POLICY PERSPECTIVES

A RESILIENT FEDERAL MORTGAGE SECURITIES SERVICING SYSTEM: THE FUTURE IS NOW

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OVERVIEW

A national mortgage finance ecosystem that is resilient to stress is crucial to the health of the broader economy. Most components of the current $10 trillion government mortgage ecosystem are either competitive markets where entry and exit are not destructive, or entities that have federal backing such as government-sponsored enterprises (GSEs) Federal Home Loan Banks, Government National Mortgage Association (GNMA), and the banks. The notable exception is the $4.5 trillion non-bank government mortgage servicing market. Amidst of the pandemic, even more so than during economic downturns in the past, the servicing contract makes this business inherently unstable and subject to highly disruptive failure. Consensus developed among servicers and experts after the last financial crisis around the following radical solution, one that was widely viewed as unimplementable—until now.

The Federal mortgage servicing contract should change so that guarantors pay servicers for the cost of servicing non-performing loans. The GSEs recently announced they will begin paying $500 to servicers for loans entering forbearance.

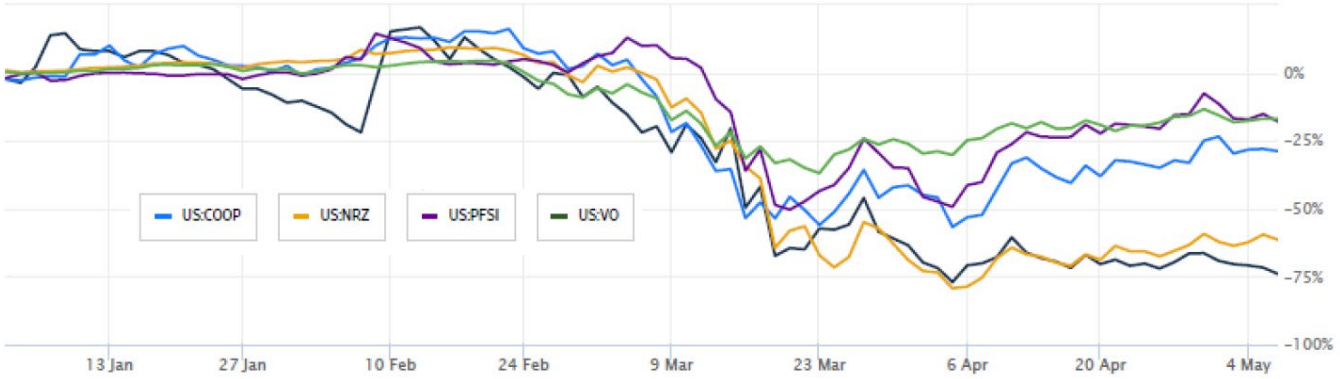
Government-related mortgage markets generally have standards to originate and securitize loans that encourage efficient and resilient markets.

However, the servicing asset is unlikely to generate investment grade cash flows because revenue and expenses are misaligned by contract. Among other things, this has driven banks to a smaller market share in the government mortgage securities servicing business, especially with regard to GNMA.

The graph below shows year-to-date stock price movements for four non-bank servicer/originators and a mid-cap exchange-traded fund. Two of the more diversified companies track close to the mid-cap index, which is down about 25% so far this year. Two others have fallen more than 50%, illustrating the volatility of the servicing asset. However, it is logical that servicing should be a stable business of compliance, data management, and cash flow distribution based on the stable outstanding volume of mortgages; it should not be levered to credit and highly volatile.

In this article we examine problems illuminated by the current crisis to show how the GSEs' recently announced plan to connect servicing revenue to cost is an enduring structure that likely eliminates the need for emergent federal intervention. There would be no need for emergency liquidity facilities, nor hasty programs from the Fed or Treasury or GNMA, no scrambling by servicers that are otherwise sound to maintain operating liquidity.

