

Risk-mitigating Effects of Being Prompt and Transparent

Seung Jung Lee (FRB)
Lucy Qian Liu (IMF)
Viktors Stebunovs (FRB)

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Introduction

- “Risk-mitigating Effects of Being a Prompt Supervisor and a Transparent Bank on a Global Risk-taking Channel of Monetary Policy”.
- Debates about effects of low policy rates on risky lending & financial stability:
 - Low rates encourage riskier lending to corporations.
 - Some of it is “excessively” risky and a lot of it cross-border.
 - Limited powers that target such lending.
- **Global risk-taking channel (GRTC)**: Do lower U.S. policy rates lead to global originations of larger risky U.S. dollar corporate loans? Weaken risk pricing?
- **Mitigation**: Do micro- and macroprud powers & market discipline (MMM) that banks face in home countries dampen sizes of such loans? Reinforce risk pricing? Why?
 - **Externalities**: Are there global externalities of home-country MMM?

Literature

- Multiple risk-taking channels of monetary policy that work through corporate lending.
 - Credit risk and pricing of new loans, not volumes of new risky loans.
 - Little on potential mitigants of the channel.
 - Altavilla, Boucinha, Peydro, and Smets (2019).
- Efficacy of **MMM** in mitigating credit risk of lending.
 - Not in the context of a risk-taking channel of monetary policy.
- Both strands often study syndicated loans.
- Here: Quantity- and price-based **GRTC** that works through originations of corporate loans and its mitigants.

Loan syndication

	Term loans
Syndication	Multiple institutions lend to a borrower and charge a riskier borrower a higher spread over the U.S. dollar LIBOR.
Disbursement	Disbursed at origination.
Lenders' income	Origination fees, loan spreads.
Lenders	Originate to distribute: (Mostly) banks from around the world originate loans & sell many of them to shadow banks (CLOs, funds, and others) within a few weeks.
Borrowers	Lots of unrated and low-rated borrowers from the around the world.
Volume of originations	Magnitudes are comparable to volume of U.S. dollar bond issuance.

Data

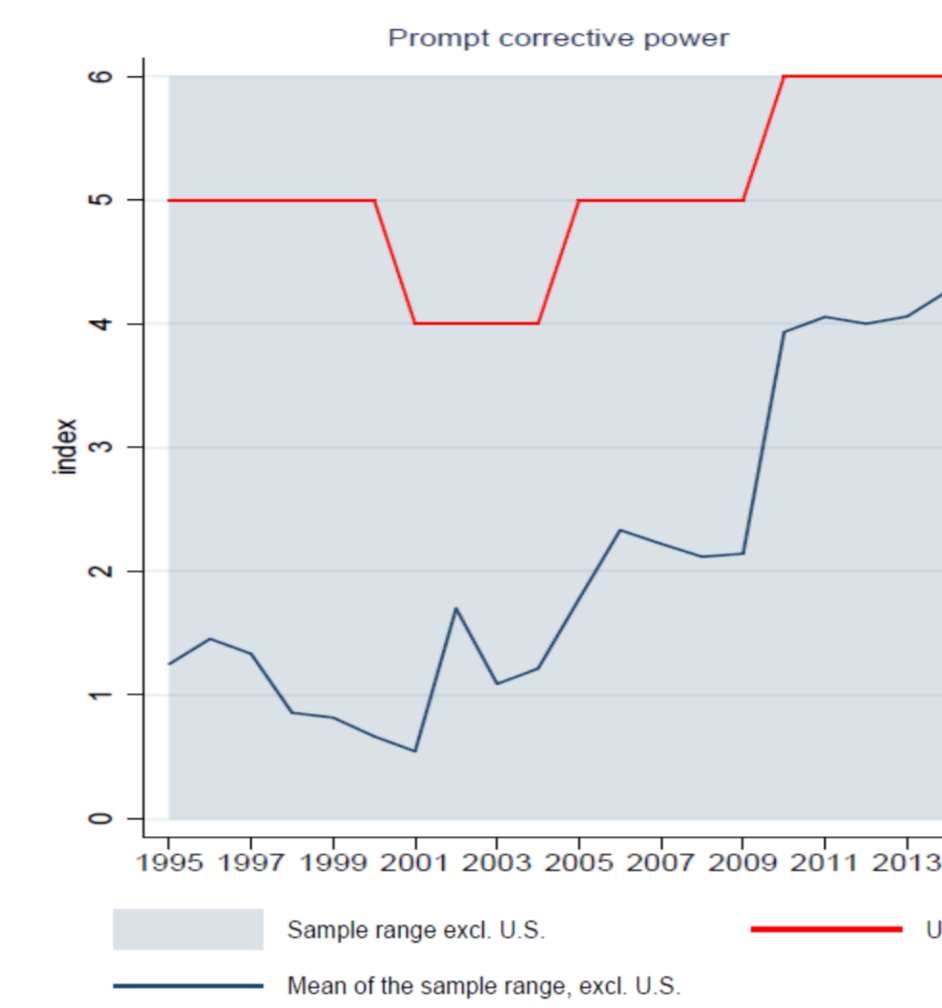
- Eventful period with multiple monetary policy cycles: 1995 to 2014.
- DealScan for U.S. dollar corporate term loans.
- Moody's Expected Default Frequencies (**EDFs**) for borrowers' ex ante credit risk.
 - Estimates of point-in-time probabilities of default.
 - Judgement- and gaming-free measures.
 - Matched horizon of **EDFs** with maturities of loans.
 - Won't define excessive but will account for the skewness of **EDF** distributions.

