A Heuristic View of Evolving Capital and Liquidity Standards

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For discussion purposes. Comments welcome.
A Heuristic View: What’s Really Changed in Capital Requirements?

Thesis: The greatest challenge in framing capital and liquidity requirements is in the capital markets business. Basel III liquidity standards deserve more intention.

Thesis: Traditional commercial banking at large institutions face less constraint from Basel III capital standards when compared to capital markets activities.

Thesis: Size, interconnectedness and systemic importance justify some increase in capital and liquidity requirements as asset size and other systemic indicators increase.

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The Difference Between Bank and Securities Firm (Broker-Dealer) Capital Requirements

- Haberman (1987) offers a nice exposition of the historical differences between bank and broker/dealer capital requirements.

- Two principal differences: assumed managerial time horizon and liquidation as the resolution method.

- Broker/dealer capital requirements emphasize the combination of credit quality and liquidity of assets.

- Broker/dealer requirements did not contemplate the “fire sale” problem around very large broker/dealers.
Both Capital for Credit Losses and Sufficient Liquidity Matter for Capital Markets Businesses

- Capital markets today involve both substantial credit risk and liquidity risk.
- The need for time, capital and liquidity to unwind positions has been “rediscovered” many times in the aftermath of crises.
- Basel III incorporates a higher “through the cycle” standard on counterparty credit risk exposure.
Do Basel III capital and liquidity requirements work well for capital markets?

- Basel III gives us separate requirements for capital and liquidity.
- Liquidity is challenging for capital markets activities.
  - Section 23A
  - Absence of stable funding sources
  - Limited opportunities for stable revenues
- Stress testing to capture the dynamics of the capital markets business through the still developing CLAR process.

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How the new Basel III likely constrain the capital markets business

- The likely binding requirements in general are:
  - CET1/RWA
  - CET1/Leverage Exposure Measure
  - Level 1 assets/net cash outflows portion of the LCR
    - The definition of Level 1 assets is very narrow and limits the amount of other liquid assets that count toward HQLA
  - For trading banks, the latter two requirements are especially challenging.
In Contrast, The Impact on Traditional Commercial Banking Appears to be Less

- Minimum capital requirements have not changed greatly for commercial banking activities.
  - New emphasis on CET1 (common equity)
  - Improved quality of capital
  - The capital conservation buffer and the G-SIB surcharge
- Banks largely funded by deposits and with a small nonbank component
So what do we see from Bank Annual Reports? Notes on the Following Charts

- I would call this look at the data as the first, “observation stage” of the scientific process—not hypothesis testing!
- To span business models, data from the 2015 and 2011 annual reports for eight of 10 largest BHCs in 2015. The two not included are BNY/Mellon and State Street, both largely focused on custody, transaction processing and payments and settlement businesses.
- The focus is on conventional balance sheet elements rather than on regulatory ratios.
- Because of the small number of really large institutions, the analysis risks being more of a “story”.

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Data Definitions

- **Assets**—Total Assets
- **Deposits**—Total Deposits, noninterest and ineliterest-bearing
- **Loans**—Loans net of loan loss reserves.
- **Trading assets**—fair value of securities inventory plus the asset-side value of derivatives (current value owed)
- **Securities**—the investment account, securities held to maturity and, in some cases, available for sale.
- **Long-term debt**—largely senior and unsecured debt.
- **CET1**—common equity Tier 1 as defined by Basel III: common equity, paid-in capital, and retained earnings. Disclosed in 2015 reports; estimated from 2011 reports where the closest equivalent is tangible common equity (used in the SCAP and disclosed by many banks that year).

