Discussion of "Internal Loan Ratings, Supervision, and Bank Leverage"

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[1] The views expressed in this presentation are those of the author and do not necessarily reflect the views of the Federal Reserve Board or the Federal Reserve System.

Research questions and predictions

- Investigate whether banks systematically assign biased internal loan ratings
- **Main research questions:**
  - Do banks systematically assign biased internal loan ratings?
  - What impact does regulatory supervision have on these ratings?
  - How do internal loan ratings affect bank leverage across economic cycles?
- **Setting:**
  - Uses Shared National Credit (SNC) Program data
  - Uses large syndicated loans (above $100M) shared by multiple financial institutions
  - Exploits conditional random assignment of loan examinations
  - Multiple banks rate identical loans, enabling comparison of ratings for the same credit risk
- The paper finds evidence of systematic ratings inflation, supervisory effectiveness in improving ratings accuracy, and ratings inflation contributing to the procyclicality of bank leverage

Main contribution

- CSI data, interesting setting, and important findings with clear policy implications
  - Supervisory examinations produce significant positive externalities
  - Information spillovers suggest optimized examination targeting could enhance efficiency
  - More frequent examinations during economic expansions could reduce procyclical effects
- Main limitations: the sample focuses on large syndicated loans that are subject to supervisory evaluation and oversight

Economic rationale for regulatory loan review

- What are the incentives of supervisors and lenders?
  - *Supervisors:* Ensure safety and soundness
  - *Loan examiners:* Review loan portfolios (expertise, career concerns and reputation concerns)
  - *Regulated syndicated lenders (banks subject to SNC supervision):* Profitable lending subject to regulatory and liquidity constrains
  - *Unregulated syndicated lenders:* Profitable lending subject to liquidity constraints (and potential learning from regulated syndicate members)
- The paper focuses on the drift in rating and the feedback from supervisory rating changes on future ratings and lending

Mechanism

- The paper documents a downward drift in ratings (approximately 0.07 grade per year)
- But provides limited explanation of the specific mechanism assuming that the rating drift is due to overly high ratings at loan origination
  - Ratings inflation is *predictable* from pre-issuance characteristics and particularly pronounced for:
    - Lower-quality loans
    - Higher utilization rates
    - Non-investment grade borrowers
  - Suggests information available during screening is not fully incorporated into initial ratings
  - However, why are banks making these loans that seem to be systematically graded too high?
  - Why would a bank lend to a borrower that has a loan grade below 'pass' at loan origination?
  - Are there specific incentives at the syndicate level?

Mechanism (cont.)

- What are the incentives for providing higher ratings at loan initiation?
  - **Top rating is pass:** Pass rating has three categories
    1. Investment Grade,
    2. Non-Investment Grade, or
    3. Lowest-Graded Pass
  - Given that most of the ratings are in the pass category, it would be helpful to delineate between the three ratings
  - Consider whether grade inflation is more likely in one of these categories
  - Link back to the literature on SNC loan examination intensity (Ivanov and Wang, 2024)
  - Clarify whether a loan can have a non-pass rating at initiation

Mechanism (cont.)

- What is the underlying link between an adverse SNC rating on a particular loan and increased supervisory scrutiny?
- What assumptions do we need to make about banks' choosing a loan portfolio in equilibrium to identify changes in a loan-level rating by a supervisor to lead to bank changing their credit portfolio or credit rating?
  - Relationship banks have repeated interactions with borrowers and other syndicate members. What is the role of monitoring in this setting (Gustafson et al. 2021)?
  - One adverse rating appears to have significant changes on the affected bank's willingness to lend to this borrower in the future (Ivanov and Wang, 2024)

Mechanism and supervision intensity

- Utilize more the richness of the data on supervisory ratings
  - Currently pooling three pass ratings together
  - More adverse ratings have a larger direct impact on bank's provisions, profitability, and capital
- Provide more information on banks existing incentives in the presence of regulatory oversight
  - How persistent is the effect of a negative supervisory rating?
  - What is the long-term regulatory cost to a bank from incurring negative ratings?
  - If loan rating changes are more predictable for worse borrowers, are these risks not priced by the banks (link to the tests using interest rate spreads)?
- Provide additional tests on bank outcomes
  - Do changes in lending result in banks' improving the quality of their assets or loan portfolio overall?
  - Do banks change overall monitoring, syndicated loan market participation or lending to riskier borrowers?

Estimation and sample construction

- The authors use multiple additional datasets and link them with SNC
- Difficult to follow how the additional datasets were linked and to how many observations:
  - SNC-DealScan match is required for loan characteristics at origination
  - SNC-CRSP and SNC-Compustat match is required for borrower-level characteristics
  - Call Reports are used for bank-level characteristics
  - Examination frequency changes in 2016 and examined loan amount threshold changes in 2019
  - Main sample includes the financial crisis and several business cycles
- It is unclear how different each sample is and how it affects inferences
- What mechanism would provide incentives to reduce internal ratings inflation?

Estimation and sample construction (cont.)

- **Sample size:** Consider providing more color on sample construction and include a table with sample changes and the number of observations for various subsamples
- **Matching:** Matching SNC to various other datasets is a process, consider providing some more color on how good these matches are and what assumptions were made to construct these subsamples
- **Borrower characteristics:** CRPS and Compustat mostly include public firms. Are these firms more likely to have investment grade (pass) ratings than private firms? Consider evaluating the subsample of private borrowers
- **Sample changes:** The sample period includes the financial crisis and several business cycles. Consider utilizing this more directly for your inferences on procyclicality

Inferences

- The authors carefully discuss their identification strategy and provide robustness tests
- Some causal inferences would benefit from further clarification
  - Table V is interpreted that borrower characteristics at loan origination predict future ratings drift (or rating downgrades)
  - Tables VII and VIII are comparing regulatory or bank ratings. The interpretation of the counterfactual is unclear
- Implications for loan loss provisions and regulatory changes (e.g., CECL)
- Loan loss provision simulations rely on standardized assumptions that may not reflect heterogeneous banking practices
- **Suggestions:**
  - Estimation sample sensitivity: alternative windows, placebo dates
  - Consider matching treated and control banks on the balance sheet and profitability metrics
  - Exclude banks with other supervisory scrutiny (e.g., stress tested banks)
  - Explore dynamic effects: Do these spillovers persist over time and over the credit cycle?

Minor comments and suggestions

- Figure 1 is the only one within the text and it is referenced after Figures 2-4, consider moving it together with the rest of the figures to avoid confusion
- How might changes in accounting standards (e.g., CECL) affect ratings inflation incentives?
- Do banks with different business models exhibit different patterns of ratings inflation?
- Do you observe any differences across loan types?
- Can you utilize other measures of risk (e.g., PDs) to evaluate alternative risk ratings?
- Can you exclude banks that are subject to additional supervisory scrutiny (e.g., stress tested banks)?
- References to the literature need to be expanded to include other related papers (e.g., Gustafson et al., 2021) and updated (e.g., Ivanov and Wang, **2024**)
- Interpretation on market leverage and stock return volatility is unclear

Conclusion

- Interesting paper providing new evidence on potential inflation in banks' internal loan ratings
  - Important contribution to understanding supervisory effects on internal loan rate inflation
  - Novel evidence showing existence of inflation and its mitigation by supervisory oversight
  - Clear policy implications
- Clarifying the mechanism, acknowledging limitations, and providing a more careful discussion about the sample construction and inferences, will further enhance the contribution and impact of the paper