The Federal Home Loan Bank System: The Lender of Next to Last Resort?

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Funding: ABCP, FHLB Advances and Discount Window

- Outstanding ABCP declined $259 bn from peak to end of Q3 (latest $355 bn)
- FHLB Advances grew $165 bn in August and September ($184 bn in Q3)
- Discount Window borrowing max 3.2 bn (weekly average)

Source: FHLB Office of Finance, Federal Reserve Board
Federal Home Loan Bank System

- A GSE Created in 1932
- 12 FHLBs + Office of Finance
- Federal Housing Finance Board
- Coops with 8000+ members
- Elected + public interest directors
- Member: 10%+ of portfolio in residential mortgage related assets (incl. MBS)
- Mission: Housing financing … and “a reliable source of liquidity for its membership”
- Severally and Jointly Liable
- Advances, mortgage programs, banking services, community investment
- Capital: Membership and activity requirements
- Super Lien on other assets of borrower
- Stricter haircuts than Discount Window
- Never a credit loss on advances

Source: FHLB Office of Finance
FHLB Consolidated Debt Outstanding

Source: FHLB Office of Finance
Members and Advances

Members

- Banks, 5834, 72%
- Thrift, 1208, 15%
- Credit Union, 899, 11%
- Insurance, 147, 2%

Advances

- Banks, 431, 53%
- Thrift, 338, 41%
- Credit Union, 28, 3%
- Insurance, 25, 3%

FHLB Advances by Institution Type

Source: Federal Reserve Statistical Release Z.1
Quarterly %-Change in FHLB Advances

Source: Federal Reserve Statistical Release Z.1
### Top 10 Members Holding Advances at Par Value at 9/30/07

<table>
<thead>
<tr>
<th>Name</th>
<th>Advances ($ millions)</th>
<th>Percent of Total Advances</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Citibank, N.A.</td>
<td>$98,682</td>
<td>12.0%</td>
</tr>
<tr>
<td>2  Countrywide Bank NA</td>
<td>$51,050</td>
<td>6.2%</td>
</tr>
<tr>
<td>3  Washington Mutual Bank</td>
<td>$43,711</td>
<td>5.3%</td>
</tr>
<tr>
<td>4  World Savings Bank, FSB</td>
<td>$24,241</td>
<td>2.9%</td>
</tr>
<tr>
<td>5  RBS Citizens NA</td>
<td>$21,856</td>
<td>2.7%</td>
</tr>
<tr>
<td>6  Sovereign Bank</td>
<td>$21,078</td>
<td>2.6%</td>
</tr>
<tr>
<td>7  Bank of America Rhode Island, NA</td>
<td>$19,581</td>
<td>2.4%</td>
</tr>
<tr>
<td>8  World Savings Bank, FSB (Texas)</td>
<td>$17,263</td>
<td>2.1%</td>
</tr>
<tr>
<td>9  U.S. Bank, NA</td>
<td>$16,806</td>
<td>2.0%</td>
</tr>
<tr>
<td>10 Bank of America California, N.A.</td>
<td>$14,750</td>
<td>1.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$329,018</strong></td>
<td><strong>40.0%</strong></td>
</tr>
</tbody>
</table>

Source: FHLB Office of Finance
Top 75 Increases in FHLB advances Q2 to Q3, 2007

Source: Call and Thrift Financial Reports
Concentration of Advances

Concentration of Advances for FHLB SF

- Top 3: 70.0%
- Other: 30.0%

Concentration of Advances for FHLB Seattle

- Top 3: 69.2%
- Other: 30.8%

Concentration of Advances for FHLB Boston

- Top 3: 61.7%
- Other: 38.3%

Concentration of Advances for FHLB Atlanta

- Top 3: 50.3%
- Other: 49.7%

Source: Call and Thrift Financial Reports, FHLBanks 10-Q
Pricing of Advances

- Pricing is a spread to FHLB cost of funding (typically tied to Treasury or 1 mo OIS Federal Funds)
- Advance rates differ across FHLBanks but so do dividends

**FHLB NY Advance Rates and CoF Comparison**
FHLB Advances, AA ABCP and LIBOR

Source: FRB, BBA, FHLB New York
Advances vs. Discount Window (Example)

As of Dec. 12, 2007

<table>
<thead>
<tr>
<th>30-day loan/advance</th>
<th>FHLB New York</th>
<th>Discount Window</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mortgage Backed Securities pledged</td>
<td>1,000,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Haircut</td>
<td>10%</td>
<td>7%</td>
</tr>
<tr>
<td>Advance (subtotal)</td>
<td>900,000</td>
<td>930,000</td>
</tr>
<tr>
<td>Activity Requirement</td>
<td>4.50%</td>
<td>-</td>
</tr>
<tr>
<td>Capital stock purchase</td>
<td>40,500</td>
<td>-</td>
</tr>
<tr>
<td>Remaining left to fund</td>
<td>140,500</td>
<td>70,000</td>
</tr>
<tr>
<td>Lending rate</td>
<td>4.51</td>
<td>4.75</td>
</tr>
<tr>
<td>Remaining rate (1-month LIBOR)</td>
<td>5.10</td>
<td>5.10</td>
</tr>
<tr>
<td>Dividend rate</td>
<td>6.00</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Weighted average rate</strong></td>
<td><strong>4.53</strong></td>
<td><strong>4.77</strong></td>
</tr>
</tbody>
</table>

