

# Monetary Policy and Bank Lending Terms: Evidence from a Survey of US Loans

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# Monetary Policy and Bank Lending Terms

## This paper

What is the consequence of expansionary monetary policy (conservative as well as unconservative) on banks' risk taking?

### Idea:

- Credit channel of monetary policy
- Banks that are more interest rate sensitive or worse capitalized should react stronger

### Main Finding:

- Lending terms are eased as a consequence to a interest rate cut

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## This paper

### Main regression

$$Spread_{kit} = \alpha_i + \lambda_j + \beta Fed\ funds\ rate_t + \theta X_{kit} + \mu Y_{it} + \rho Z_{jt} + \sigma M_t + \varepsilon_{kit},$$

- $Spread_{kit}$  is the interest spread of loan  $k$  by bank  $i$  during quarter  $t$  (*new loans*)
- $Fed\ fund\ rate_t$  is the target federal funds rate
- $X_{kit}$  is loan size and loan risk rating (bank's internal ratings)
- $M_t$  is macroeconomic variables
- $\alpha_i$  are bank specific FEs
- $\lambda_j$  are state specific FEs



Identification assumption: no unobservable variables affecting loan demand and monetary policy decisions

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### Result I:

	Dependent variable	
	Loan spread	Dummy for secured loans
	(1)	(2)
Target federal funds rate	0.037** [0.016]	0.007*** [0.002]
Loan risk rating	0.355*** [0.012]	0.051*** [0.003]
Bank fixed effects	Yes	Yes
State fixed effects	Yes	Yes
Time fixed effects	No	No
Observations	1,438,826	1,438,824
Number of banks	612	612
$R^2$	0.321	0.212

A lower Fed fund rate (more FED treasury holdings) results in a lower loan spread (easing of credit conditions) holding for the internal credit risk constant

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## This paper

### Result II:

	Dependent variable	
	Loans spread	Dummy for secured loan
	(1)	(2)
Target federal funds rate x short-term deposits / deposits	0.546*** (0.103)	0.040** (0.017)
Target federal funds rate x Leverage ratio	-3.782*** [0.996]	0.052 [0.067]
Federal Reserve treasury holdings x Bank Securities Holdings / assets	-10.392*** (3.458)	-6.039* (3.464)

Effect is more pronounced for banks:

- Which are ex-ante more sensitive to interest rates
- Which have a weaker balance sheet (measured by capital ratio)
- Which are more sensitive to the fluctuations in the price of treasury securities (measured by fraction of Treasury and MBS securities in the trading account to total assets)

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## Comment 1: Contribution

### Contribution to the literature:

- „This paper is the first to study the impact of both short-term interest rates as well as large-scale asset purchases on bank lending terms to the corporate sector. “
- „Our paper also contributes to the recent literature on the risk-taking of monetary policy (Jimenez et al. 2014; Becker and Ivashina 2015; Di Maggio and Kacperczyk, 2016; Dell’Ariccia et al. 2017). “

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## Comment 1: Contribution

- What do we learn from this paper in addition to current literature?
  - Dell’Ariccia, Giovanni, Luc Laeven, and Gustavo Suarez, 2017, Bank leverage and monetary policy’s risk-taking channel: Evidence from the United States, *Journal of Finance*, forthcoming.
  - Di Maggio, Marco, and Marcin T. Kacperczyk, 2016, The unintended consequences of the zero lower bound policy, *Journal of Financial Economics*, forthcoming
  - Di Maggio, Marco, Amir Kermani, and Christopher Palmer, 2016, Unconventional Monetary Policy and the Allocation of Credit, mimeo, Harvard Business School.
  - Ioannidou, Vasso P., Steven Ongena, and Jose Luis Peydro, 2015, Monetary policy, risk-taking, and pricing: Evidence from a quasi-natural experiment, *Review of Finance* 19, 95–144
  - Jimenez, Gabriel, Steven Ongena, Jose Luis Peydro, and Jesus Saurina, 2012, Credit Supply and Monetary Policy: Identifying the Bank Balance-Sheet Channel with Loan Applications, *American Economic Review* 102, 2301-2326.
  - Jimenez, Gabriel, Steven Ongena, Jose Luis Peydro, and Jesus Saurina, 2014, Hazardous times for monetary policy: What do 23 million loans say about the impact of monetary policy on credit risk-taking? *Econometrica* 82, 463–505.

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## Comment 2: Interpretation

Result of main specification:

Holding constant for internal credit risk rating (and other controls) banks charge lower spread if interest rates fall

Can we interpret this as „conventional monetary policy being associated with changes in the quality of bank credit (consistent with a risk-taking channel of monetary policy)“?

- No! Main concern wrt leverage ratio is that banks take the highest risk within a risk category
- No! Banks may shift to overall lower credit ratings
- No! If expectations about future macro conditions (unobservable) as well as interest rate cuts coincide



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## Comment 3: Identification

Two main challenges:

- Monetary policy decision might be endogenous wrt loan demand/supply
- Disentangle loan demand and supply

# Monetary Policy and Bank Lending Terms

## Comment3: Identification

Two main challenges:

- Monetary policy decision might be endogenous wrt loan demand/supply
  - Focus on Spain (ECB follows core countries)
  - Event studies: FOMC meetings
- Disentangle loan demand and supply
  - Change in relative lending quantities (Khwaja/Mian)
  - Discontinuities of credit limits for different FICO scores

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## Comment 3: Identification

This paper adds macro and loan level control (i.e. banks' internal loan assessment) to address identification concerns

### But

- Interest rates are not changed without a reason!
  - Unobservable (forward looking) assessment affects monetary policy decisions
  - Changes in Fed Fund rate is not an exogenous policy shock
- Loan demand is likely to be low if Fed rate is lowered
  - Difficult to interpret all findings to a bank supply effect
- Credit ratings: through the cycle versus point in time?

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## Suggestions

- Reconcile findings on capital ratio and risk-taking with your other paper
- Evidence on ex-post riskiness (return on loans would be great)
- Focus on deviations of a Taylor rule or a specific event (e.g. Lehman) as a policy experiment
- Are findings driven by „Deposit channel“ (see paper by Itamar Drechsler, Alexi Savov and Philipp Schnabl)?

# Monetary Policy and Bank Lending Terms

## Conclusion

- Very topical paper with important policy conclusion
- New evidence on risk-taking channel
- Provide further explanation on interpretation of results