FIGURE 1: RELATIVE PERFORMANCE FOR NON-BANK SERVICERS



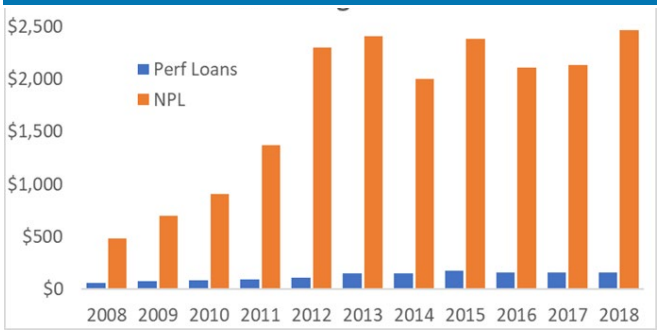
We then quantify the impact on borrowers, servicers, and guarantors. The high cost of servicing non-performing loans in compliance with consumer protection standards is assigned back to the guarantors that are designed to absorb it.

This vastly reduces the volatility of the servicing asset and in turn substantially reduces the financing cost of mortgage servicing operations. So, the net gain to the system and to consumers is slightly lower mortgage rates and a mortgage ecosystem that is more resilient to stress.

ROOT CAUSE

A basic economic principle is that price should relate to cost; it isn't hard to imagine the problems that occur when this principle is violated. In the case of mortgage servicing, revenue derives from fixed and equal servicing fees for both performing and non-performing loans (NPLs), but the cost of servicing NPLs is 15 to 30 times higher. Future delinquencies are uncertain and unhedgeable, so even expectations of delinquency spikes cause mortgage servicing right (MSR) values to crash, thereby devaluing the servicing franchise, imperiling funding continuity, and ultimately resulting in ongoing and ad hoc government intervention.

FIGURE 2: SERVICING COSTS



Servicing costs have been roughly flat since 2012.[1] However, greater consumer protections were implemented in the aftermath of the last financial crisis, and, as a result, performing loan servicing costs have tripled and NPL servicing costs have increased by a factor of five, while the servicing fee remains unchanged. The costs of servicing performing, and non-performing loans are now so different that the average fee model is unworkable.

The projected spike in mortgage delinquencies deriving from a pandemic-driven unemployment surge, combined with the dramatic widening of credit spreads, have shocked MSR values down 50% or more. This drastic drop in value immediately led to perilous financing problems for servicers in terms of both the amounts available and costs at the same time that cash needs are rising, resulting in a scramble by federal agencies to create financing vehicles and policy changes to avoid systemic disruption. At a minimum, this is a substantial distraction from the business of managing nationwide forbearance during the current economic crisis.

Federally connected companies (banks, GSEs, etc.) that take mortgage credit risk have externally imposed capital standards, but servicers bear this risk without them. Achieving resilient markets generally requires external standards when losses are distant in time from transactions. Such risk is more efficiently borne by credit investors or guarantors, but in the current crisis, a change in federal policy (forbearance) unintentionally transferred billions in credit-related expenses onto government mortgage securities servicers. Operating losses can explode in tail scenarios as servicers continue to earn fixed fee rates while operating costs skyrocket. Although servicers earn above-average profits when delinquencies are average, they face disruptive rates of operating losses in high delinquency scenarios. Increasing capital or average fees so that servicers can theoretically survive stress probably wouldn't alleviate this imbalance because the extra profits and capital that are available most of the time are likely to get competed away—and it would certainly raise consumer costs.

1 Mortgage Bankers Association, Urban Institute

Such instability in contained markets (those that have no external consequences on other markets) is not a problem that policymakers need to solve. However, non-bank servicers are a core part of the government mortgage ecosystem, so this instability threatens to fracture the entire ecosystem today even more than it has in past crises.

Although banks have lower financing costs than non-bank servicers, they retreated from servicing federal mortgage securities (they still service mortgages in their own portfolios) in the aftermath of the last economic crisis. Their decision to withdraw was driven by cost and capital asymmetries combined with increased compliance risk and associated liability. Excessive risk-taking in the financial markets resulted in economic dislocation 15 years ago. Today, the pandemic is causing it. Despite the varied causes, the strain on servicers today is once again imposing financial jeopardy on the essential business of collecting and distributing mortgage payments, and it comes at a time when servicers are critical to public efforts to help borrowers through the federal forbearance process. Either the compensation structure must change, or periodic dislocations and disruptions in the servicing market are likely to continue and repeat over time.

