Portfolio Decisions

Risk Overhang and Loan Portfolio Decisions: Small Business Loan Supply before and during the Financial Crisis

Robert DeYoung, Anne Gron, Gokhan Torna and Andrew Winton

Covenant Violations, Loan Contracting, and Default Risk of Bank Borrowers

Felix Freudenberg, Björn Imbierowicz, Anthony Saunders and Sascha Steffen

Unstable Equity? Combining Banking with Private Equity Investing

Lily Fang, Victoria Ivashina and Josh Lerner

Discussion by

Greg Udell

Session Overview

- An plate of delights for anyone interested in commercial lending!
- Covers many interesting topics
  - How do portfolio decisions affect credit supply
  - Lending pro-cyclicality
    - Non-price terms
    - Pricing terms
  - The credit crunch
  - Covenant violations
  - Measuring loan restrictiveness
  - Combining lending & non-traditional banking
  - Lending and community banking

Risk Overhang and Loan Portfolio Decisions: Small Business Loan Supply before and during the Financial Crisis

DeYoung, Gron, Torna and Winton

- **Key issues:**
  - **Do banks choose investments in an effectively risk averse fashion where new business loans:**
    - **move inversely with size of existing portfolios?**
    - **move inversely with liquidity of existing portfolios?**
    - **move with the covariance of business loan returns with existing portfolios?**
    - **Move inversely with bank risk tolerance?**
  - **Is this consistent with pro-cyclicality?**
  - **Did this change during the crisis?**

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- **Methodology**
  - **Theory component**
    - **Model based on Froot and Stein (1998)**
    - **Portfolio model of “risk/loan overhang” where banks consider:**
      - **covariance of loans in other sectors**
      - **return of loans in same category**
      - **size of exposure in same loan category**
      - **effective risk tolerance**
  - **Empirical component**
    - **Test model’s predictions on U.S. banks**
      - **with less than $2 billion assets**
      - **cleaner test of theory**
      - **pre- and post-crisis**

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- **Empirical Results**
  - **Evidence of loan overhang effects**
    - **Fewer new business loans when large overhang of pre-existing business loans**
    - **More new business loans when returns in other loan portfolios vary negatively with business loan returns**
  - **Overhang results grew stronger during the crisis**
    - **and, business loan supply grew inelastic during the crisis**
  - **Size of equity capital cushion influences**
    - **New loan supply decisions**
    - **The importance of overhang effects**
    - **This effect, however, disappeared for low-capital banks**

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- **Paper's key contributions**
  - **Evidence on the portfolio/overhang model of banking behavior**
    - **Very interesting**
  - **Evidence on the crisis and the credit crunch**
    - **Best evidence yet on SME credit crunch**

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- **Comments**
  - **The real estate variables are a concern**
    - **Combines very different sub-portfolios**
      - **Residential single family mortgages**
      - **Multi-family residential mortgages**
      - **Commercial real estate mortgages**
      - **Land loans**
      - **Construction loans**
    - **The covariance of returns on these sub-portfolios is likely very different than residential mortgages**
    - **Huge pre-crisis build-up of CRE by community banks**
      - **E.g., construction loans increased from 7% of the loan portfolio in 2000 to 16% in 2007.**
      - **Commercial real estate peaked much later than residential real estate**
        - » **January 2008 vs. July 2006**
        - » **lag in small bank performance problems**
  - **Other trends – DeYoung Hunter and Udell (2004)**

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- **Comments (cont.)**
  - This may be our best insight into SME lending during the crisis in the U.S.
    - Inelastic loan supply and credit rationing during the crisis period
    - Loan supply declined by twice as much at low capitalized banks
  - Most prior work has been focused on large firms where data are available (e.g., Ivashina and Scharfstein 2010)
  - Our best insight into SME access to finance comes from Europe (and superior European SME data),
    - e.g., Puri, Steffen and Rocholl (2011), Jimenenez, Ongena, Peydro and Saurina (2012), Popov and Udell (2012)

Covenant Violations, Loan Contracting, and Default Risk of Bank Borrowers

Freudenberg, Imbierowicz, Saunders and Steffen

- **The key issue: the association between covenant violations and:**
    1. **Default probability**
    2. **Subsequent changes in loan rates**
    3. **Changes in covenants**
    4. **Increased monitoring**
    5. **Likelihood of future covenant violations**
    6. **Likelihood of being secured**
    7. **Likelihood of switching lenders**
- **Another issue:**
    1. **Covenant tightness and relationship length**

Freudenberg, Imbierowicz, Saunders and Steffen (cont.)

- **Results:** **the association between covenant violations and:**
  1. **Default probability**
  2. **Subsequent changes in loan rates**
  3. **Changes in covenants**
  4. **Increased monitoring**
  5. **Likelihood of future covenant violations**
  6. **Likelihood of being secured**
  7. **Likelihood of switching lenders**
- **Other Results:** **banking relationship**
  1. **Covenant tightness and relationship length**

Freudenberg, Imbierowicz, Saunders and Steffen (cont.)

- **Comments**
  - **Key contribution: new measure for "covenant looseness"**
    - **Index across covenant *types* that capture the number of standard deviations ratios deteriorates before violations**
      - **An important extension of Murfin (2011)**
    - **Very important!**
    - **This captures how bankers react and is a major improvement in distinguishing among loan contracts**

Freudenberg, Imbierowicz, Saunders and Steffen (cont.)

