

# Bank Lending

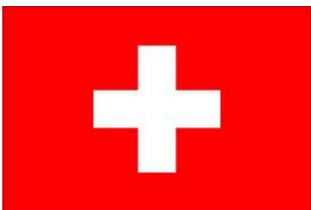
FDIC Fall Banking Conference 2012



“What is Special about Bank Loans?” Greg Nini



“How Committed are Bank Corporate Line Commitments?” Irina Barakova and Harini Parthasarathy

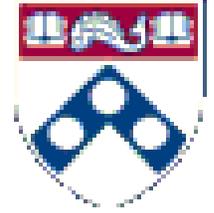


“Information or Insurance? On the Role of Loan Officer Discretion,” Martin Brown, Matthias Schaller, Simone Westerfeld, Markus Heusler,



Discussant: Bob DeYoung, University of Kansas

# Nini



## Overview:

–Previous research has shown an increasing role for Collateralized Loan Obligations (and other non-bank institutions) in corporate debt funding.

- Business loans in CLOs carried lower spreads
- CLOs increased the speed of loan syndications
- CLOs provided increased supply of corporate credit (especially in funding LBO firms).

–Author asks logical next question: “Has the growth of CLOs affected the right-hand side of corporate balance sheets?”

–Tests this and related questions, using quarterly data on CLOs and publicly traded U.S. firms in 2001-2011.

# Nini



- Estimates price elasticities and cross price elasticities ( $\beta$ ):

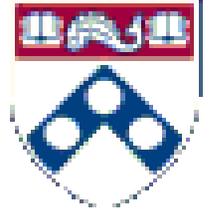
$$\ln(\text{ABS Debt}) = \alpha + \beta * \ln(\text{Spread on CLOs}) + \gamma * \text{CONTROLS} + \varepsilon$$

$$\ln(\text{Bank Credit}) = \alpha + \beta * \ln(\text{Spread on CLOs}) + \gamma * \text{CONTROLS} + \varepsilon$$

where  $\ln(\text{Spread on CLOs})$  is instrumented by ABS issuance and CDO issuance.

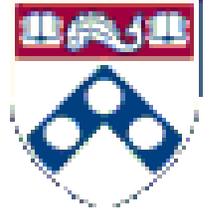
- Finds non-trivial negative price elasticity for ABS Debt.
- Finds non-trivial positive cross-price elasticity for Bank Credit.
- Results limited to firms with speculative ratings (e.g., zero cross-price elasticity for Bank Credit at investment grade firms.)
- **General conclusion:** “Bank term loans to corporations are not (no longer) special.”

# Nini



- Solid, well-done paper.
- Will eventually be published in good finance journal:
  - Carefully extends the existing literature.
  - Stays nicely within the methodological parameters of the academic finance literature.
  - Extension is meaningful.
- *What do we learn from this paper?*

# Nini



## Author can say more:

–His findings (and the previous literature) on business loan securitizations (CLOs) parallel our general understanding of mortgage loan securitizations (MBSs, CMOs).

- Increase in non-bank institutional investors.
- Borrowers alter financing structure (more debt; less relationship finance).
- Increase in supply of loans.
- Supply shock largest for borrowers with high credit risk.

***–Thus, the technology, not the loan sector, is primary here.***

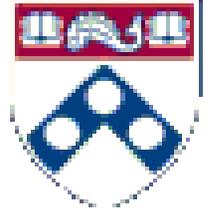
# Nini



## Author should say less:

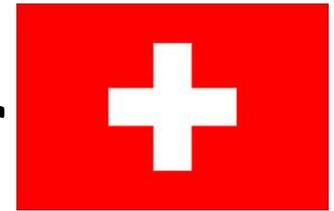
- Conclusion “banks are not special” over-reaches.
- Zero cross-price elasticity for investment grade firms: Strictly speaking, CLOs are not substitutes for Bank Credit.
- Results reflect the choice of the data:
  - Demand elasticities are estimated for publicly traded firms.
  - Data available only for public firms?
  - CLOs include loans only to public firms?
- For large subset of private firms, bank loans remain special.
  - Small and mid-sized firms need relationships with banks.
  - For very small businesses, credit card-like lines of credit can be securitized. And mortgage finance provides term credit.
- Thus, the loan sector matters, too.***

# Nini



- This paper will garner lots of citations.
- More circumspection: “Banks no longer special for public, speculative grade corporations.”
- My take-away: Paper provides further evidence that commodity credit continues to make in-roads...when will this end?