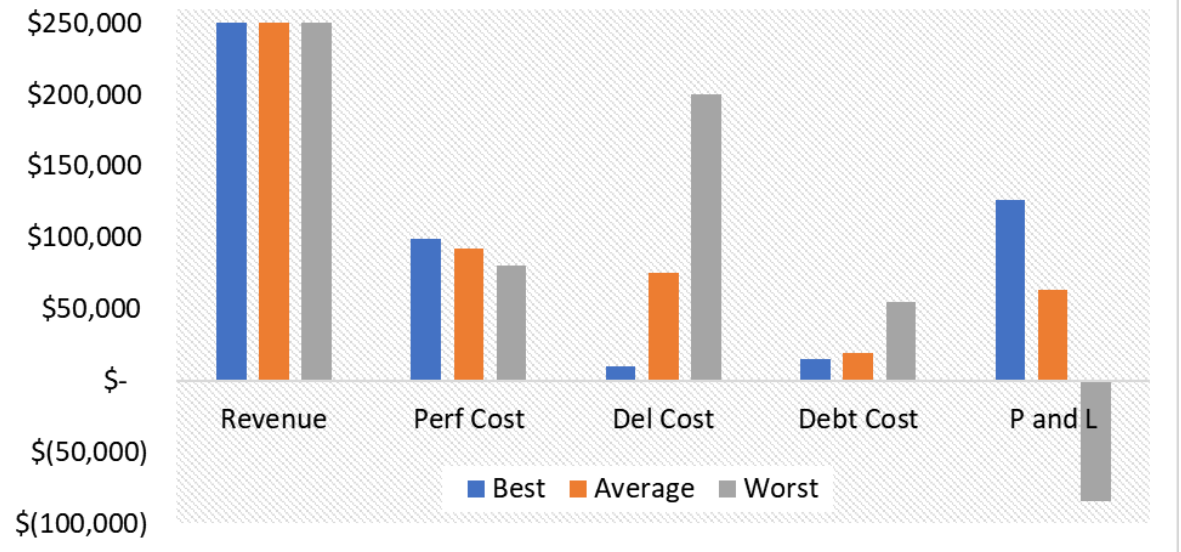
Today's MSR Revenue and Cost Model

Financial services firms generally manage the competing objectives of expected returns and survivability capital. For decades, scale economies have been driving servicing to fewer, larger firms, with even fewer infrastructure vendor platforms. Regulatory changes stemming from the last financial crisis dramatically increased compliance costs for NPLs and have led to government mortgage servicing being an inherently volatile and below-investment grade asset when combined with fixed fee rates. It is no longer feasible to adequately capitalize mortgage servicing (even without leverage) because the MSR asset value can become negative. The capital markets reflect this risk because MSR financing terms generally have spreads consistent with below-investment grade risk even with 50% collateral. Banks do not generally make large investments in non-IG assets, so they pared back government mortgage securities servicing, especially GNMA servicing. This has left non-bank servicers with larger market share, caused increased stress on the remaining banks in the sector, and rendered the mortgage servicing business the weak link in the mortgage ecosystem. Compounding the problem is a patchwork of state and federal regulators.

The chart below shows various revenue, cost, and profit and loss outcomes from a simple one-period GSE MSR business simulation. The results indicate that mortgage servicing is profitable in benign scenarios, but that capital critical to sustaining finance and operations is lost in stress cases because variable and increasing NPL servicing costs dramatically exceed what is largely fixed revenue.

As a fundamental matter, it is useful to note that in addition to bearing the credit risk associated with costs increases and spikes in non-performers, the MSR asset has significant prepayment risk because the 25 bps servicing fee is generally twice the cost of servicing. This leaves servicers with excess IO (interest only strips) to manage in benign markets as they seek to mitigate the risk of their servicing book shrinking faster than they can originate new loans or acquire new servicing. In downturns, servicers struggle to cover rising costs while, at the same time, they manage prepayment risks. Servicers with an origination arm have something of a built-in hedge to

