

POLICY PERSPECTIVES



FHA MMI FUND: WHAT'S THE RIGHT RESERVE AND INSURANCE FEE?

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ANDREW
DAVIDSON
& CO

A white logo consisting of a stylized, abstract shape that resembles a folded piece of paper or a sail, positioned to the left of the company name.

TABLE OF CONTENTS



03	BACKGROUND
05	FEDERAL BUDGETING AND FHA RESERVES
06	LOAN PERFORMANCE
07	ASSESSING RESERVES AND PREMIUMS: PORTFOLIO VS NEW LOANS
09	THE FUND MANAGER'S DILEMMA
10	CONCLUSION

BACKGROUND

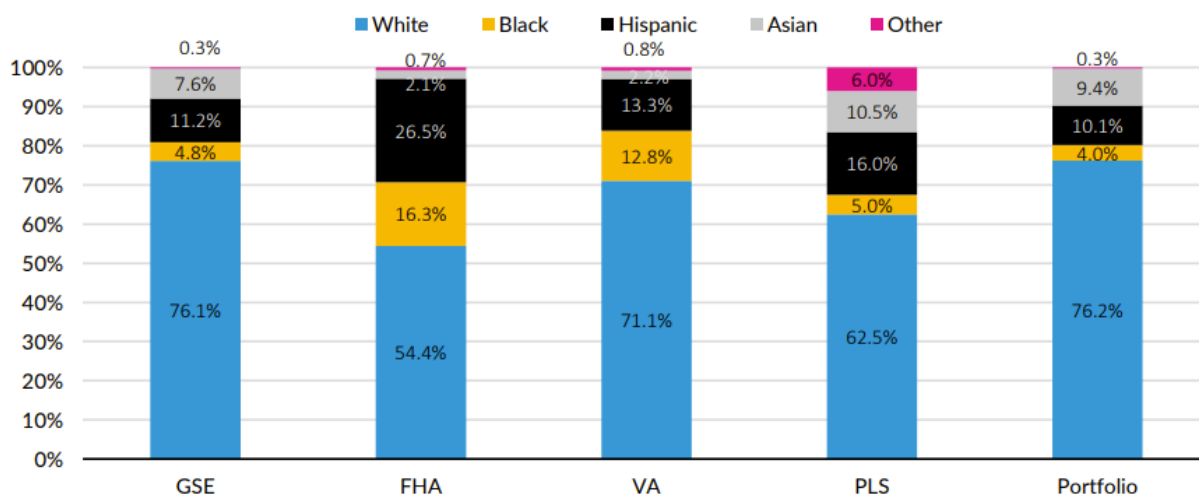
This paper uses Andrew Davidson & Co., Inc. (AD&Co) analytics to answer the question, What is the appropriate set of FHA MMI Fund reserve and premium to ensure Fund solvency while continuing to convey its needed benefit?

We find that Federal Housing Authority's (FHA's) portfolio has experienced about 27 points of housing price appreciation (HPA) and needs virtually no capital given its fee structure. However, typical new loans with lower credit scores at current fees require reserves much above the current target.

FHA's Mutual Mortgage Insurance Fund (MMIF) is the largest holder of US mortgage credit risk and the largest provider of credit to both first-time and minority homeowners. Like the obligations of the Veterans Administration (VA) program, but unlike the other significant sources of mortgage credit, FHA's obligations are on the Federal (that is, taxpayer) balance sheet. To help manage taxpayer net exposure to FHA (and other federal) guarantees, the Federal Credit Reform Act (FCRA) of 1990 includes the present value of the FHA subsidy in the federal budget, using Treasury bond discount rates; in 2021, the Congressional Budget Office's 2022 estimate was -3.2% (taxpayer benefit), while their fair value estimate at market funding cost was 3.0%.¹ This 6.2% difference in present value, over 1% in mortgage rate, illustrates the benefit to FHA borrowers without direct taxpayer outlays.