Sample	50 th pctl	75 th pctl
Global borrowers	0.85%	2.07% = SG rating
Non-U.S. borrowers	1.06% = SG rating	2.58%

- Wu and Xia (2016)'s shadow federal funds rate to proxy a U.S. policy rate (**R**).

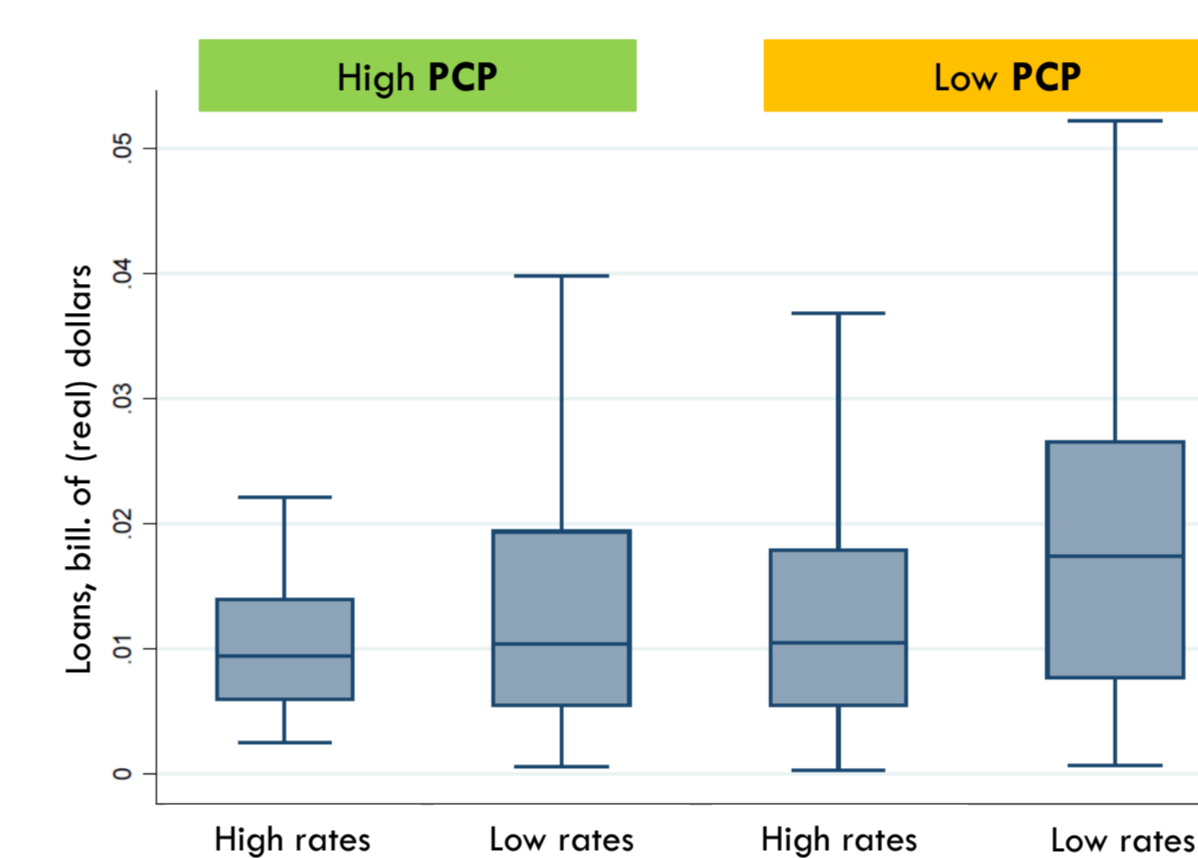
Data (cont.)

- Barth, Caprio, and Levine (2013)'s **MMM** indexes.
 - Surveys spanning two decades.
 - Prompt corrective power (**PCP**): Index for power to intervene if triggers are set off.
 - **PCP** broken down into finer δ powers.
 - Ranges from 0 (low) to 6 (high).
- Cut sample at 2014 as the ECB took over bank supervision.