Source: Bloomberg, FRBNY

We ignore the capital charge for holding extra FHLB Stock as it is economically small. The calculation is sensitive to the exact haircuts applied to the specific security pledged and is only intended for illustrative purposes.
Advances vs. Discount Window

Historical Spread Between All-In Funding Rate Offered by Fed Discount Window Versus FHLB New York (Example)

Aug. 17 - Fed narrows discount rate spread to fed funds target by 50 bps

Sep. 18 - Fed cut by 50 bps

Oct. 31 and Dec. 11 Fed cut by 25 bps

Source: Bloomberg
Recap

- Many funding sources seized due to subprime concerns
- USD ABCP: Outstanding has fallen by $355 bn from peak
- Total collateral pledged at Discount Window grew by $150* bn but little was borrowed ($3.2 bn)
- Many institutions went to Federal Home Loan Banks
- Advances up $184 bn in Q3
- Six institutions accounted for $100+ bn
- Institutions borrowed because they
  - Brought nonconforming loans onto balance sheet
  - Increased cash on hand
  - Wanted to support liquidity facilities for ABCP programs
  - Had other funding needs
- The use of FHLB advances rather than borrowing from the discount window reflects several factors:
  - the lower cost, longer terms, the lack of stigma and ease of use

History – déjà vu?: Fahey vs. Gregory

- In 1944, a stand in for the “flamboyant” president of Long Beach Federal Savings and Loans Thomas Gregory was elected executive of FHLB LA
- A “fast-buck boy” that took advantage of fast growing markets (Florida and California)
- Allegations: LBF S&L made large loans to developers that bought materials from a company partly owned by Gregory
- Fahey (an “authoritarian” FHLB commissioner) distrustful of Gregory refused to approve the elected executive
- Tensions ensued with lobbying in Congress until Fahey announced that the FHLB LA would be abolished and merged with FHLB Portland to create FHLB SF in March ‘46
- 2 months later Fahey authorized the seizure of LBF S&L (a healthy thrift) due to “unsafe and unsound” practices. Sparked a run on deposits
- Endgame: Gregory did get LBF S&L back. Fahey was not reappointed by Pres. Truman but the Ninth Circuit Court upheld Fahey’s decision to abolishing the FHLB LA
- The legal implication: Federal Housing Finance Board (the current regulator) have broad powers over the FHLB system.

## FHLB Consolidated Balance Sheet

<table>
<thead>
<tr>
<th>Assets</th>
<th>Dec. 31, 2006</th>
<th>June 30, 2007</th>
<th>Sept. 30, 2007</th>
<th>$ Change Q2-Q3 '07</th>
<th>% Change Q2-Q3 '07</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Funds Sold</td>
<td>77.1</td>
<td>100.4</td>
<td>98.1</td>
<td>-2.2</td>
<td>-2%</td>
</tr>
<tr>
<td>Advances</td>
<td>640.7</td>
<td>640.0</td>
<td>824.0</td>
<td>184.0</td>
<td>29%</td>
</tr>
<tr>
<td>Investments</td>
<td>193.5</td>
<td>194.8</td>
<td>204.9</td>
<td>10.1</td>
<td>5%</td>
</tr>
<tr>
<td>Mortgage loans</td>
<td>98.0</td>
<td>94.4</td>
<td>93.0</td>
<td>-1.4</td>
<td>-2%</td>
</tr>
<tr>
<td>Other Assets</td>
<td>7.2</td>
<td>7.5</td>
<td>8.0</td>
<td>0.5</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td>1,016.5</td>
<td>1,037.1</td>
<td>1,228.0</td>
<td>190.9</td>
<td>18%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Liabilities</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Discount Notes</td>
<td>157.5</td>
<td>163.5</td>
<td>309.0</td>
<td>145.5</td>
<td>89%</td>
</tr>
<tr>
<td>Bonds</td>
<td>776.7</td>
<td>789.5</td>
<td>825.0</td>
<td>35.5</td>
<td>4%</td>
</tr>
<tr>
<td>Other Liabilities</td>
<td>37.3</td>
<td>39.5</td>
<td>43.0</td>
<td>3.5</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Total Liabilities</strong></td>
<td>971.5</td>
<td>992.5</td>
<td>1,177.0</td>
<td>184.5</td>
<td>19%</td>
</tr>
</tbody>
</table>

| Capital                      | 45.0        | 44.6         | 51.0           | 6.4               | 14%               |
| **Total Capital and Liabilities** | 1016.5   | 1037.1       | 1228.0         | 190.9             | 18%               |

| Capital / Assets             | 4.4%        | 4.3%         | 4.2%           |                   | -3%               |

Source: FHLB Office of Finance