Given that negative equity is known to be an important trigger of default, this means that FHA is underestimating default risk because of its choice of index. To reiterate, this is not to criticize FHFA or its index. Their index just is not appropriate for FHA's purposes.

The fourth critique about underestimating the risk associated with streamline refinanced mortgages, which is based on excellent work done by a team of researchers from the Federal Reserve Bank of New York and NYU, is only briefly mentioned, but not directly addressed in a substantive way. Hence, I have nothing to add on that issue beyond what is in previous research and my report.

In sum, the Assistant Secretary's response does not lead me to change any of my conclusions regarding FHA's underestimation of default risk. However, the paths forward in addressing each critique is reasonably clear. There just needs to be a will to pursue them, and that must come from HUD's and FHA's leadership.

There are other noteworthy aspects of the HUD blog post, including its reinforcement of how critical are future books of business to FHA's ultimate fortunes. Specifically, it notes that the "... new 2012 book of business will add \$9 billion to the economic value of the Fund" (emphasis and underlining in the original). Those insurance guarantees remain to be made, so only time will tell. However, that number comes from the same outside reviewer who has estimated that every future book of business since 2005 would generate positive value to FHA. Given that forecasting track record and the fact that FHA's excess reserves have dwindled from 6.50% to 0.12% of its single family insurance portfolio over that time period, FHA would be well advised to let others 'stress test' those predictions. It should provide researchers access to their data (appropriately masked to preserve confidentiality, just as in Census data releases), and encourage new analysis. I am confident they could obtain substantial 'free consulting' from the academic community in particular this way.

My final point pertains to FHA accounting. I leave this for last because I understand that the eyes of normal people glaze over when they begin to hear words like accrual-based accounting, which is the methodology FHA uses when it reports the financial condition of its insurance fund. This is relevant because the HUD blog post makes various references to increased reserves and rising fee income as a sign of FHA's financial robustness. As my report notes, the accounting convention under which FHA operates means that it gets to count the 1% upfront insurance premium it imposes on new guaranteed balances, even though it often finances that premium (along with other closing costs in some cases) by adding it to the mortgage balance. Moreover, FHA may have to pay some of those fees back to lenders if the loan defaults precisely because they were part of the loan balance. Thus, FHA's accounting permits it to book the fees on loans that its actuarial model expects to default. Why should anyone care about this? Precisely because FHA's reserves are so low relative to their liabilities. Excess reserves for unexpected losses on their \$1.009 trillion single family mortgage guarantee portfolio are only \$1.2 billion, or 0.12% of their guarantee balance. As noted above, FHA made guarantees on a little over \$200 billion of single family mortgages in FY2011. One percent of that number is \$2.13 billion. How much of this actually represents net cash for FHA is unknown to me, but it emphasizes how close to the edge their single family insurance portfolio really is. Even if you end up agreeing with the

written view of HUD's senior leadership that my analysis of how FHA measures risk is "completely false", "not true", "irresponsible" or replete with "outrageous claims", just these final numbers raise the possibility that the economic value of the single family component of FHA's insurance fund is positive only because of phantom accounting income. Given that taxpayers bear the downside risk of this program which now has grown in size to nearly 7% of national output, we should all hope that someone in Congress wants to find out whether that is, in fact, the case.