FIGURE 3: GSE SERVICING P&L WITH 25 BPS FEE, 1:1 LEVERAGE



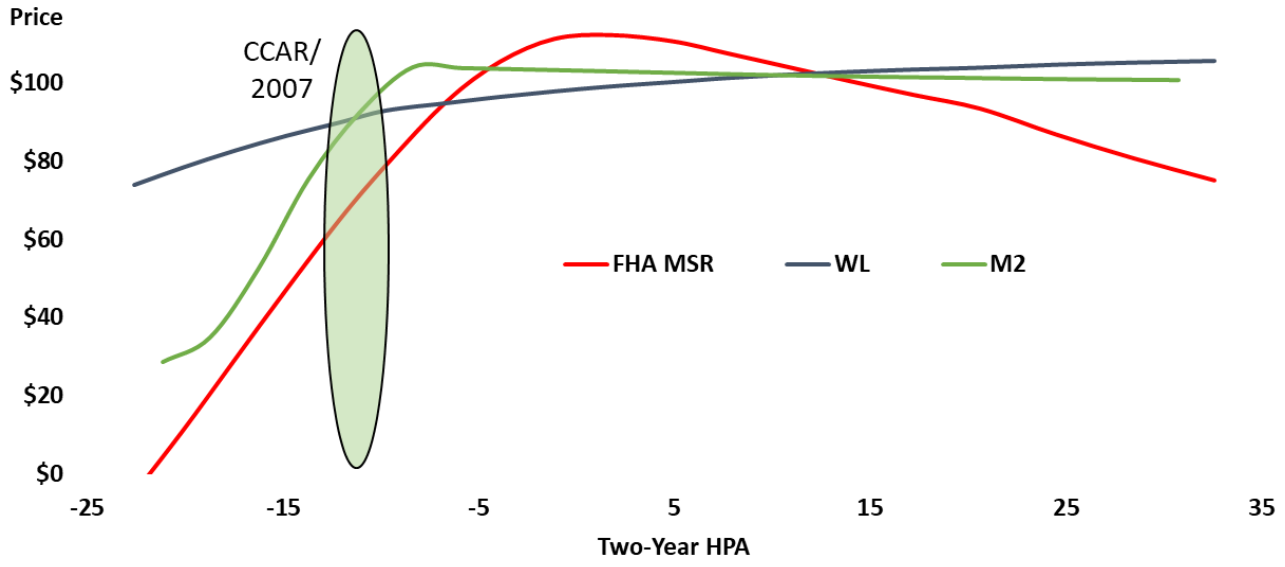
these coinciding risks from increases in volume and fee income from originations when rates fall. However, history tells us this may not be enough to steady franchise values and financing availability through tail delinquency scenarios. Note that subservicing, by contrast, does not have similar IO risk because fees roughly equal cost plus a moderate profit margin.

The stability of the MSR asset, measured as the expected net present value of future servicing income, determines the amount and cost of financing servicers have access to. Servicers finance MSR portfolios and operations with short- and medium-term (fixed spread) warehouse lines. When servicing asset values plummet as delinquency expectations spike, lenders reduce available financing and raise its cost.

This damages franchise value and makes it all but impossible to raise equity or debt. While past and present crises do present significant liquidity problems for non-bank servicers, the root cause of MSR declines is the average pricing model.

The chart below shows a distribution of values for various mortgage-related assets indexed to 100 across short-term housing price shocks. Whole loans are the most stable while Federal Housing Authority (FHA) MSR values drop to zero in extreme events. The green oval gives the approximate level of the CCAR severe stress which is similar to the 2007 financial crisis. MSR volatility is cripplingly high and illustrates that the sustainability of today's government mortgage payments system depends on the value of one of the riskiest derivative instruments in the capital markets. But it doesn't have to be this way.

FIGURE 4: PRICE [INDEXED TO $100] VS 2-YEAR HPA MORTGAGE-RELATED ASSETS



Proposal

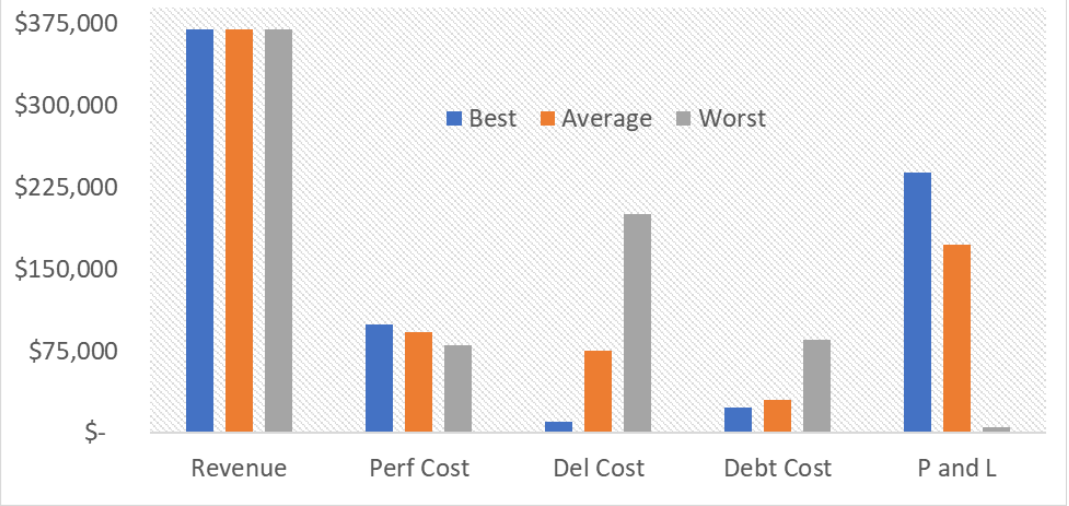
We have described the well-known dynamics of government mortgage securities servicing and explained why it is such a problem now, even as the federal government works to prevent dislocation in mortgage finance. The latest in a series of constructive steps is for the GSEs to reimburse servicers $500 when loans go into the federal forbearance program. While $500 isn't enough, it is a crucial first step that demonstrates how the solution would work.

