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Discussion of
Accounting, Capital Requirements, and Financial Stability

Anne Beatty
Deloitte and Touche Chair
Ohio State University
“Why fit in when you were born to stand out?”
~ Dr. Seuss
Is Banks’ Current Regulatory Capital Adequacy the Mechanism by which their Accounting Requirements Affect Financial Stability? (Ryan, 2017)

• In most settings banks’ current regulatory capital adequacy is not plausibly the primary mechanism underlying how GAAP requirements affect financial stability
  – The effects of alternative GAAP approaches … on banks’ current regulatory capital adequacy are not large enough to drive banks’ investment and financing decisions, particularly in economic good times when banks’ regulatory capital is far beyond the well-capitalized threshold.

• Two alternative mechanisms more plausibly underlie how GAAP’s accounting and disclosure requirements affect financial stability
  • First, banks’ compliance with improved GAAP requirements or better compliance with existing requirements enhances banks’ decidedly imperfect understanding of their risks.
  • Second, such compliance increases the transparency of banks’ financial reports to the market and regulators, thereby increasing market and regulatory discipline.
The Real Effects of FAS 166 and FAS 167  
(Dou, Ryan, Xie, 2016)

• Examine the effects of variation in regulatory capital adequacy across consolidating banks under FAS 166/167 on the banks’ lending and loan sales

  – Expect consolidating banks with lower capital ratios to be more likely to experience binding regulatory capital requirements and thus to exhibit larger decreases in lending and increases in loan sales

• The effects of FAS 166/167 on lending and loan sales are stronger for less well capitalized banks, consistent with FAS 166/167 causing actual or perceived capital constraints at consolidating banks

• Evidence contributes to the literature on the real effects of accounting in general and of FAS 166/167 in particular ... informs ongoing regulatory efforts to enhance financial system stability.
Dou, Ryan, Xie (2016)

- Do not examine whether this change in accounting recognition changes banks understanding of their risks, increases transparency, or enhances market discipline.

- Do not address the plausibility of these accounting changes resulting in the documented effects

- 27 publicly listed banks consolidated VIEs holding assets of $765 billion, 5.3% of the banking industry’s total assets.
  - ~10% were held by asset-backed commercial paper (ABCP) conduits and 80% by other types of securitization entities, mostly credit card master trusts
Have SFAS 166 and SFAS 167 improved the financial reporting for securitizations?
Bonsall, Bozanic, Dou, Richardson, Vyas (2016)

• For 16 materially effected and 39 immaterially effected banks find:
  – in the pre-SFAS 166/167 period
    • confirm that securitizations accorded off-balance sheet treatment are risk-relevant
  – in the post post-SFAS 166/167
    • find that securitizations accorded off-balance sheet treatment are not risk-relevant
    • find that securitizations accorded on-balance sheet treatment are risk-relevant

• To summarized they find that the equity market could see-through the accounting recognition rules suggesting that the change in accounting for these securitization likely did not improve market discipline or transparency
Appendix C – Assets On-boarded Consequent to SFAS 166/167 by Firm

<table>
<thead>
<tr>
<th>Name of Bank</th>
<th>Onboarding as a % of Total Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Express</td>
<td>21.8%</td>
</tr>
<tr>
<td>Capital One</td>
<td>20.2%</td>
</tr>
<tr>
<td>CitiGroup</td>
<td>7.2%</td>
</tr>
<tr>
<td>Bank of America</td>
<td>4.5%</td>
</tr>
<tr>
<td>JPMorgan Chase</td>
<td>4.1%</td>
</tr>
<tr>
<td>KeyCorp</td>
<td>2.7%</td>
</tr>
<tr>
<td>Susquehanna Bancshares</td>
<td>1.8%</td>
</tr>
<tr>
<td>CIT Group</td>
<td>1.5%</td>
</tr>
<tr>
<td>Wells Fargo</td>
<td>1.5%</td>
</tr>
<tr>
<td>PNC Financial</td>
<td>1.5%</td>
</tr>
<tr>
<td>SunTrust Bank</td>
<td>1.2%</td>
</tr>
<tr>
<td>Huntington Bancshares</td>
<td>1.2%</td>
</tr>
<tr>
<td>First Horizon National</td>
<td>0.9%</td>
</tr>
<tr>
<td>M&amp;T Bank</td>
<td>0.6%</td>
</tr>
<tr>
<td>US Bancorp</td>
<td>0.5%</td>
</tr>
<tr>
<td>First Citizens Bancshares</td>
<td>0.5%</td>
</tr>
</tbody>
</table>
Impact of FAS 166/167 on the Securitization of Credit Card Loans
Tian and Zhang (2017)

