Interest Rate Risk

Bank Performance & Insights

October 23, 2013

Dean Anderson, Senior Technical Expert
Risk Analysis Unit
Supervision & Regulation

Joseph Curry, Senior Examiner
Community Bank Group
Supervision & Regulation

The opinions expressed are those of the presenter and are not those of the Federal Reserve Bank of Atlanta, the Federal Reserve or its Board of Governors
Aggregate Period-End U.S. Commercial Bank Net Interest Margin & Unrealized Gain/Loss on Securities Performance vs. Interest Rates

NIM (%) vs. 10-Yr Treasury & Fed Funds (%)

- Effective Fed Funds Rate (%): Year-to-Date Annualized
- 10-Yr Treasury (%): Year-to-Date Annualized
- NIM (%): Year-to-Date Annualized
- Pre-1984 NIM (%): Estimated

Unrealized G/L on Securities (Market Value - Book Value / Book Value) (%)

- Unrealized Gain (%)
- Unrealized Loss (%)

Source: FDIC, Call Report Data, FRB St. Louis (FRED)
Overall, while average NIM performance has declined, it has been supported by declining liability costs and increases in net earning assets (due to increasing noninterest deposits).

With short-term rates near zero and the incremental benefits of funding earnings assets with low cost deposits constrained, these positive contributors to NIM are at historically low levels thus making yield performance even more important.

Though small, the increasing yield curve over the quarter boosted yields while costs continued to decline.
Primary Driver of Changes in NIM: Southeastern States (2007Q2-2013Q2)

- 27% of all banks see rising NIM due to declining costs. A greater percentage of TN banks (37%) are benefiting from lower costs, while only 14% of FL banks are growing NIM through interest cost savings.

- Asset/Liability mix has been a large driver for declines in NIM for many banks – a scenario where the elements for NIM growth are in place but the mix causes NIM to fall. AL has a larger share of its banks where mix is a primary driver.

- Banks whose NIM has declined and current asset yields are below 2007Q2 NIM levels may be most vulnerable to continued low interest rates. Given current interest costs and funding structure, banks in this group need to increase yields from 1.8bp to over 348bp to equal 2007 NIM.
Reach for Yield? Loans & Securities Mature/Reprice > 3Yr/ Assets (%) (Size & Growth)

<table>
<thead>
<tr>
<th>State</th>
<th>Loans &amp; Securities Mat/Repr &lt;= 3Yrs</th>
<th>Loans &amp; Securities Mat/Repr &gt; 3Yrs</th>
<th>Unrlzd G/L (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2013Q2</td>
<td>2007Q2</td>
<td>2013Q2</td>
</tr>
<tr>
<td>AL</td>
<td>37.70</td>
<td>50.29</td>
<td>46.58</td>
</tr>
<tr>
<td>FL</td>
<td>34.68</td>
<td>52.92</td>
<td>45.20</td>
</tr>
<tr>
<td>GA</td>
<td>45.41</td>
<td>68.14</td>
<td>31.53</td>
</tr>
<tr>
<td>LA</td>
<td>43.30</td>
<td>54.37</td>
<td>40.73</td>
</tr>
<tr>
<td>MS</td>
<td>41.67</td>
<td>57.72</td>
<td>42.46</td>
</tr>
<tr>
<td>TN</td>
<td>38.29</td>
<td>57.68</td>
<td>44.53</td>
</tr>
<tr>
<td>U.S. Banks</td>
<td>37.51</td>
<td>56.70</td>
<td>44.81</td>
</tr>
</tbody>
</table>

* Excludes Other Mortgage Securities (<=3Yr & >3Yr)

Source: UBPR, Call Report Data
## Nonmaturity Deposits/ Assets (%) (Size & Growth)

