Ways to Curb Nonbank Activity in the Mortgage Market and Reduce Systemic Risk

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This note documents the dramatic shift in both the origination and servicing of mortgage loans from banks to nonbanks in the United States and analyzes how much of that migration is attributable to differences in capital requirements. In particular, the note compares the capital stress test imposed on banks by the Federal Reserve with the stress test imposed on government sponsored enterprises (GSEs) by the Federal Housing Finance Agency (FHFA). We show the stress tests conducted by the FHFA are much less severe than the banks’ stress tests. For example, the FHFA allows the GSEs to employ loss mitigation strategies, including private mortgage insurance coverage, to reduce their projections of credit losses under stress. Also, the FHFA stress tests are not closely tailored to the GSEs’ unique activities and should explicitly include a scenario in which many large nonbank mortgage companies fail due to liquidity pressures.¹ Tougher stress tests would incentivize the GSEs to impose tougher requirements on nonbanks that sell or service government guaranteed loans and reduce the risk of the U.S. government having to backstop more losses from the GSEs.

Residential mortgages are the largest component of household borrowing in the United States, with over $10.3 trillion of mortgage loans outstanding as of the end of 2018.² In the post-crisis period large banks have significantly reduced their activity in the mortgage market and have generally attributed that reduction to heightened capital and liquidity requirements as well as legal risk from mortgage-related lawsuits. In contrast, nonbanks have expanded their activity rapidly in the mortgage market over the same period. Nonbanks face a much lighter regulatory burden; also, while nonbanks generally incur higher funding costs than banks, nonbank mortgage lenders can obtain lower funding costs by selling the loans to the GSEs and Ginnie Mae. Notably, the expansion of nonbanks occurred despite banks offering higher quality mortgage products to their customers.³ Moreover, nonbanks have also gained market share in the servicing of mortgage loans, a sector that has been traditionally dominated by the largest banks.

Recent Trends in Mortgage Markets

Origination. Nonbank activity in the mortgage market has expanded considerably in the post-crisis period. The chart below shows the increase in the share of mortgage-loan originations by nonbanks. Between 1995 and 2007, nonbanks’ market share was stable and hovered around 30 percent of all mortgage originations. At the onset of the past financial crisis, the share of nonbank mortgage originations fell about 10 percentage points because of the failure of many nonbanks; however, in the post-crisis period, it has risen quickly and significantly. According to the most recent data on mortgage loans, nonbanks account for about 55 percent of all mortgage-loan originations to purchase a home. In

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¹ The vulnerability of nonbanks to liquidity problems was well documented in a paper by Kim, You Suk, Steven Laufer, Karen Pence, Richard Stanton, and Nancy Wallace; “Liquidity Crisis in the Mortgage Market,” Brookings Papers on Economic Activity, Spring 2018.
addition, nonbanks originate more than 75 percent of nonconventional loans, which are typically made to the least creditworthy borrowers.⁴

Servicing. Both banks and nonbanks finance their mortgage originations via securitization, that is they originate the mortgage and sell the loan to a third party. While banks on average hold between 30 percent and 50 percent of all the mortgages they originate, nonbanks finance almost all originations through securitization. In the post-crisis period, the GSEs and Ginnie Mae control almost all of the securitization market due to the collapse of private securitization market in the last crisis. After a mortgage is originated and sold to one of the GSEs or Ginnie Mae, the firm that originated the loan can retain the servicing of the mortgage. In that case, the loan originator collects the principal and interest payments from borrowers and distributes those payments (less a spread) to mortgage-backed securities (MBS) investors. The present value of fees lenders collect for servicing mortgage loans is a mortgage servicing asset (MSA).

As shown in the chart below, the nonbank share of MSAs also rose considerably in the post-crisis period, and nonbanks currently service close to 45 percent of all outstanding mortgage loans.

![Nonbank Mortgage Activity Shares](chart)

(¹ Series starts in 2008 due to data availability. Source: FHFA data, FHLB's Call Reports)

Regulatory Drivers of Mortgage Trends

Regulatory changes have substantially increased the absolute and relative (to nonbanks) cost to a bank of originating a mortgage. Specifically, risk-weights for first-lien residential mortgage loans are 50 percent under the standardized approach, and about 80 percent under stressed conditions (i.e., the Federal Reserve's CCAR stress test).⁵ These numbers are multiples higher than the 20 percent risk weights produced under the so-called advanced-internal ratings-based approach (AIRB), which accounts for the risk of a mortgage loan with greater specificity and risk sensitivity. (Under the AIRB, banks can use internal estimates for probability of default, loss-given default and exposure-at-default, subject to regulatory approval of their models to calculate risk-weighted assets.) Thus, capital requirements under the Basel III standardized approach or under the Fed's stress tests require a bank to hold more capital relative to the underlying risk of the asset.