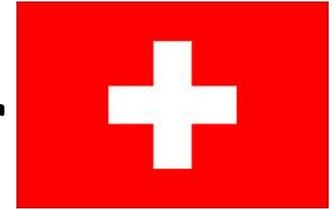
# Brown, Schaller, Westerfeld, Heusler



## Overview

- Loan officers have soft information about their SME clients. How do they use this information to set internal loan ratings?
  - Do loan officers use this soft information to “correct” misleading hard information? (Smoothing)
  - Do loan officers use discretion to avoid downgrades that would increase loan interest rates? (Implicit loan contracts)
- Authors use unique loan ratings data for 6,669 small business loans from 9 Swiss banks that use the same loan rating model.
- Authors find evidence consistent with both stories.

# Brown, Schaller, Westerfeld, Heusler



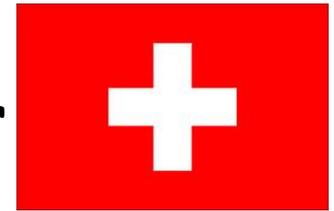
$$\text{DISCRETION} = \alpha + \beta * \text{RATING SHOCK} + \varepsilon$$

$$\begin{aligned} (\text{New Rating} - \text{Hard Info update}) &= \alpha \\ &+ \beta * (\text{Hard Info update} - \text{Old Rating}) + \varepsilon \end{aligned}$$

## What does $\beta$ measure?

- If new rating fully conforms to change in hard info, then  $\beta = 0$ .
  - $\beta = 0$  is most often rejected. But if not rejected...
  - Loan officer endorses hard info? Or bank rules allow no discretion?
- If new rating unchanged by new hard info, then  $\beta = -1$ .
  - Not tested, but pretty clear that  $\beta = 1$  is rejected across the board.
  - Complete inertia.
- If new rating partially conforms to hard info, then  $0 < \beta < -1$ .
  - Information-based rating? (Smoothing)
  - Strategic rating? (Insurance; Implicit Loan Contracts)

# Brown, Schaller, Westerfeld, Heusler



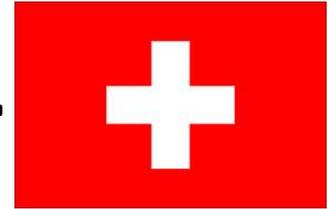
## Insurance?

- Estimate model for subsamples of banks by pricing policy: “Does loan rating affect loan interest rate?”
- $\beta$  more negative if bank links interest rates to loan ratings.  
*Consistent with “insurance” explanation.*

## Smoothing? (NOTE: Perhaps “Correcting”?)

- Estimate linear probability model:  
 **$\text{Credit event}(t+1) = f(\text{DISCRETION, controls}) + \varepsilon$**
- For firms with poor ratings, DISCRETION associated with fewer credit events. *Consistent with “information-based smoothing.”*
- For firms with good ratings, DISCRETION not predictive.
  - But how frequent are credit events for banks with good ratings?

# Brown, Schaller, Westerfeld, Heusler



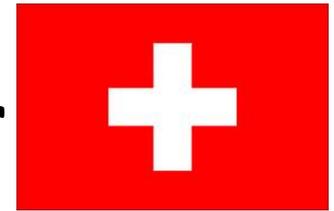
- Linear probability model:

$$\text{Credit event}(t+1) = f(\text{DISCRETION, controls}) + \varepsilon$$

- Implied causation in this model is backwards.
  - Do loan officer rating actions cause loan performance? NO!
  - Rather, expected loan performance (soft info) causes loan officer rating actions!
- Assume perfect foresight for loan officers, and run model:

$$\text{DISCRETION} = f(E(\text{Credit event}(t+1)), \text{controls}) + \varepsilon$$

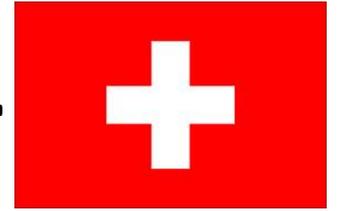
# Brown, Schaller, Westerfeld, Heusler



Dummy variable SAME = 1 if the loan officer at  $t+1$  was also the loan officer at  $t$ .

