Comment on “Bank Leverage Limits and Regulatory Arbitrage: New Evidence on a Recurring Question”

Joe Peek*

Federal Reserve Bank of Boston

for

Joint Conference of the ECB and JMCB:

Financial Intermediation, Regulation and Economic Policy: The 50th Anniversary of the Journal of Money, Credit and Banking

European Central Bank

29 March, 2019

*The views expressed here are my own and do not necessarily reflect the views of the Federal Reserve Bank of Boston or the Federal Reserve System.

Even Briefer Summary of the Paper

- Investigates the implementation of the supplementary leverage rule (SLR)
  - Potential for regulatory arbitrage, risk-shifting, and perverse outcomes
- Find that:
  - Subject banks rebalanced portfolios toward riskier, higher yielding securities
  - Effects for securities and trading assets, but not for loan portfolios
  - But no evidence of higher overall risk (higher capital requirements offset shift to riskier assets)
- Acknowledge possibility of confounding effects of other regulatory changes that occurred with overlapping adjustment periods
- One major concern for me is determining the binding capital constraint among the (Supplementary) Leverage ratio, Risk-based capital ratio, and Stress tests
  - Note that BHCs have failed the stress tests at times (and the SLR is not included in the stress test minimum regulatory capital ratios during their sample period)
- Another major concern is why the loan portfolio is not affected by the SLR, even though both the securities portfolio and trading assets do appear to be affected

Outline of My Discussion

- Timing is everything
- Mix and match
- Specification concerns
- Suggestions
- Concluding comments
- Note that I am unable to comment directly on the analysis based on individual security holdings and yields because that would require access to the stress testing data. However, note that the conclusion that the SLR BHCs actively shift to riskier securities occurs in an environment where both types of BHCs are reducing their ratios of risk-weighted securities to total securities, with the differential responses being due to SLR BHCs reducing the ratio by less (see Table 1).

Timing Is Everything

- A major concern is that BHCs' adjustments to the SLR potentially can occur over an extended period of time
  - Introduces a problem analogous to event studies: desirable to have a very short window to minimize the potential for confounding events occurring within the window
    - SLR implementation overlaps with a number of other regulatory changes that likely have an impact on bank portfolios, e.g., stress testing, liquidity coverage ratio, capital treatment of investment securities, IHCs
    - M&A activity: no mention of how this was handled to produce consistently defined BHCs
  - The adjustment can occur anywhere (or everywhere) within the potential "adjustment" window
    - Would expect gradual adjustment, but not obvious when adjustment starts and when BHCs fully adjusted
    - Thus, the precise treatment date (2014Q3) is somewhat arbitrary, although it somewhat lines up with when the SLR denominator is finalized (September 2014); but then 2014Q4 would also be a reasonable treatment date
  - The regression sample ends in 2016Q2, yet the compliance date is not until January 2018
    - Could be missing an important part of banks' adjustment to the SLR, although that would work against finding an effect
- I find it puzzling that effects are found (and expected to be found) for securities and trading assets, but not for loans
  - The argument is that securities and trading assets are more liquid than loans
  - Yes, but the 2018 compliance date leaves plenty of time to shift to riskier loans as existing loans mature
  - Can this finding be related to the nature of other regulatory changes, to which banks were adjusting contemporaneously, having a relatively stronger effect on securities than on loans?

Mix and Match

- The analysis is done (necessarily) at the BHC level, not the bank level
  - Thus, **matching** two subsamples of BHCs that have a **mix** of subsidiary types
    - The set of BHCs is not at all homogeneous
    - Some composed primarily of domestic commercial banks
    - Some certainly not
      - Former investment banks (Morgan Stanley, Goldman Sachs)
      - Custodian banks (State Street, Bank of NY Mellon, Northern Trust)
    - Relative importance of various types of nonbank subsidiaries within BHCs varies over time and across BHCs
      - For example, the importance of primary dealer or broker/dealer subsidiaries may contribute to finding effects for securities and trading assets but not loan portfolios, given other regulatory changes affecting securities holdings
- Analysis is based on a relatively small sample of BHCs
  - Thus, outliers can be quite influential
  - Size and holdings of some BHCs jump around a bit
    - M&As? How handled?
    - Response in forming IHCs by foreign owned BHCs? (e.g., Deutsche Bank Trust). In particular, there were major shifts of assets between the IHCs of foreign banking organizations and their foreign branches, as well as the shifting of broker/dealer subsidiaries into the IHCs (e.g., Deutsche Bank and MUFG)
    - We took a shot at constructing the dependent variables and did find that a few BHCs ratios strayed enough from the herd that they could potentially account for the results
  - Some BHC IDs do not exist for the entire sample period, and thus must be spliced, which may be problematic in terms of forming a consistent entity associated with a fixed (BHC) effect

Specification Concerns

- Given the variation across time in the composition of assets and lines of business, it is not clear that a fixed (BHC) effect gets the job done
- The three control variables may be problematic
  - While **log(assets)** is a standard control, the SLR designation is based on BHC size
    - Also, the distinction between meeting the LCR versus the modified LCR is based on the same size threshold as SLR ($250 billion)
    - Moreover, the nature of the largest BHCs differs from that of smaller BHCs in terms of the composition of assets and lines of business. This heterogeneity may not be fully captured by simply controlling for log(assets)
- **Risk-based capital ratio**: It seems problematic to use the RBC ratio as a control variable when the dependent variable is the ratio of risk-based assets to total assets, overall or for a specific asset class.
- **Liquidity stress ratio**: This is a proxy intended to pick up liquidity coverage rule exposure to account for the effect of the phase-in of the LCR which overlaps with the implementation of the SLR. My guess is that the timing of this control variable may be correlated with the timing of the gradual adjustment to the SLR by BHCs.
- Thus, it is not clear that the specification successfully isolates the SLR effect

Suggestions

- Extend the sample period into 2018 so that the compliance date is included within the sample period
- Omit problematic BHCs or at least better control for potential problems
  - M&A events
  - Shifting lines of business into or out of the IHCs by foreign-owned BHCs
  - The need to splice entities that change IDs
- Check that the correlation of BHC size with the range of, and the relative importance of, the variety of a BHC's nonbank subs is not driving the results
- Check the sensitivity of results to alternative treatment dates around 2014Q3, given that it is not obvious exactly when BHCs started adjusting to the SLR
- Interact the "Post" dummy variable with each of the three control variables to make sure that their movements are not being picked up by SLR Bank interacted with the Post dummy variable, given the likely correlations among the control variables, the SLR designation, and the dependent variables
  - The authors do include a specification in their robustness tests that includes Post interacted with log(assets). Only the securities specification produces a significant SLR interaction term, and that is now only at the 10% significance level

Concluding Comments

- This is a very interesting paper and involved a lot of hard work incorporating a range of detailed and promising data, but . . . [1]
- Need to better isolate the SLR effects from other regulatory events that are occurring simultaneously
- Need to address a number of problems with the underlying data, or if you have already done so, clearly state how these problems have been addressed
- Need to provide a better understanding of why we do not also observe an increase of the riskiness of the loan portfolio, given that the loan portfolio turns over, especially the C&I loan portfolio, and there is plenty of time for such adjustments before the compliance date, and even before the end of the sample period analyzed here

[1] I just remembered that I forgot to list the NY Fed along with the Boston Fed and the Federal Reserve System in my disclaimer at the bottom of the first slide.