Figure 1 – 2020 Purchase Loan Channel Shares by Race²

2020 Purchase Loan Channel Shares by Race



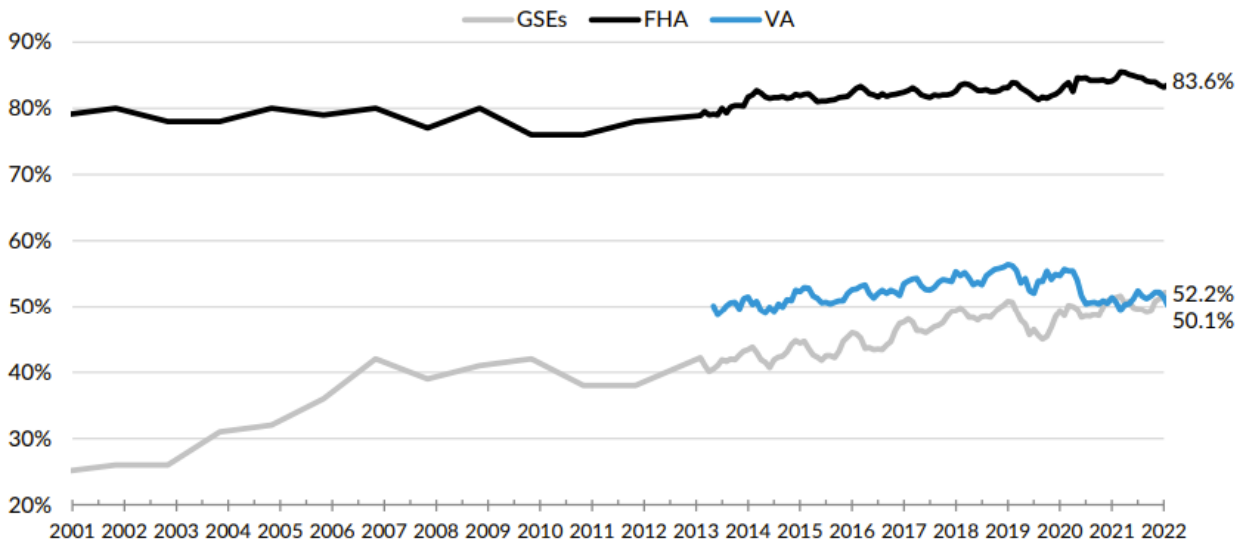
Source: 1997 to 2020 Home Mortgage Disclosure Act (HMDA).

Note: Includes purchase loans only.

¹Congressional Budget Office, "Estimates of the Cost of Federal Credit Programs in 2022" (supplemental material for Supplemental Data and Data Underlying the Figure and Table, October 2021), <https://www.cbo.gov/publication/57412>.

² Goodman, Laurie, et al. 2022. *Housing Finance at a Glance: A Monthly Chartbook, June 2022* (p. 16, 23). <https://www.urban.org/research/publication/housing-finance-glance-monthly-chartbook-june-2022>.

Figure 2 – First Time Homebuyer Share



Sources: eMBS, Federal Housing Administration (FHA), and Urban Institute.

Note: All series measure the first-time homebuyer share of purchase loans for principal residences.

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FEDERAL BUDGETING AND FHA RESERVES

As described above, FHA targets a net-zero taxpayer subsidy at Treasury funding costs while providing a meaningful cost reduction to borrowers compared with market funding (debt plus equity) costs. Since it is well targeted, one could conclude that FHA is an appropriate use of the valuable Federal balance sheet. However, it is generally considered a serious administrative and political problem should FHA become unable to pay its claims and require a federal outlay. At the same time, FHA generally faces pressure to release reserves when they build.

FHA faces two financial challenges in this context. First, FCRA (which this author helped design) considers expected losses but not capital or reserves. The 2013 FHA Solvency Act³ recognized this and aimed to require the Fund to target 3% reserves, however, the target settled at 2%. For context, government-sponsored enterprise (GSE) loans (low LTV or insured) require 3% or 4% capital, and uninsured high LTV bank mortgages require 8% regulatory capital, while FHA loans generally embody more risk. As a result, provided the economy performs within an expected range (+/- one standard deviation of housing price growth and unemployment rates, for example), the Fund is likely to be able to pay its claims. However, repeating economic stress anywhere close to the 2007 Financial Crisis could exhaust a 2% reserve and require additional Treasury outlays.

