Normalizing the Fed Balance Sheet: Practical Considerations

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

FRB of NY/ Columbia SIPA
New York, NY
July 11, 2017
Questions about the wind down

• What should the terminal size of Fed portfolio be?
  • Much larger than pre-crisis.
  • The growth of currency in circulation alone requires that.

• What should the terminal composition of the Fed portfolio be? Treasuries only, Treasuries + MBS?
  • The case for the inclusion of MBS in a perfect world is weak.
  • A more active MBS policy could act as a stabilizer, its not clear to me that this should be the Fed’s role

• What do you do with the MBS tail?
  • The tail will be quite sizeable.
  • Would just holding it distort the market?

• Wind down mix?
  • Do you want to wind down Ginnie/Conventional mix less than proportionately in order to favor the first time home buyer?
  • Do you want to reinvest in MBS that are less prone to prepayment slowdowns?

• Will the Fed convert legacy Freddie’s to the single security (Q2, 2019)?
  • Does it matter?
## Determining the Fed’s target portfolio size

### The Federal Reserve Balance Sheet through time

<table>
<thead>
<tr>
<th>Assets ($Billions)</th>
<th>20-Jun-07</th>
<th>20-Jun-12</th>
<th>21-Jun-17</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Securities held outright</td>
<td>$790,439</td>
<td>$2,623,099</td>
<td>$4,254,154</td>
<td>$2,644,376</td>
</tr>
<tr>
<td>Unamortized premiums and discounts</td>
<td>$0</td>
<td>$0</td>
<td>$151,898</td>
<td>$0</td>
</tr>
<tr>
<td>Repurchase Agreements</td>
<td>$21,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Maiden Lane and TALF</td>
<td>$0</td>
<td>$15,597</td>
<td>$1,709</td>
<td>$0</td>
</tr>
<tr>
<td>Gold + SDRs</td>
<td>$13,237</td>
<td>$16,237</td>
<td>$16,237</td>
<td>$16,237</td>
</tr>
<tr>
<td>Other Assets</td>
<td>$46,192</td>
<td>$218,106</td>
<td>$50,259</td>
<td>$50,259</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td><strong>$870,868</strong></td>
<td><strong>$2,873,039</strong></td>
<td><strong>$4,474,257</strong></td>
<td><strong>$2,710,872</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Liabilities ($Billions)</th>
<th>20-Jun-07</th>
<th>20-Jun-12</th>
<th>21-Jun-17</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currency in Circulation (Federal Reserve Notes)</td>
<td>$773,636</td>
<td>$1,066,758</td>
<td>$1,508,773</td>
<td>$1,508,773</td>
</tr>
<tr>
<td>Deposits other than reserve balances(^1)</td>
<td>$12,923</td>
<td>$183,913</td>
<td>$305,881</td>
<td>$305,881</td>
</tr>
<tr>
<td>Reverse Repurchase Agreements(^2)</td>
<td>$30,443</td>
<td>$84,108</td>
<td>$446,236</td>
<td>$247,467</td>
</tr>
<tr>
<td>Other liabilities</td>
<td>$28,137</td>
<td>$23,808</td>
<td>$7,895</td>
<td>$7,895</td>
</tr>
<tr>
<td>Capital Account</td>
<td>$16,106</td>
<td>$54,669</td>
<td>$40,856</td>
<td>$40,856</td>
</tr>
<tr>
<td>Bank Reserves</td>
<td>$9,441</td>
<td>$1,459,783</td>
<td>$2,164,616</td>
<td>$600,000</td>
</tr>
<tr>
<td><strong>Total Liabilities</strong></td>
<td><strong>$870,686</strong></td>
<td><strong>$2,873,039</strong></td>
<td><strong>$4,474,257</strong></td>
<td><strong>$2,710,872</strong></td>
</tr>
</tbody>
</table>

**Sources:** Urban Institute Calculations from FRB H.4.1 Statistical Release. **Note:** Target assumes 600b in target reserve balances and repurchase agreements other than those of foreign official and international accounts go to zero. All numbers are in billions of dollars.

\(^1\) Comprised of US Treasury General Account, Term deposits of depository institutions, foreign official and other deposits, and bank clearing deposits.

\(^2\) Comprised of foreign official/international accounts and other
Growth of target portfolio over time vs. stated winddown

Sources: Urban Institute Calculations from FRB H.4.1 Statistical Release. Note: Target assumes 600b in target reserve balances and repurchase agreements other than those of foreign official and international accounts go to zero.
MBS are not going to wind down at plan

Sources: Urban Institute Calculations from FRB H.4.1 Statistical Release. Note: Target assumes 600b in target reserve balances and repurchase agreements other than those of foreign official and international accounts go to zero.
Neither are treasuries

Sources: Urban Institute Calculations from FRB H.4.1 Statistical Release. Note: Target assumes 600b in target reserve balances and repurchase agreements other than those of foreign official and international accounts go to zero.
Actual winddown base case

Sources: Urban Institute Calculations from FRB H.4.1 Statistical Release. Note: Target assumes 600b in target reserve balances and repurchase agreements other than those of foreign official and international accounts go to zero.
Who owns total Agency debt?