- The GSEs and FHFA recognize that servicing revenue is vastly insufficient to cover the costs of servicing NPLs.
    - Such costs are an aspect of credit risk.
    - The government should be responsible for funding federal forbearance policies, not servicers with no government connection.
- Any proposal must maintain the fixed spread between fixed-rate mortgages and MBS which is achieved by paying servicers when loans become non-performing.

Because fees are high enough to generate profits on average but not to survive stress, treating government mortgage-backed securities servicing as a stand-alone asset carries destabilizing volatility that periodically threatens the government mortgage system. One solution is to raise average fees high enough (about 12 bps) to survive appropriately stressful events, with the extra revenue held as capital. However, this approach is problematic. Survival resources for rare and very expensive events are more efficiently funded by capital, not by raising income that is not needed for most scenarios. Raising income would also raise mortgage rates, and it would be surprising if, without capital regulation, the excess profits were not competed away most of the time. Finally, it would require servicers to manage much more (double the amount) interest rate risk and balloons balance sheets to finance higher asset values.

A better solution embraces the fundamental economic principle that price should equal marginal cost. In plain terms, this means restructuring servicer compensation so that the guarantors and credit investors pay separately for servicing performing and non-performing loans as they evolve over time. By raising the servicing fee on non-performing loans so

FIGURE 5: GSE SERVICING P&L WITH 37 BPS FEE, 1:1 LEVERAGE



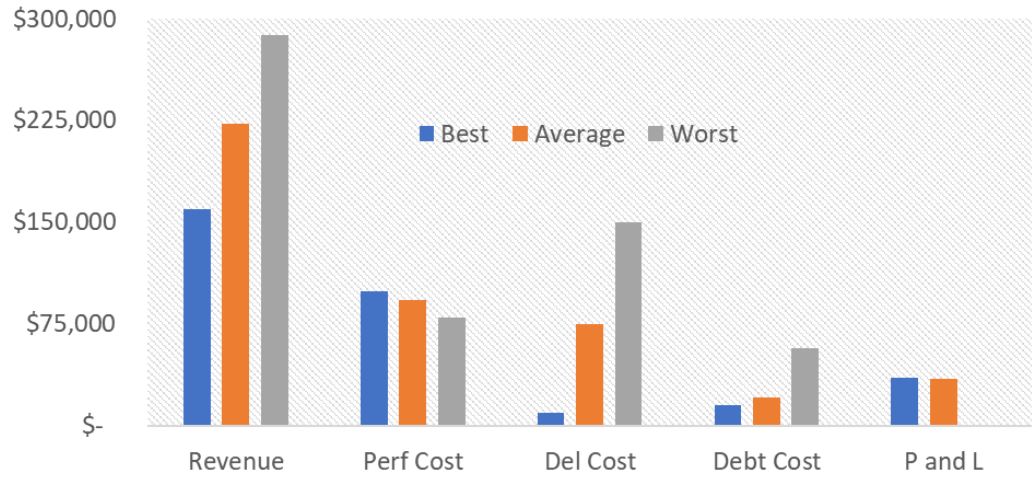
that revenue equals cost, MSR values become flat to delinquency rates, are much less risky and costly to finance, and thereby negate the systemic need for complex federal backstops during crises. The ex-post uncertainty of paying to service NPLs based on future economic conditions is shouldered more efficiently by the credit risk guarantors who already manage future credit costs. The steadying effect of changing marginal revenue to reflect marginal cost is depicted in the chart below.