FHA's second challenge is inextricably connected to the reserve issue; how much it should charge. By design, FHA's pricing is flat across the credit risk spectrum, while the rest of the market generally prices differentially for risk. This complicates the solvency challenge but does focus FHA's business on the neediest borrowers. Solvency management is made more difficult by the lack of market pricing. The GSEs, MIs, and banks, to some extent, all sell some credit risk into the private capital and reinsurance markets. This helps them manage their risk and provides valuable feedback on pricing. The last financial crisis reminded us that it's extremely difficult for monoline insurers to maintain high investment grade resiliency without laying off tail risk. The FHA can be imagined as managing this fair lending portfolio on behalf of taxpayers who own it. It might be reasonable to sell some of this risk, moving it into the private market to properly manage.

Having provided this context, we now use AD&Co modeling and its Capital Charge method, market prices, and comparative data performance to evaluate the FHA MMIF and dimension the fees and reserves necessary for FHA to continue meeting its mission, subject to its federal budget constraint.

³ <https://www.congress.gov/bill/113th-congress/senate-bill/1376>.

LOAN PERFORMANCE

It's well known that FHA has higher delinquency and loss rates than GSE or VA mortgages; however, it's also true that FHA loans have higher risk drivers, such as credit score, LTV, and DTI. Thus, we compared performance across these mortgage segments while controlling for the key risk drivers, and show in Figure 3 that FHA loans perform similarly to other mortgage segments.⁴

Figure 3 – Delinquency Rates for “FHA Average”

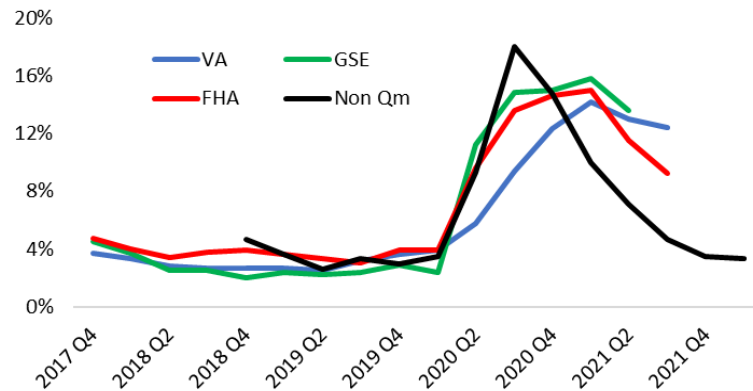


Figure 3 compares the “FHA Average” cohort for each of the three federal segments: GSE, VA, FHA, and non-QM (non-qualified mortgage). The “FHA Average” cohort is roughly 95 LTV, 680 FICO, 40 DTI for government lending, and about 90 LTV, 680 FICO for non-QM. The results illustrate that when adjusted for risk, mortgages perform similarly across market segments. Implications include that models using risk drivers that fit for one segment will fit for others. Default rates could be similar when controlling for risk, and the price of risk may vary more by segment fund cost than nominal losses. These results support an important point: FHA standards and borrowers are not “worse” than other mortgage segments. It suggests that analytics applied to other segments and to the capital markets are indeed applicable to FHA.

⁴ https://www.ad-co.com/system/files?file=policy-perspectives/policyperspectives_iss0_0.pdf.

ASSESSING RESERVES AND PREMIUMS: PORTFOLIO VS NEW LOANS

Fund losses are a function of risk factors, borrower behavior, and economic dynamics. They are unaffected by assumptions about discount rates, fees, and confidence levels. However, reserves (capital), insurance premiums, capital costs, and resiliency (confidence level) are related to one another. For example, lower capital costs lead to lower fees but higher required capital. Another key issue is that the risk of today's lucky loan portfolio can be quite different than the risk of a new loan.

Two key assumptions required to determine the necessary fees and reserves are the discount rate and confidence level (financial resiliency). FCRA uses expected losses and treasury bond discount rates to determine expected costs. In that regard, we use 5% for 10 year Treasuries as a long-term round number. The confidence level for GSE financial resiliency and AAA bonds is generally 99% or higher; however, we use 95% for FHA, as it is a less exacting measure that generates lower stress losses and reserve requirements.

