

The Cross Section of Bank Value

(Mark Egan, Stefan Lewellen, Adi Sunderam)

BIS 2018 discussion by

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Key question

- Fundamental question: What drives bank value? This is an interesting and potentially important question.
 1. Assets!
 - Banks have a comparative advantage in monitoring / screening
Diamond (1984), Ramakrishnan and Thakor (1984).
 2. Liabilities!
 - Banks provide depositors with improved risk sharing or consumption smoothing when subject to preference shocks
Bryant (1980), Diamond and Dybvig (1983).
 3. Synergies between both sides!
 - Kashyap, Rajan, and Stein (2002), Coval and Thakor (2015).
- **Comment:** useful to discuss the main theories more prominently.
 - Currently buried in footnotes and discussion is confusing.

Methodology

1. Construct novel estimates of bank's deposit and asset productivity using tools from industrial organization.
 - Higher deposit productivity if it can generate more deposits, holding fixed the “inputs” to collect the deposits.
 - Example: BB&T and SunTrust both \$150B in deposits and similar deposit rates.
 - SunTrust: 23% fewer branches → more deposit productive.
 - Higher asset productivity if it can generate more risk-adjusted revenue with the same asset base.
 - Example: BB&T and SunTrust both \$200B in assets.
 - BB&T generated more revenues despite having lower levels of observable risk → more asset productive.
2. Regress bank value (M/B) on estimates of deposit and asset productivity.

Data and main results

- Data: Publicly-traded U.S. bank holding companies from 1994 – 2015.
- Find: Bank value is driven by deposit & asset productivity.
 - One σ \uparrow in deposit productivity \rightarrow M/B \uparrow 0.2 – 0.5 points
 - Most important driver: savings deposits.
 - One σ \uparrow in asset productivity \rightarrow M/B \uparrow 0.1 – 0.2 points
 - Most important component: loans.
 - Synergies exist: positive and significant interaction effect.
 - Differences in deposit and asset productivity are driven by both technological and customer-based explanations.

Assessment

- The paper is ambitious and very intriguing.
- It uses novel approaches from industrial organization to address an important question.
- It tries to carefully address endogeneity.
- It presents a lot of food for thought.
- It has potentially important policy implications.

Comments and suggestions for improvement

- Natural big picture question that is not adequately addressed: Why should we care about how much value comes from the deposit versus asset side?
 - One reason is if it informs the policy debate!
 - Narrow banking optimal?
 - If most of the value is created on the deposit side, why let banks invest in risky assets that expose the deposit insurance safety net to large losses?
 - Deposit insurance to be increased?
 - If most value is created by deposits being a safe asset, why not just provide 100% deposit insurance, since that is what ultimately “manufactures” safety?
- Why is this approach better than a simple approach that focuses e.g. on net interest margin (measures how well banks manage the two sides of the balance sheet)?

Comments and suggestions for improvement

- The paper argues that on the liability side, bank value comes from its ability to issue information-insensitive, i.e., safe deposits.
 - But... most deposits are insured: these are safe assets because of deposit insurance, not because the bank is productive. What are we really measuring with the authors' measure of deposit value creation? Degree of monopoly power in deposit markets?
 - Should the paper distinguish between insured versus uninsured deposits?
 - Banks create no safe-asset-production value by issuing insured deposits, but only by issuing uninsured deposits that they make safer due to their qualitative asset transformation and risk management?
 - Bank A is more productive than Bank B if its uninsured deposits are safer than bank B's?

Comments and suggestions for improvement

- To capture **deposit productivity**:
 - Regress $\ln(\text{deposits})$ on **deposit rates**, # branches, # employees, non-interest expense, and time & bank fixed effects.
 - Deposit productivity is defined based on residuals.
 - **Comment**: explain why these controls are the right ones.
 - E.g., salaries and employee benefits better than non-interest expense?
 - **Comment**: mergers and acquisitions versus organic growth?
 - After M&A, reduce # branches: truly more productive or just one that has grown through acquisitions versus organic growth?
 - Deposit rates are endogenous → use two instruments:
 1. Fitted value of a bank-specific regression of the deposit rate on 3-month LIBOR.
 2. Weighted average of a bank's competitors' product characteristics (# branches, # employees, non-interest expense, fees) across all counties the bank operates in.
 - **Comment**: endogeneity police – hard to find valid instruments.

Comments and suggestions for improvement

- To capture **asset productivity**:
 - Regress interest & fee income on **ln(assets)**, equity beta, $\sigma(\text{ROA})$, # branches, # employees, non-interest expense, and time & bank fixed effects.
 - Asset productivity is defined based on residuals.
 - **Comment**: use the unlevered beta instead of the equity beta
 - **Comment**: use 5 (not 2) years of monthly data to estimate beta
 - Bank size is endogenous → use one instrument:
 1. Weighted average deposit productivity of the bank's competitors.
 - Use ALL competitors, not just the public banks.
 - **Comment**: why not use ALL competitors also when creating 2nd instrument for deposit rates?
 - **Comment**: show summary statistics on productivity measures!
 - Which banks are the most / least productive?

Comments and suggestions for improvement

- Regress bank value (M/B) on estimates of deposit and asset productivity and time fixed effects, and possibly: assets, leverage, 3-month returns, equity beta, $\sigma(\text{ROA})$.
 - **Comment:** explain controls better – Why included? Definition?
 - “Assets” = $\ln(\text{assets})$?
 - Leverage = $(\text{book assets} - \text{common equity}) / \text{book assets}$?
 - Why add 3-month returns?
 - Why are assets lagged by 1 year and leverage and 3-month returns by 1 quarter? Are equity beta and $\sigma(\text{ROA})$ not lagged?
 - **Comment:** ordering of variables?
 - Adding controls hardly improves explanatory power – surprising!
 - Capital positively affects bank value & M/B (Mehran & Thakor, RFS 2011)
 - Capital positively affects large banks’ ability to survive and increase their market shares during bad times (Berger and Bouwman, JFE 2013).
 - Capital positively affects banks’ risk-adjusted stock performance during bad times (Bouwman, Kim, and Shin, w.p. 2018).
 - Also show results of regressing M/B only on controls (in light of previous literature).
 - Multicollinearity between controls & productivity measures?

In sum...

- This is a very nice paper.
- The results are intriguing.
- The main areas for improvement:
 - Improve the writing: lots of things about the empirical execution need to be much clearer.
 - Discuss policy implications and big picture: why should we care how much value is created from one side of the balance sheet versus the other?
- I highly recommend it!