- **High quality liquid assets**: only a few banks disclose this at year-end 2015; 2016 is the first year the LCR requirement is in effect. When not disclosed, constructed by taking eligible balance sheet items and applying the prescribed haircuts to eligible Level 2 assets. 2011 data estimated in the same manner. Should be viewed as an approximation.
The Business Model Matters

Goldman Sachs and Wells Fargo span the set of commercial/investment banking models.
Change in the Composition of Assets/Liabilities: Percentage Change in the Proportion Relative to Total Assets from 2011 to 2015 for Certain Key Balance Sheet Items, weighted by asset size for each group of banks

<table>
<thead>
<tr>
<th></th>
<th>All 8 banks (the top ten excluding BNY/Mellon and State Street)</th>
<th>Trading Banks: JPMC, Bank of America, Citigroup, Goldman Sachs and Morgan Stanley</th>
<th>Commercial Banks: Wells Fargo, US Bancorp, and PNC Financial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deposits</td>
<td>6.49</td>
<td>6.68</td>
<td>-0.21</td>
</tr>
<tr>
<td>Loans</td>
<td>2.54</td>
<td>2.80</td>
<td>-4.2</td>
</tr>
<tr>
<td>Trading</td>
<td>-3.45</td>
<td>-3.32</td>
<td>-0.48</td>
</tr>
<tr>
<td>Securities</td>
<td>1.25</td>
<td>0.67</td>
<td>2.01</td>
</tr>
<tr>
<td>L/T Debt</td>
<td>-2.84</td>
<td>-3.59</td>
<td>1.01</td>
</tr>
<tr>
<td>CET1</td>
<td>1.97</td>
<td>2.33</td>
<td>0.52</td>
</tr>
<tr>
<td>HQLA</td>
<td>3.39</td>
<td>2.53</td>
<td>7.52</td>
</tr>
</tbody>
</table>
Growth in Key Balance Sheet Quantities 2011 to 2015 as a Proportion of Total 2011 Assets for All 8 Banks and the Five Trading Banks and 3 Commercial Banks

Legend:

2-Deposits
3-Loans
4-Trading
Assets
5-Securities
6-Long-Term
Debt
7-CET1
8-HQLA

For discussion purposes. Comments welcome.
We are seeing the impact of capital and liquidity requirements in the evolution of business models

- Consider changes between 2011 and 2015.

- We use simple percentage changes over the four years (not CAGR).

- Plenty of caveats are in order for the comparability of data across the years.
Change in Total Assets 2011-2015

Key:

1-JPMＣ
2-Bank of America
3-Citibank
4-Goldman
5-Morgan Stanley
6-Wells Fargo
7-US Bancorp
8-PNC Financial
Changes in Deposits and Loans Relative to Total Assets: Percentage Change 2011-2015

Key:
1-JPMC
2-Bank of America
3-Citibank
4-Goldman Stanley
5-Morgan Stanley
6-Wells Fargo
7-US Bancorp
8-PNC Financial

For discussion purposes. Comments welcome.
Percentage Changes in Deposits and Loans Relative to Total Assets: 2011-2015 (Excluding Goldman and Morgan Stanley Loans in order to see other institutions)

Key:

1-JPMC
2-Bank of America
3-Citibank
4-Goldman
5-Morgan Stanley
6-Wells Fargo
7-US Bancorp
8-PNC Financial
Percentage changes in the Share of Trading Assets and Securities in Total Assets 2011-2015

Key:
1-JPMC
2-Bank of America
3-Citibank
4-Goldman
5-Morgan Stanley
6-Wells Fargo
7-US Bancorp
8-PNC Financial
Key:

1-JPMC
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Percentage Changes in Key Liquidity and Capital Measures Compared to Total Assets 2011-2015
Notes on Some Circumstances Affecting Values

- Changes in loans and deposits are large because the base is low.
- Trading assets at US Bancorp and PNC Financial are small; the changes therefore look large.
- The sharp increase in Securities and HQLA for Wells Fargo reflect a strategic decision to greatly increase the securities account.
- Long-term Debt declined for Bank of America and Citigroup between 2011 and 2015; this may reflect the end of the FDIC’s Temporary Liquidity Guarantee Program for medium-term debt.

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We might also expect a steep tradeoff between capital and liquidity (although the relationship is no doubt complex).

But here, too, what we observe may well reflect the ultimate Basel III and TLAC requirements pushing firms into a zone.