• Over 80 percent of securitized loans consolidated back onto banks’ balance sheets as a result of FAS 166/167 are revolving consumer loans, primarily credit card loans.
  – Identify 8 domestic banks that engage in credit card securitization including American Express, Capital One, and Discover Financial

• Document that the affected U.S. banks sponsor significantly less amount of credit card-backed securities after FAS 166/167
  – Compared with both non-securitized credit card loans from the same securitization banks and credit card loans from non-securitization banks.

• Consider two alternative explanations: increased financial reporting transparency and reduced regulatory capital arbitrage.

• Find banks reduce credit card securitizations due to decreased regulatory capital arbitrage opportunities after the adoption of FAS 166/167.
• Discuss a Fin 46 (predecessor to FAS 167) requirement that sponsors consolidate their highly leveraged asset-backed commercial paper (ABCP) conduits.
• These assets were assigned a zero regulatory risk weight so this accounting change did not affect the calculation of the risk-based capital ratios.
• However, this accounting change did affect the calculation of the leverage ratio, because GAAP assets are used in the denominator of the leverage ratio.
  – U.S. banks have always required banks to meet a leverage ratio in addition to the risk-based capital requirements.
• Examine how sponsors of ABCP conduits responded to this accounting change.
Bens and Monahan (2008)

Trends in ABCP Conduit Outstanding

- US Banks
- Non US Banks
- US Non-bank
- Non-US Non-bank
Identification Strategies


- Dou, Ryan, Xie (2016) use loan-level HMDA mortgage application, acceptance, and sale data to disentangle loan supply from loan demand.
  - Assumes that mortgage applications not affected by loan supply.
  - **LendingTree** is an online lending exchange that connects consumers with multiple lenders, banks, and credit partners. LendingTree is not a direct supplier of loans; it is instead a broker. Since being founded in 1998 LendingTree has facilitated more than 32 million loan requests. (Wikipedia)
Procyclicality of Loan Loss Provisioning
Ryan (2017) Loan Loss Reserving

- Evaluate the extent to which regulatory capital is the mechanism [using] variation in regulatory capital adequacy results from variation in the measures of loan loss provision timeliness used [in] the extant literature (pg 19)
  - Examine variation in loan loss provision timeliness across countries … not ideal for this purpose (pg 19)
  - Calculations, which are based on regression coefficients that likely are attenuated, probably are downward biased (pg (19)

- Even very large increases in banks’ allowances for loan losses during good times … do not reduce banks’ regulatory capital adequacy sufficiently to constrain their lending or induce them to issue capital during those times (pg 20)

The FSF identified three areas as priorities for policy action:

1) the capital regime,
2) bank provisioning practices, and
3) the interaction between valuation and leverage.

FSF working groups supported the formulation of policy recommendations in these areas.
Remarks by John C. Dugan Comptroller of the Currency before the Institute of International Bankers March 2, 2009 
“Loan Loss Provisioning and Pro-cyclicality”

• I think we would be considerably better off today if there had not been so many impediments to building larger reserves.

• Had banks built stronger reserves during the boom years, they would not need to reserve as much now; they wouldn’t need as much additional capital now; and they would be in a stronger position to support economic growth.
Moody’s Analytics: Ceci’s Implications For Bank Profitability, System Stability, And Economic Growth

• Perhaps the biggest criticism of the current process is that it is backward-looking. By restricting the analysis to recent history, loss reserves can become highly procyclical, as shown in Figure 1.

• Leading up to a recession, loss reserves are low and firms must rapidly add to their ALLL as delinquencies and defaults soar.

• Such behavior can exacerbate the recession as lenders are forced to pull back from supplying credit at precisely the time that borrowers and the economy may need credit the most. Lenders also end up over-reserving toward the end of recessions, when realized losses fall as the economy improves.