Regulation has also increased the non-capital costs of originating loans for banks. There are three major factors driving these higher origination costs: (i) put-back risk, or the risk that one of the GSEs or Ginnie Mae will require the bank to

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⁴ Nonconventional loans are those insured by the Federal Housing Administration (FHA), or backed by the guarantees from the U.S. Department of Veterans Affairs (VA), the Farm Service Agency (FSA), or the Rural Housing Service (RHS).

purchase a defaulted loan if there are any inaccuracies in the loan documentation; (ii) relatedly, the risk of a False Claims Act by the FHA in the event of loan documentation errors; and (iii) the significant expansion in the time it takes to foreclose on a mortgage, which significantly increases its cost. In each case, banks incurred massive liabilities in the aftermath of the financial crisis, and now consider these costs in deciding whether to originate mortgages and how to price them. The put-back risk alone, for example, has caused several large lenders to exit the FHA market. Indeed, JPMorgan Chase’s 2016 letter to shareholders noted that the excessively complex regulations made FHA lending risky and too costly for many banks.⁶

With respect to servicing, the Basel III Accord increased significantly the risk-weight of MSAs. Specifically, the risk-weight on MSAs is equal to 250 percent if its share relative to common equity tier 1 (CET1) does not exceed 10 percent. MSAs above the 10 percent limit are directly deducted from CET1— an effective risk weight of 1250 percent.⁷ The chart below plots the share of MSAs relative to capital at banks since 2001. Up until the 2007-2009 crisis, MSAs as a share of bank capital hovered around 10 percent. After the implementation of Basel III, MSAs declined significantly and are close to 3 percent according to the most recent regulatory reports. Thus, the increase in risk-weights reduced the incentives for banks to service the loans they originate and sell to the GSEs or Ginnie Mae.

Capital and Liquidity Requirements of Nonbanks

Nonbank originators and servicers are subject to very light supervision by the Consumer Financial Protection Bureau. In practice, the most binding requirement for nonbank servicers are the minimum capital and liquidity requirements imposed by the GSEs and Ginnie Mae for mortgages guaranteed or insured by them. In terms of capital requirements, nonbanks are subject to a minimum net worth requirement of $2.5 million plus 25 basis points of the outstanding principal for serviced loans and a minimum net worth to total assets ratio of 6 percent. Second, the GSEs are subject to stress tests conducted by the FHFA, which could become an indirect capital requirement for nonbank servicers if the performance of nonbanks under stress raises the losses of the GSEs under stress. For instance, the stress tests could include a scenario in which the failure of nonbanks raises the risks to the GSEs, thereby increasing the odds of another bailout by the U.S. government and ultimately the taxpayer. Under that scenario, the GSEs would be incentivized to increase capital requirements to nonbanks, thereby reducing the probability of nonbank failures under stress.

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⁷ Of note, only the banks subject to the advanced approaches are currently subject to a 250 percent risk-weight, all other banks are subject to a transitional risk-weight of 100 percent, which will be raised to 250 percent at some point in the near future.
In contrast to banks, nonbank servicers may count an unlimited amount of MSAs as part of their net worth by the GSEs and, moreover, are subject to a non-risk-based requirement also set by the GSEs that incentivizes nonbanks to service riskier loans. The table below shows the holdings of MSAs and total equity capital of the three largest publicly traded nonbanks and seven banks. For each nonbank included in the sample, MSAs exceeded 100 percent of equity capital and therefore should be deducted directly from capital. As a result, these nonbanks would have a significant capital shortfall if the Basel III MSA capital requirement were applied to nonbanks. In contrast, MSAs do not exceed more than 10 percent of banks’ common equity tier 1 capital, and of course banks hold considerably more capital than required.