Figure 4 shows the results for FHA's portfolio and a typical new loan in three ways: using the Capital Charge method, fixing FHA's actual fees, and then fixing FHA's targeted reserve at 3%.⁵ By definition, the sum of capital and present value (PV) premium always equals the expected shortfall, or present value of stress losses for a given confidence level, so fixing fees determines capital, and fixing capital determines fees.

Figure 4 – FHA Portfolio Metrics

	Portfolio	New	
Age	35	1	
Orig Bal	\$255,000	\$250,000	
Rate	3.52	5.50	
Cred Score	675	660	
OrigLTV	94.5	97.0	
CLTV	67.0	97.0	
Current	92%	100%	
Cum Default	5.06	11.00	
Loss Sev	33	37	
Cum Loss	1.68	4.10	
Exp Shrtfall	5.6	14.6	
WAL	7.6	6.6	
Avg CPR	8.1	10.6	
Capital	3.6	10.0	Capital Charge
PV Premium	2.0	4.6	
Premium	0.32	0.83	
Capital	-1.4	8.1	Std. Fees
PV Premium	7.0	6.5	
Premium	1.13	1.17	
Capital	3.0	3.0	Reserves
PV Premium	2.6	11.6	
Premium	0.37	1.80	

⁵ Portfolio data is a random sample of FHA loans from the most recent GNMA loan level output.

ASSESSING RESERVES AND PREMIUMS: PORTFOLIO VS NEW LOANS

Two key differences that drive results are that the seasoned portfolio has mark-to-market LTV of about 67%, compared with 97% for recently originated purchase loans, and the average credit scores of new loans are 15 points lower than the seasoned portfolio. Together, this more than doubles expected and stress losses (Expected Shortfall) on new loans. Required fees and reserves are comparably higher.

FHA premia include up-front and over-time fees. Since these two loan examples have different durations, we combine and transform the fees into fully up front and fully over time equivalents so they can be easily compared. FHA fees are generally higher, and targeted reserves lower, than the balance generated by the Capital Charge method on its own.

The bottom three sections of Figure 4 show fund results in three ways for the two loan groups. The expected shortfall of the seasoned portfolio is smaller than the present value of current premia alone, and thus eliminates the need for capital. However, new loans need substantially higher reserves at current fees.

THE FUND MANAGER'S DILEMMA

These results illustrate the MMI Fund manager's dilemma. FHA finances (fees + reserves) are higher than necessary for the seasoned portfolio because HPA has been so high recently, but they're not nearly high enough for new loans standing alone. Dynamic portfolio risk will generally be lower than stand-alone vintages (except at the end of stress periods), though it's exceptionally low now. Thus, steady-state financing requirements are likely in between the two results presented here.

This analysis is not intended as a full dynamic assessment of the Fund—one that accounts for its current reserve or a pricing strategy—but rather as a thought exercise to clarify the core issues. Portfolio risk inevitably changes over time based on loan characteristics, economics, and policy, so in principle, reserves and fees shouldn't be constant either. However, stability in Fund resiliency, market presence, and borrower costs suggest a middle ground. One could imagine lowering annual fees on the existing portfolio, but care should be taken since new loans require higher reserves and portfolio conditions are changeable. The worst time to raise capital is when it's needed.

CONCLUSION

The budgetary solvency of FHA's MMIF is exceptionally strong based on years of solid underwriting, high HPA, and recent federal forbearance policy. However, a rising reserve during this particularly good run doesn't mean that FHA's fee structure is too high. There may be room to ease up on FHA's combination of fees and reserves, but care should be taken since new loans require higher reserves and portfolio conditions can change. Dynamic stress testing with ongoing business assumptions would be an appropriate approach.

We use data and theoretically sound analytics to demonstrate the level of reserves and fees required for the current portfolio, and for new loans, in ways that are broadly consistent with Credit Reform combined with a reserve fund. These results provide some useful guideposts for the Fund Manager's dilemma.

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