It is likely that paying marginal costs to service performing and non-performing loans separately would lower expected average servicing fees (about 4 bps in our scenario weighting scheme). This savings compensates guarantors for taking back the risk. Thus, the net expected cost to both servicers and guarantors does not change, nor does volatility of guarantor credit risk, but servicing volatility is dramatically lowered. This lowers the total financing cost for government securitized mortgage cash flows, slightly lowering cost to borrowers and eliminating the current turmoil in the servicing market. Further, it may incent banks to reenter the government mortgage servicing business by making MSRs much less volatile and also enable a reduction in the regulatory capital treatment.

It is likely necessary to continue the servicing fee as a fixed spread between mortgage note rates and MBS pass-through rates with future variation handled as monthly reimbursements from the GSEs to servicers in the way that GSEs pay the future variation in credit losses. As of early May, the GSEs announced that they are going to pay servicers $500 (about 20 bps) for loans in forbearance. While this fee is not high enough, it should eliminate any questions as to whether such things are, in fact, possible or that the GSEs don't recognize the root cause and solution discussed here. If NPL reimbursement is fully implemented, the base servicing rate can probably drop to 15 bps on performing loans and the GSEs can accrue the savings as capital for paying delinquency servicing costs in the future.

Lastly, we recommend establishing a unified servicing regulator for safety and soundness that

FIGURE 5: GSE SERVICING P&L @ 15 & 112 BPS FEE, 3:1 LEVERAGE



works in concert with the bureau that oversees consumer financial protection (CFPB). There are not hundreds of servicing guides to unify, just a handful of federal guarantors: FNMA, FRE, FHA, VA, etc. Moreover, we believe such a regulator could significantly help standardize the varied disaster and forbearance servicing practices to benefit consumers and servicers alike.

Aligning incentives between investors and those who service on their behalf is a crucial element of the servicing contract.

One reason that the existing servicing fee is so much higher than average cost is to ensure that underperforming servicers have something to lose if servicing portfolios are transferred away by the guarantors who actually own the servicing. However, distressed servicing portfolios can be a net liability, which turns incentives upside down. Under the proposed structure, NPL portfolios are equally valuable (more or less), retaining incentive alignment and maintaining the credible threat of transfer.

Conclusions

1) The government mortgage securities servicing business is unnecessarily and intolerably volatile because of the flawed compensation model. Servicing non-performing loans compliantly is more expensive than ever, making the system ever more fragile when macro events such as the pandemic drive delinquencies up. This volatility drove banks back generally, and nearly out of the GNMA servicing business entirely, and it makes financing non-bank operations especially fragile. This weak link imperils the entire government mortgage ecosystem and undermines vast federal efforts toward ensuring a stable and fair market for housing finance.

2) Our solution is straightforward and is based on the principal of marginal cost pricing. Guarantors should pay servicers separately for the costs of performing and non-performing loans, according to industry averages for each. Indeed, the GSEs have recently announced partial action to do just that.

3) Spreads between fixed-rate mortgage rates and security coupons should remain fixed to maintain the liquidity and value of the TBA market. Thus, ex-post variation in delinquency-related servicing costs should be borne and charged for by guarantors, as they are for other credit costs.

4) The operational cost and associated revenue of servicing delinquent loans would be transferred from servicers to guarantors without changing the cost to borrowers. The big change would be lowering the cost of financing servicing rights, capital, and resiliency to stress. Raising credit costs slightly does not materially raise credit risk volatility and thus has a small impact on guarantor capital. Further, guarantor financing costs are much lower than those for private services.

5) The revised MSR asset will become dramatically more stable, flat to changes in future economic conditions and delinquencies. Servicers will require less capital and debt, lowering financing costs. As with subservicing contracts, servicers are less exposed to prepayment and IO risk, further reducing financing costs and capital needs. The new MSR can be an investment grade asset and could bring banks back into the government mortgage servicing business. Setting the fees high enough for servicing performing and non-performing loans to make the asset valuable enough to maintain the guarantors' level influence to enforce sound operations would be a straightforward process.

6) It is crucial to align incentives between investors and those that service on their behalf. Marginal cost pricing effectively does so, especially for distressed portfolios.

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