In terms of liquidity requirements, nonbanks must hold liquid assets equal to 3.5 basis points of the outstanding principal for GSE MBS and 10 basis points for Ginnie Mae MBS. In addition, the GSEs require a 2 percent liquidity buffer for nonperforming loans. By comparison, liquidity regulations currently require large banks to hold about 20 percent of their balance sheet in high-quality liquid assets. Moreover, the banks’ definition of HQLA is more restrictive because FHFA’s definition of liquid assets include the unused amount of lines of credit used to fund servicing advances and holdings of Agency MBS are not subject to the Level 2A haircut.

Table 1: Estimated Capital Required for Mortgage Servicing Assets

<table>
<thead>
<tr>
<th>Company name</th>
<th>Mortgage servicing assets ($m)</th>
<th>Total equity ($m)</th>
<th>Estimated capital required for MSAs ($m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonbanks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr Cooper Group*</td>
<td>3,676</td>
<td>1,945</td>
<td>3,520</td>
</tr>
<tr>
<td>Ocwen**</td>
<td>1,457</td>
<td>555</td>
<td>1,413</td>
</tr>
<tr>
<td>PennyMac</td>
<td>2,821</td>
<td>1,654</td>
<td>2,688</td>
</tr>
<tr>
<td>Banks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wells Fargo</td>
<td>16,092</td>
<td>146,000</td>
<td>3,218</td>
</tr>
<tr>
<td>JP Morgan</td>
<td>6,130</td>
<td>183,000</td>
<td>1,226</td>
</tr>
<tr>
<td>US Bank</td>
<td>2,791</td>
<td>34,700</td>
<td>558</td>
</tr>
<tr>
<td>Suntrust</td>
<td>2,049</td>
<td>17,258</td>
<td>668</td>
</tr>
<tr>
<td>Bank of America</td>
<td>2,042</td>
<td>167,000</td>
<td>408</td>
</tr>
<tr>
<td>PNC</td>
<td>1,983</td>
<td>30,900</td>
<td>397</td>
</tr>
<tr>
<td>BB&amp;T</td>
<td>1,122</td>
<td>184,000</td>
<td>224</td>
</tr>
</tbody>
</table>

Notes: Data as of the fourth quarter of 2018. (*) Acquired Nationstar on July 31, 2018; (**) PHH Corporation was bought by Ocwen Financial in October 2018.

Stress Testing the GSEs

Under the Dodd-Frank Act, the GSEs are subject to annual stress tests by the FHFA. Those stress tests differ from the stress test imposed by the Federal Reserve. As described below:

- The FHFA stress tests contain significantly less severe assumptions;

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8 See the liquidity tab at [https://bpi.com/bank-conditions-index/](https://bpi.com/bank-conditions-index/).

9 Under the Liquidity Coverage Ratio applicable to banks, Level 2A assets, which include securities issued or guaranteed by a GSE, are subject to a haircut of 15% of their fair value.
The stress tests administered by the FHFA do not capture some of the unique risks faced by the GSEs, including potential losses associated with the failure of nonbanks that service GSE-guaranteed loans.

**Stress severity.** The basic framework used in the Federal Reserve and FHFA stress tests is similar and uses the same macroeconomic stress scenario and global market shock. However, the FHFA stress tests are considerably less stringent than the Fed’s stress tests for four primary reasons.

First, the FHFA allows GSEs to report loan loss rates than are much lower than banks’ loss rates for similar types of loans. Specifically, the projected loss rate for first-lien mortgage loans on the books of the GSEs was only 0.4 percent under the 2018 severely adverse scenario while it was almost 3 percent, on average, across all banks that participated in CCAR 2018. Thus, the Federal Reserve requires banks to project losses almost eight times greater than the FHFA requires the GSEs to project. The impact of applying the loss rates projected by the Federal Reserve on the stress tests to the GSEs is very large. According to the FHFA’s DFAST 2018 disclosure, the GSEs hold about $5.3 trillion in mortgage loans on their books. Assuming a loss rate of 3.2 percent would have raised credit losses to approximately $170 billion from $21.2 billion.\(^{10}\)

![Delinquency Rate of First-lien Mortgage Loans](image)

One possible explanation for this difference could be that banks are holding riskier mortgages on their books relative to those sold to the GSEs. However, the chart above shows that the difference in the risk of mortgage loans is probably not a significant driver in loss rates between the banks and the GSEs. In particular, the delinquency rate for the GSEs as well as a group of CCAR banks that hold a sizable portfolio of mortgage loans on their books was roughly similar during the past crisis. Despite this similarity, the average projected loss rate on home mortgages of these banks in CCAR 2018 was eight times higher (3.2 percent) than the loss rate projected by the GSEs (0.4 percent). The loss rate for the set of representative banks is slightly higher than the average for all CCAR banks because many of the banks that experienced large increases in loan mortgage defaults in the 2007-2009 crisis now hold very pristine mortgage loans and therefore experienced lower loss rates in CCAR 2018.

