Panel 4: Mortgage Markets

Laurie Goodman
Co-Director, Housing Finance Policy Center
Urban Institute

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Paper #1: Bank Balance Sheet Capacity and the Limits of Shadow Banks

- This paper consists of a set of stylized facts, a model and policy implications from the model

- Aggregate stylized facts:
  - Jumbo market share increases are accompanied by a decrease in the spread between jumbos and conventional mortgages
  - Tightening of regulatory constraints was associated with increases in the shadow bank share
  - Shadow banks have a small slice of the jumbo market; they mainly originate to distribute (OTD)

- Micro evidence
  - Loans immediately above the loans limit are way to likely to be originated by a bank than a non-bank, and more like to be held on balance sheet.
  - Better capitalized banks have more balance sheet capacity.
Summary

- Banks have an advantage in originating mortgages on balance sheet; this is limited by their capitalization.

- This advantage means that banks focus more on the jumbo market, where it is harder to securitize.

- Non-banks have a lower regulatory burden and focus on the OTD model.
Model

**Player**
- Banks
- Non-banks

**Financing**
- Portfolio
- OTD
- OTD

**Loan Origination**
- Jumbo or conforming loan
- Conforming loan
- Conforming loan

Consumer utility model
- Whether or not to get a mortgage
- Loan size

Model endogenously determines:
- Interest rates (jumbo & conforming)
- Mortgage volumes (jumbo & conforming)
- Conforming split between banks and non-banks
## Impact of Policy Actions

<table>
<thead>
<tr>
<th></th>
<th>Increasing Capital Requirements from 6 to 9%</th>
<th>QE-decreasing GSE funding costs (-25 bps)</th>
<th>Eliminating conforming loan limits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Jumbo volume</strong></td>
<td>-$150b (-40%)</td>
<td>-$6b</td>
<td>-$53b</td>
</tr>
<tr>
<td><strong>Jumbo rates</strong></td>
<td>+89 bs</td>
<td>unch</td>
<td>-57 bps</td>
</tr>
<tr>
<td><strong>Conforming volume</strong></td>
<td>+$120b (split 50/50 bank/ non-bank)</td>
<td>+$165 b</td>
<td>+$365b</td>
</tr>
<tr>
<td><strong>Conforming rate</strong></td>
<td>Unch</td>
<td>-25 bps</td>
<td>-11 bps</td>
</tr>
<tr>
<td><strong>Total lending volume</strong></td>
<td>-31b</td>
<td>+$159b</td>
<td>+$312b</td>
</tr>
<tr>
<td><strong>Profitability</strong></td>
<td>-$28b bank/0 non-bank</td>
<td>+$3 b bank</td>
<td>-$18b bank/+$17 non-bank</td>
</tr>
<tr>
<td><strong>Consumer surplus</strong></td>
<td>-$8b, higher income benefits more</td>
<td>+$43 b, lower income benefits more</td>
<td>+$305b, higher income benefits more</td>
</tr>
</tbody>
</table>
Policy actions asymmetric

- Decreasing capital requirements from 6% to 4.5% expands balance sheet holdings by banks by 48%, little difference in volumes

- Increasing GSE funding costs by 25 bps leads to a 14 bps increase in mortgage rates, mortgage origination declines by $70 b, jumbo origination unaffected, consumer surplus -$20b. Balance sheet financing share increase considerably from 42 to 74%, which mutes the effect.

- 25% decrease in loan limits: jumbo production up by $125 b, conforming volume down by $400 b, total volume down by $275b
Origination Share

(Share, percent)

Non-bank Origination Share

Sources: eMBS and Urban Institute.
## False Claims Act Settlements and Litigation