- The mean value of SAME is 0.43.
- Hence, a new loan officer for 57% of the loans in the data.
- ***Does the soft information reside with the loan officer or elsewhere in the bank?***
  - Estimate models for SAME = 1 and SAME = 0 subsamples.
  - And/or include SAME and RATINGSHOCK\*SAME on right-hand side of models.

# Brown, Schaller, Westerfeld, Heusler



- I learned some institutional details about internal loan ratings and loan officer behavior.
- I think the authors can easily make at least one additional contribution to the SME finance literature.
- My take-away: Be wary of credit ratings because they are often gamed—even for SMEs.

# Barakova and Parthasarathy



## Overview:

- Two streams of research on business lines of credit:
  1. **Bank actions:** Cut lines if firm deteriorates or covenants violated. Lines are at best “contingent liquidity insurance.”
    - *If so, then why do firms pay for liquidity insurance?*
  2. **Firm actions:** Draw down when health deteriorates, cash flows wane, or external conditions deteriorate.
    - *If so, then why do banks allow drawdowns?*
- Authors seek evidence to rationalize these findings, using annual data (SNC, 1997-2009) on syndicated loans.
- Estimate (a) determinants of bank actions, (b) determinants of firm actions, (c) inter-dependencies of bank and firm actions.

# Barakova and Parthasarathy



## Findings: Limit Cuts

- Banks more likely to reduce lines if (a) firm financials deteriorate and/or (b) firm is using large portion of its line.
- But banks tend not to cut lines for healthy firms during downturns.
- Private firms get larger line cuts than public firms.

## Findings: Additional Draw Downs

- Unhealthy firms and/or firms using large portion of lines are less able to take further draws.
- But healthy firms able to take draws, even during downturns.
- And healthy firms draw down in anticipation of downgrades.
- Private firms make larger draws than public firms.

# Barakova and Parthasarathy



## What does Additional Draw measure?

$$\text{Additional Draw}_{t+1} = \frac{\text{balance}_{t+1} - \text{balance}_t}{\text{limit}_t - \text{balance}_t}$$

- Who causes this variable to increase in  $t+1$ ?
  - Is the firm accessing credit in  $t+1$ , increasing numerator?
  - Did the bank restrict access in  $t$ , reducing denominator?
- Using data from Figure 2, Additional Draw highly and inversely reflects previous year's Limit Cuts:
  - Correlation (Additional Draws , Limit Cuts) = -0.41.
  - If Additional Draws are lagged, correlation = -0.73.
- ***Might the evidence of “anticipatory draws” by firms actually reflect “proactive line cuts” by banks?***

# Barakova and Parthasarathy



## How does Additional Draw behave?

$$\frac{\partial \text{Additional Draw}_{t+1}}{\partial \text{balance}_{t+1}} = \frac{1}{\text{limit}_t - \text{balance}_t} > 0$$

- It moves positively with  $\text{balance}_{t+1}$  as required.
- Positive association is stronger when  $\text{balance}_t$  is large and/or when  $\text{limit}_t$  is small.
- Thus, coefficients on variables correlated with either high past usage or past limit cuts are biased upward.
  - ***Example: Is this driving or exacerbating the positive coefficient on private firms in Table 10?***

# Barakova and Parthasarathy



## A bit more information, please:

–In most of the tables, the models are estimated for both full sample and a public firm subsample...but not estimated for the private firm subsample.

- If firms are private, the information asymmetry between bank and borrower is likely to be different.
- This may affect limit cut behavior (conditional liquidity insurance) and pre-emptive draw down behavior (exploiting information).

## Panel data:

–Why not use bank fixed effects in the Limit Cut model?

–Why not use firm fixed effects in the Additional Draw model?

# Barakova and Parthasarathy



- I find the “static” findings very believable; the “cyclical” findings are not as convincing.
- Additional work needed to rule out potential methodological biases.
- My take-away: Line draw downs and credit limit cuts are dynamic and interdependent processes. A rich area for future research.

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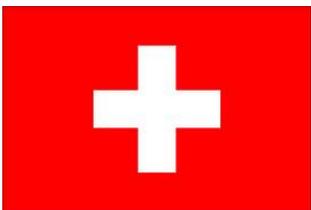
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