One clear cause of the difference in loss rates is the treatment of private insurance. The FHFA notes that it expects the GSEs to have lower loss rates than banks because the GSEs employ loss mitigation strategies—namely, private mortgage insurance. In contrast, the Federal Reserve does not allow banks to incorporate private mortgage insurance in the calculation of loss given default because such insurance was unreliable during the financial crisis.

Second, the FHFA stress tests do not assume any failure of nonbanks during stressful macroeconomic conditions, and therefore do not consider risks to the GSEs associated with the transfer of the servicing of loans to a healthy servicer.

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\(^{10}\) While the loss rate of loans on the books of GSEs was only 0.4 percent, the ratio of provisions to loans was 1.2 percent in the 2018 stress tests.
under stressful conditions. According to the disclosures provided by the FHFA, the GSEs hold approximately 21 million mortgage loans on their books. The estimates provided by the Mortgage Bankers Association indicate that the cost of servicing a nonperforming loan is about $2,400. If during a stress event several nonbank servicers become insolvent because of their thin capital cushions and the GSEs were required to take direct possession of the servicing of their loans the additional cost of servicing nonperforming loans could be between $2.5 billion and $7.8 billion, depending on the share of nonperforming loans in the next severe recession (see Table 2). (This estimate does not consider the social costs associated with the rise of foreclosures that result from servicer stress.\textsuperscript{31}) Thus, the failure to assume any nonbank servicer failures appears to significantly understate the stress losses of the GSEs.

**Table 2: Direct Costs of Servicing Nonperforming Loans**

<table>
<thead>
<tr>
<th>% of nonperforming loans</th>
<th># of nonperforming mortgages</th>
<th>Cost of Servicing ($B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5%</td>
<td>1,060,000</td>
<td>2.54</td>
</tr>
<tr>
<td>10%</td>
<td>2,120,000</td>
<td>5.09</td>
</tr>
<tr>
<td>15%</td>
<td>3,180,000</td>
<td>7.63</td>
</tr>
</tbody>
</table>

Third, the capital requirements in the Fed’s stress tests are measured in terms of the peak-to-trough decline in banks’ regulatory capital ratios under stress, while the FHFA stress tests looks at the aggregate losses at the end of nine-quarters. Many banks in the Fed’s stress tests, particularly those banks subject to the global market shock and the largest counterparty default shock typically report the peak decline in capital ratios at the end of four quarters rather than at the end of nine quarters. This occurs because losses arising from the global market shock and the largest counterparty default shock are booked in the first quarter of the stress horizon. Thus, by assessing performance based on the incremental Treasury draws at the end of nine quarters instead of the peak draw from the Treasury credit line over the nine-quarter stress horizon, the FHFA imposes a significant less stressful test than the Federal Reserve.

Lastly, there is no quantitative pass/fail in the FHFA stress tests. Since the GSEs are still under conservatorship, they are subject to a limit on the maximum amount of capital that each GSE can hold. Specifically, each GSE can hold more than $3 billion in capital. This amount is insufficient to cover credit and trading losses during the 9-quarter stress horizon. Instead, those losses are paid by drawing down a line of credit provided by Treasury. As of the end of 2017, the GSEs had more than $250 billion available in funding from Treasury. Even if the GSEs would have to draw the entire funding commitment provided by Treasury under stress, it isn’t clear what the implications would be for the GSEs.

**Final Remarks**

As described in this blog post, regulatory differences are causing nonbanks to gain significant market share in the origination and servicing of mortgage loans, especially for riskier mortgages. The rapid growth of nonbank lending in the mortgage market, which is in large part driven by the lighter regulatory burden, could incentivize the GSEs to impose tougher requirements on nonbanks that sell or service government guaranteed loans and reduce the risk of the U.S. government having to backstop more losses from the GSEs. A relatively straightforward way to mitigate these risks would be to strengthen the stress tests of the GSEs and also impose stricter pass/fail requirements. We argue that the imposition of tougher stress tests on the GSEs would incentivize the Agencies to impose stricter capital and liquidity requirements to nonbank servicers.

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