Nonmaturity Deposits = Demand Deposits, NOW, ATS, MMDA & Other Savings

### Data Width = Absolute change from 2007Q2 to 2013Q2

<table>
<thead>
<tr>
<th>State</th>
<th>Nonmaturity Deposits/Assets (%)</th>
<th>Nonmaturity Deposits/Assets &gt; 3Yr (%)</th>
<th>Nonmaturity Deposits/Long-term Assets (%) *</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2013Q2 2007Q2</td>
<td>2013Q2 2007Q2</td>
<td>2013Q2 2007Q2</td>
</tr>
<tr>
<td>AL</td>
<td>50.00 35.78</td>
<td>108.09 99.99</td>
<td>172.61 197.01</td>
</tr>
<tr>
<td>FL</td>
<td>56.67 42.31</td>
<td>130.10 145.42</td>
<td>199.29 298.98</td>
</tr>
<tr>
<td>GA</td>
<td>49.62 36.69</td>
<td>153.93 197.57</td>
<td>222.78 340.18</td>
</tr>
<tr>
<td>LA</td>
<td>56.36 47.30</td>
<td>132.21 149.41</td>
<td>241.20 323.00</td>
</tr>
<tr>
<td>MS</td>
<td>48.47 38.92</td>
<td>120.46 126.66</td>
<td>204.76 297.96</td>
</tr>
<tr>
<td>TN</td>
<td>44.84 35.30</td>
<td>100.48 123.69</td>
<td>168.60 228.69</td>
</tr>
<tr>
<td>U.S. Banks</td>
<td>53.38 40.25</td>
<td>119.40 137.28</td>
<td>187.47 278.55</td>
</tr>
</tbody>
</table>

* Long-term Assets = Loans & Securities Mature/Reprice > 5Yr + CMOs
Mature/Reprice > 3Yr

Source: UBPR
Part 1: Historical NIM & Interest Rates, DuPont Explanation, Drivers of NIM Performance
http://www.frbatlanta.org/pubs/financialupdate/12q4_vp_net_interest.cfm

Part 2: Response to Declining NIM (%) - Earnings & Efficiency, Changing Balance Sheet Durations
http://www.frbatlanta.org/pubs/financialupdate/13q1_vp_net_interest_part_2.cfm
**Summary: Trends in Common IRR Metrics**

**6th District Median**

### Total Securities/Assets (%)

- **2006Q2**: 12
- **2007Q2**: 14
- **2008Q2**: 16
- **2009Q2**: 18
- **2010Q2**: 20
- **2011Q2**: 22
- **2012Q4**: 20.95

### Asset Sensitivity

- **Long-term Assets/Assets (%)**
- **Rate-sensitive Assets/Assets (%)**

### Funding

- **Core Deposits/Total Assets (%)**
- **Noncore Liabilities/Assets (%)**

**Long-term Assets** = Loans & Securities Mature/Reprice > 5Yr + CMO Mature/Reprice > 3Yr

**Rate-sensitive Assets** = Assets Mature/Reprice < 1Yr

**Core Deposits** = Deposits (<= $250K) – Brokered Deposits (<= $250K); Prior to 3/31/2010, the insured limit was $100K

**Noncore Liabilities** = Jumbo Time, Foreign Deposits, Brokered Deposits, Other Borrowings, Fed Funds & Repurchase Agreements

Source: UBPR, SNL
“Investment securities are expected to have good to very strong credit quality. In the case of structured securities, this determination may be influenced more by the quality of the underlying collateral, the cash flow rules, and the structure of the security itself than by the condition of the issuer.”

Potential alternative to fixed rate agency paper is non-agency, floating rate CMOs, which can earn yields similar to Agency paper but with much less interest rate risk; Standardized Supervisory Formula Approach (SSFA)

No longer relying on rating agencies to determine classification rating; recently upgraded $6MM of TRUPS rated BB
Hot Button Issues

- Deposit betas – banks have conducted studies forecasting projected betas in a rising rate environment based on historic data
- Usefulness of guidance (SR 10-1) – some bank’s view the advisory guidance as an academic exercise
- Common report findings