- <u>**Comments (cont.)**</u>
  - **Results confirm that monitoring increases**
    - **Probably not surprising – this is what we would have expected based on just about any theory of covenants**
    - **Results are also completely consistent with the practitioner literature**
    - **Nevertheless, it is still important to confirm our priors about covenant violations**
  - **It would be very interesting see the application of this new measure of covenant looseness to other topics**
    - **E.g., analysis of pro-cyclical lending theories (e.g., Borio 2001, Berger and Udell 2004, Jimenez, Salas, Saurina 2006)**

Freudenberg, Imbierowicz, Saunders and Steffen (cont.)

- **<u>Comments (cont.)</u>**
  - **Definition of a covenant violation?**
    - **Paper appears to define a covenant violation as when an "accounting value" is violated**
    - **This seems to be different than definition elsewhere, e.g., as reported in 10K or 10Q (Nini et al. 2009)**
    - **What is the context?**
      - **Was it waived?**
      - **Was it in conjunction with a new a NPV-enhancing strategy? i.e., a renegotiation?**
      - **Or, was it was a consequence of a failed strategy?**
      - **Was there a forbearance agreement?**
      - **Was there a price for the waiver or forbearance agreement beyond the higher rate?**

Freudenberg, Imbierowicz, Saunders and Steffen (cont.)

- <u>Comments (cont.)</u>
  - Definition of default?
    - What is a default?
    - What constitutes a default on an R/C which doesn’t have a repayment/ammortization feature?
    - Covenant violations are an “event of default” in the typical loan agreement. So, do these defaults include future covenant violations?
    - What about cross-default features?

Freudenberg, Imbierowicz, Saunders and Steffen (cont.)

- **<u>Comments (cont.)</u>**
  - **Covenant violators are more likely to be secured**
    - **These might be asset-based loan (ABL) borrowers? (See Carey, Post and Sharpe 1998, Udell 2004)**
    - **Prices are set differently in ABL contracts**
    - **This may also be why they are more like to switch lenders, i.e., switching to ABLs:**
      - **JP MorganChase Business Credit**
      - **GE Capital**
      - **CIT**

Freudenberg, Imbierowicz, Saunders and Steffen (cont.)

- **Comments (cont.)**
  - Distinctions among covenant categories
    - E.g., coverage ratios (i.e., profitability ratios) are more important for term loans; liquidity ratios for R/Cs
  - Not sure how to interpret risk (i.e., default) results
    - Are violations a predictor beyond risk observable to the empiricist?
    - Are violations a predictor beyond risk observable to the lender?
    - How much risk is the “secured” variable picking up (Berger and Udelll1990)
    - Could push the analysis a bit further
      - Interact with opacity
      - Other controls, e.g., Paydex index (Kallberg and Udell 2003)

Unstable Equity? Combining Banking with Private Equity Investing

Lily Fang, Victoria Ivashina and Josh Lerner

- Key issues:
  - Combining nontraditional activities with banking activities might be risky and lead to more institutions that are "too big to fail"
  - One of these activities is combining private equity and traditional lending
    - Focus here: LBOs and "growth investments"
  - Key questions
    - Are *combined* deals riskier?
    - Is there pro-cyclicality?
    - Is the Volker rule justified?
  - Literature offers competing stories based on:
    - Incentives to maximize volatility
    - Cross-selling
    - Information advantages
    - Market timing

Fang, Ivashina and Lerner

- **Methodology**
  - Data: 2,105 deals PE deals with info on first lien debt traunches
  - Multinomial logit
    - Stand-alone deals (SAD)
    - Bank-affiliated deals (BAD)
    - Parent-financed deals (PFD)
- **Key Results**
  - Mostly consistent with the negative view – specifically, mostly consistent with market timing)
  - SADs least cyclical
  - PFDs
    - More attractive terms for similar characteristics & outcomes
    - Favorable terms occur during credit market peaks
    - Evidence of cross-selling
    - Ex post performance no different than SADs

Fang, Ivashina and Lerner

- **Comments**
  - **Paper suggests that combining traditional and non-traditional banking activities may not be entirely positive in contrast some of the prior literature, e.g., Kroszner and Rajan (1994); Puri (1996), Gande, et al. (1997) and Drucker and Puri (2005)**
  - **Findings are consistent with motivation driving the Volker rule.**
    - **With appropriate caveats**
  - **This is a provocative result!**

Fang, Ivashina and Lerner

- <u>**Comments (cont.)**</u>
  - **Paper needs more context**
    - **A theoretical model might help.**
    - **How should we think about the pro-cyclicality findings associated with PE in the broader context of debt pro-cyclicality and particularly pro-cyclicality in commercial lending (e.g., Borio, Furfine and Lowe 2001, Berger and Udell 2004)?**

Fang, Ivashina and Lerner

- **<u>Comments (cont.)</u>**
  - **more context (cont.)**
    - **What sort of organizational features support these findings?**
      - **What are the incentive structures at these banks?**
      - **Both Bank of America and Goldman Sachs are considered banks. Should these be treated the same?**
      - **What sort of organizational structure supports a loan syndication group behaving one way in a parent-financed deal and not in a stand-alone deal?**
        - » **What sort of market conditions for non-lead syndicate members allows this?**
  - **Incorporate the covenant looseness measure in Freudenberg (2012)**

Concluding Remarks

- Great papers
- Cover a wide swath of issues related to a core activity in banking - business lending
- Big policy issues
  - Community banking
  - Glass Steagall/Volker Rule
  - Pro-cyclicality
- Provocative reading!