<table>
<thead>
<tr>
<th>Firm</th>
<th>Settlement Date</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citi</td>
<td>Feb-12</td>
<td>$158.3 million</td>
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<tr>
<td>Flagstar Bank</td>
<td>Feb-12</td>
<td>$132.8 million</td>
</tr>
<tr>
<td>Bank of America</td>
<td>February 2012 (NMS), August 2014 (broader settlement)</td>
<td>$1 bil (NMS), $1.85 bil (broader settlement)</td>
</tr>
<tr>
<td>DB/Mortgage IT</td>
<td>May-12</td>
<td>$202.3 million</td>
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<tr>
<td>Chase</td>
<td>Feb-14</td>
<td>$614 million</td>
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<tr>
<td>US Bank</td>
<td>Jun-14</td>
<td>$200 million</td>
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<tr>
<td>SunTrust</td>
<td>Sep-14</td>
<td>$418 million</td>
</tr>
<tr>
<td>MetLife</td>
<td>Feb-15</td>
<td>$123.5 million</td>
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<tr>
<td>First Horizon/First Tennessee</td>
<td>Jun-15</td>
<td>$212.5 million</td>
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<tr>
<td>Walter Investment Management Corp</td>
<td>Sep-15</td>
<td>$29.6 million</td>
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<tr>
<td>Franklin American</td>
<td>Dec-15</td>
<td>$70 million</td>
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<tr>
<td>Wells Fargo</td>
<td>Apr-16</td>
<td>$1.2 billion</td>
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<td>Freedom Mortgage</td>
<td>Apr-16</td>
<td>$113 million</td>
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<td>M&amp;T Bank</td>
<td>May-16</td>
<td>$64 million</td>
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<td>Regions Bank, BB&amp;T</td>
<td>Oct-16</td>
<td>$52.4 million</td>
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<td>Primary Residential Mortgage</td>
<td>Oct-16</td>
<td>$83 million</td>
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<td>Security National Mortgage Co.</td>
<td>Oct-16</td>
<td>$5.0 million</td>
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<td>United Shore Financial Services</td>
<td>Dec-16</td>
<td>$48 million</td>
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<td>PHH Mortgage</td>
<td>Aug-17</td>
<td>$75 million</td>
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<td>Allied Home Mortgage Capital/Allied Home Mortgage Corporation</td>
<td>Sep-17</td>
<td>$296 million</td>
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<td>IberiaBank (LA)</td>
<td>Dec-17</td>
<td>$11.7 million</td>
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<td>Universal American Mortgage Co.</td>
<td>Oct-18</td>
<td>$13.2 million</td>
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<td>Finance of America Mortgage/Gateway Funding Diversified Mortgage Services</td>
<td>Dec-18</td>
<td>$14.5 million</td>
</tr>
<tr>
<td>Quicken Loans</td>
<td>Jun-19</td>
<td>$32.5 million</td>
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</table>

**Litigation in Process**

| Firm                                | --                                                  | --                               |

Source: Urban Institute, various press releases from the U.S. Department of Justice Office of Public Affairs, and other press reports.
Paper #2: Mortgage Leverage and House Prices

- Paper quantifies the effect of mortgage debt-to-income (DTI) restrictions on home prices using a change in the eligibility requirements imposed by the GSEs.

- In 1999 Fannie Mae and Freddie Mac’s DTI restrictions diverged, Freddie scaled back dramatically their willingness to accept DTIs greater than 50; this affects about 5% of the Freddie borrowers.

- The paper shows that locations with tighter DTI requirements experience an immediate relative reduction in home prices, on the order of 2%.

- This effect builds over time and leads to a smaller house price boom and bust in these locations during the 2000s.
The impact just seems intuitively too large

- There were other factors, interest rates were rising rapidly over that period, increasing DTIs.

- All activity was not occurring in the GSE market.
  - GSEs were less than half the total market. The FHA and private label markets were significant.
  - These channels had wider lending standard than either of the GSEs.
  - All large lenders were excluded from this analysis, so it looks at the county share (Freddie/Freddie+Fannie) for lenders originating less than 20,000 purchase loans.
  - Even if these lenders had only one system and could only sell into one lender, brokers could sell into either set of lenders.

- The way the analysis is done, the Freddie share becomes the proxy for many different factors, and hence overestimates the effect.
PMMS Rates: Monthly time series

April 1971 – September 2019

30-Year Fixed-Rate

1998 – 2002

30-Year Fixed-Rate

Source: Freddie Mac.
The GSEs were less than 50% of the market

Market Shares of Home Purchase Loans

Both Government loans and PLS loans have higher CLTVs than GSE loans

Average CLTV for Home Purchase Loans, 1990-2017

Both Government loans and PLS loans have higher DTIs than GSE loans

Average DTI for Home Purchase Loans, 1990-2017

Both Government loans and PLS loans have lower FICO scores than GSE loans.

Average Credit Score for Home Purchase Loans, 1990-2017

GSEs & FHA/VA

Portfolio & PLS

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<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
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<td><strong>Freddie Share</strong></td>
<td>-2.48***</td>
<td>-1.94**</td>
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<td>(0.78)</td>
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<td><strong>Freddie Share (All Loans)</strong></td>
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<td>-2.89**</td>
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<td><strong>Freddie x Mid Leverage</strong></td>
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<td><strong>Freddie x High Leverage</strong></td>
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<td><strong>Freddie x Low Supply Elasticity</strong></td>
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<td><strong>Freddie x Missing Supply Elasticity</strong></td>
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*Source: Johnson, 2019.*
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