Sources: Federal Reserve Flow of Funds and Urban Institute.
Move from Active Investors to more Passive Investors

Fed holdings by coupon and agency

Fed holdings by coupon

- 7.0% 4.3% 2.2%
- 15.7%
- 33.0%
- 37.8%

Fed Holdings by Agency

- 47.6%
- 28.9%
- 23.4%

Sources: Federal Reserve Bank of New York, eMBS, and Urban Institute.
Rising rates have choked off refinancing activity

PMMS rate vs. Refi Activity Index

Sources: Credit Suisse and Urban institute
As rates have risen, most of the mortgage universe has become non-refinanceable

Percent of the 30-year universe that is refinanceable versus the weighted average coupon of the Agency market

Sources: eMBS, Freddie Mac Primary Mortgage Market Survey (PMMS), and Urban institute
The lock in effect is powerful--higher rates do impact mobility

Percent of homebuyers that sell, by length of ownership: 1976-2016

Source: CoreLogic
Payment rates may slow more than expected as geographic mobility is down.

Source: U.S. Census Bureau, Current Population Survey

---

Percent Movers within Past Year--Owners

Source: U.S. Census Bureau, Current Population Survey

---

Percent Movers Within Past Year--Renters

Source: U.S. Census Bureau, Current Population Survey
### 30-year prepayment speeds by coupon

<table>
<thead>
<tr>
<th></th>
<th>3 Month CPR</th>
<th>6 Month CPR</th>
<th>12 Month CPR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ginnie Mae</td>
<td>Fannie Mae</td>
<td>Freddie Mac</td>
</tr>
<tr>
<td>2.5</td>
<td>12.68</td>
<td>6.64</td>
<td>5.09</td>
</tr>
<tr>
<td>3</td>
<td>10.21</td>
<td>7.38</td>
<td>6.91</td>
</tr>
<tr>
<td>3.5</td>
<td>14.68</td>
<td>10.72</td>
<td>10.01</td>
</tr>
<tr>
<td>4</td>
<td>21.04</td>
<td>14.86</td>
<td>14.85</td>
</tr>
<tr>
<td>4.5</td>
<td>19.84</td>
<td>16.82</td>
<td>16.96</td>
</tr>
<tr>
<td>5</td>
<td>19.70</td>
<td>20.35</td>
<td>19.86</td>
</tr>
<tr>
<td>5.5</td>
<td>19.44</td>
<td>21.65</td>
<td>22.67</td>
</tr>
</tbody>
</table>

**Sources:** Freddie Mac Primary Mortgage Market Survey, Mortgage Bankers Association, and Urban Institute.
FHA Captures the Riskier Borrowers

Channel Choice by Credit Score When Down Payment is 3 - 4.99 Percent

Source: eMBS and the Urban Institute.
Note: 2016 purchase and refinance mortgage.
FHA more important for FTHB and Minorities

First-time homebuyer

First-Lien Originations by Race/Ethnicity

Sources: eMBS, Federal Housing Administration (FHA), HMDA and Urban Institute. Note: All series measure the first-time homebuyer share of purchase loans for principal residences.
Single Security

3.0, 3.5, and 4.0 Percent Coupons (Freddie Mac Less Fannie Mae Prices)
Some thoughts for a practical wind down

1. It would be very helpful to know how the Fed is thinking about its target portfolio, so that market participants can better gauge the necessary amount of the wind down.

2. It would be very helpful to know how the Fed is thinking about the mortgage tail.

3. It may well make sense to skew reinvestments in MBS towards slightly higher coupons, as it will lessen the tail issue.
How to stay up to date with the work of the Urban Institute’s Housing Finance Policy Center:

Subscribe to our bi-monthly Newsletter: Email spardo@urban.org or go to our web page, scroll down and sign-up.

Follow us on twitter:
@MortgageLaurie: Co-Director Laurie Goodman
@MyHomeMatters: Co-Director Alanna McCargo
@Esseidman: Senior Fellow Ellen Seidman
@FollowKaranK: Research Associate Karan Kaul

Connect with Laurie Goodman on LinkedIn

Check the Housing Finance Policy Center website regularly

Get new work as soon as it is released: Email spardo@urban.org and ask to be added to the list of people who receive email blasts when we publish new content.