• The capital release that follows introduces volatility into the system as lenders flush with capital scramble to deploy it wherever possible, leading to loosened standards and the heightened potential for mal-investment and bubble formation.
Under current accounting rules, lenders need to account for this process when assessing the likelihood and severity of losses in their current portfolios. Based on the performance history of their own portfolios, they may determine the average number of months it takes for loans within a given book of business to experience losses. They then look back over recent history for a similar number of months to make their historical loss calculations. Again, while the determination of the emergence period may be largely objective, some discretion in analytical choices can influence results.

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This procyclicality was evident during the Great Recession and was one of the motivations behind the adoption of the CECL standard. In fact, CECL was initiated by the Financial Crisis Advisory Group (FCAG) and is widely supported by US banking regulators. Figure 2 shows that the increase in the reserve rate in commercial banks lagged the increase of noncurrent loans.
Moody’s Analytics: Cecl’s Implications For Bank Profitability, System Stability, And Economic Growth

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• Figure 2 shows that the increase in the reserve rate in commercial banks lagged the increase of noncurrent loans several quarters in 2009. Furthermore, the reserve rate declined more slowly than the noncurrent rate in 2012.
The divergence between reserve rate and noncurrent rate was even larger for community banks, as shown in Figure 3, although this is largely a function of the higher credit quality of loans at these institutions; note the difference in scale on the y-axes of Figures 2 and 3. The community bank experience is closer to the ideal envisioned under CECL, where reserves are sufficiently high at loan origination and require only small additions when the economy moves into recession.

CECL to the Rescue

Recognizing the flaws in incurred loss accounting, the Financial Accounting Standards Board (FASB) proposed CECL, which requires firms to estimate lifetime expected loan losses starting from the date of inception.
2013 GAO Report to Congressional Committees on Causes and Consequences of Recent Bank Failures

- Bank Failures Were Largely Related to Nonperforming Real Estate Loans but Also Highlight Impact of Impairment Accounting and Loan Loss Provisioning
- In a 2010 speech, the chief national bank examiner for the OCC [Tim Long] noted that the existing accounting rules made it difficult for examiners to require banks to make provisions to increase their loan loss allowances when it became clear that credit troubles were on the horizon.
- He said the result was that when subsequent charge-offs on impaired loans occurred, the allowances were not there to support them, and the higher provision levels that were then needed reduced capital, accelerating the spiral into insolvency for many banks.
Figure 13: Income Categories as a Percentage of Net Interest Income for Medium-size Failed Commercial Banks, 2007-2011

Net interest income,
Credit losses,
Other real estate owned,
Loans held for sale,
AFS & HTM securities,
Recurring fair value.

Income categories

Source: GAO analysis of FDIC call report data.
Release Date: June 23, 2016

For release at 4:30 p.m. EDT

The nation's largest bank holding companies continue to build their capital levels and improve their credit quality, strengthening their ability to lend to households and businesses during a severe recession, according to the results of supervisory stress tests announced by the Federal Reserve Board on Thursday.

The most severe hypothetical scenario projects that loan losses at the 33 participating bank holding companies would total $385 billion during the nine quarters tested. The "severely adverse" scenario features a severe global recession with the domestic unemployment rate rising five percentage points, accompanied by a heightened period of financial stress, and negative yields for short-term U.S. Treasury securities.

The firms' aggregate common equity tier 1 capital ratio, which compares high-quality capital to risk-weighted assets, would fall from an actual 12.3 percent in the fourth quarter of 2015 to a minimum level of 8.4 percent in the hypothetical stress scenario. Since 2009, these firms have added more than $700 billion in common equity capital.
The Federal Reserve objected to the capital plan of Zions Bancorporation because the firm did not meet the minimum, post-stress tier-1 common ratio of 5 percent. Zions said in a statement that its performance on the stress tests was worse than it expected mostly due to significantly higher commercial real estate losses.
Academic Research

For an in depth discussion of empirical bank accounting research:


• This literature suggests that banks alter their economic behavior due to accounting methods that affect regulatory capital requirements – includes fair value recognition, asset securitizations and loan loss provisioning.
• The results are less clear when there is not a direct link between the accounting methods and regulatory capital.
• Related potentially interesting questions include:
  – how is bank efficiency altered by the documented changes in economic behavior?
  – would an alternative accounting method lead to more efficient lending and risk taking?