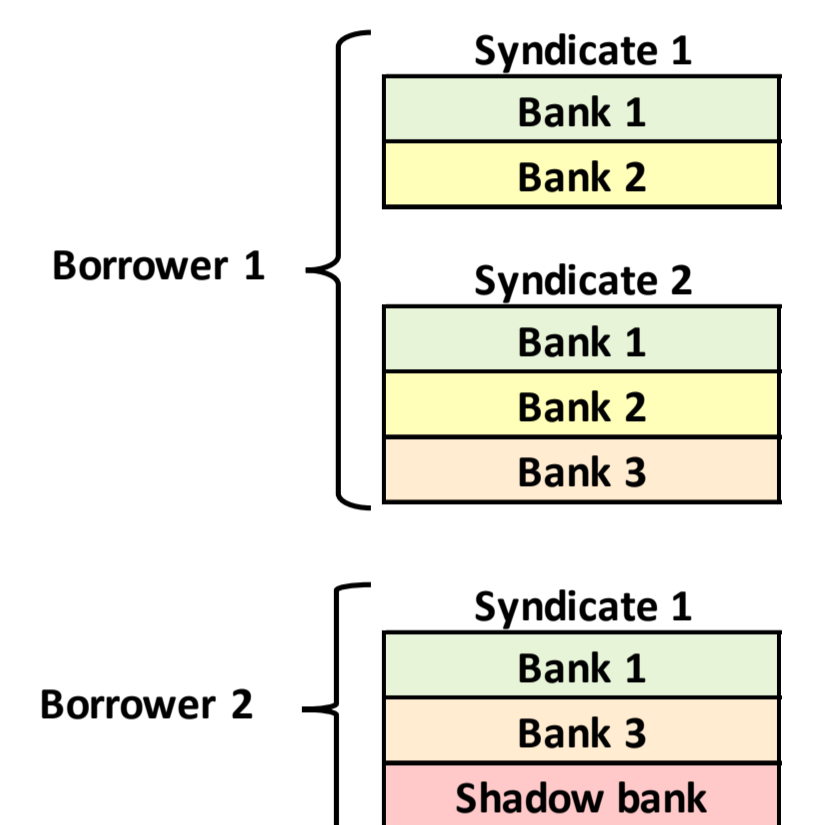
Hint at the results

- Quantity-based **GRTC**: Banks lend more to risky borrowers when rates are low.
- Mitigation: Less so when they face powerful supervision.



Data structure

- Multiple syndicates to the same borrower at a given time and sole syndicates to different borrowers.
- Syndicates to the same borrower may have different terms.
- Differences in borrower credit risk.
- Differences in bank characteristics.
- Refer to individual bank stakes in syndicates as loans.



Regression model

- Inspiration: Khwaja and Mian (2008) and Altavilla, Boucinha, Peydro, and Smets (2019).
- **Y**: Size or spread of lender l 's loan in syndicate j to borrower b at time t .
- Interactions of **EDFs**, **R**, and **X**:
 - **X** = α given **MMM**.
 - Risk-taking: $\theta_{ER} < 0$.
 - Mitigation: $\theta_{ERX} > 0$.
 - Overall: $(\theta_{ER} + \theta_{ERX} X) | X$?
- Demand: Borrower-time fixed effects.
- Supply: Bank-time fixed effects.
- Caveat: No intensity of **MMM** application.
- Samples: Global (weight of U.S. banks 33%) and **non-U.S.** (only 8%).

$$\log(Y_{j,b,t}) = (\beta_E + \theta_{EX} X_{i,j,t}) \times \log(EDF_{j,b,t}) + (\theta_{ER} + \theta_{ERX} X_{i,j,t}) \times \log(EDF_{j,b,t}) \times R_t + (\beta_X + \theta_{RX} R_t) \times X_{i,j,t} + \phi_{b,t} + \phi_{l,t} + \varepsilon_{j,b,t}$$

general risk-taking
risk-taking channel of U.S. monetary policy

Quantity-based GRTC: “Clear and present danger”

- Lower policy rates \Rightarrow larger riskier loans, more so for non-U.S. borrowers (orange).
 - Riskier borrowers: **EDF** > 1, speculative-grade or worse rating.
- Possibly stronger channel for institutional, meant-for-sale loans (red).
 - Caveat: Modest percentage of such loans in the sample.
- Capture the average effect, not the effects due to low profitability, high leverage, high reliance on deposits, easier access to dollar funding...

log(loan)	Global	Non-U.S.	Global	Non-U.S.
log(EDF)	0.288 **	0.332 **	0.357 *	0.363 *
log(EDF) x policy rate	-0.096 ***	-0.103 ***	-0.149 **	-0.12 **
log(EDF) x policy rate x inst. loan		0.022		-0.438 ***
Num. of obs.	5913	5913	2776	2776
RMSE	0.55	0.55	0.53	0.52

* p < .1, ** p < .05, *** p < .01

Price-based GRTC: No adverse effects

- No **GRTC**: Lower rates \Rightarrow wider spreads on riskier loans (blue).
 - Potentially more so for larger loans (green).
- No extra risk compensation for institutional loans (not shown).

log(spread)	Global	Non-U.S.	Global	Non-U.S.
log(EDF)	0.432 ***	0.410 ***	0.548 ***	0.466 ***
log(EDF) x policy rate	-0.066 **	-0.078 **	-0.087 *	-0.100 *
log(EDF) x policy rate x log(line)		-0.004 *		-0.005
Num. of obs.	5913	5913	2776	2776
RMSE	0.12	0.12	0.16	0.16

* p < .1, ** p < .05, *** p < .01

GRTC: Potential mitigants

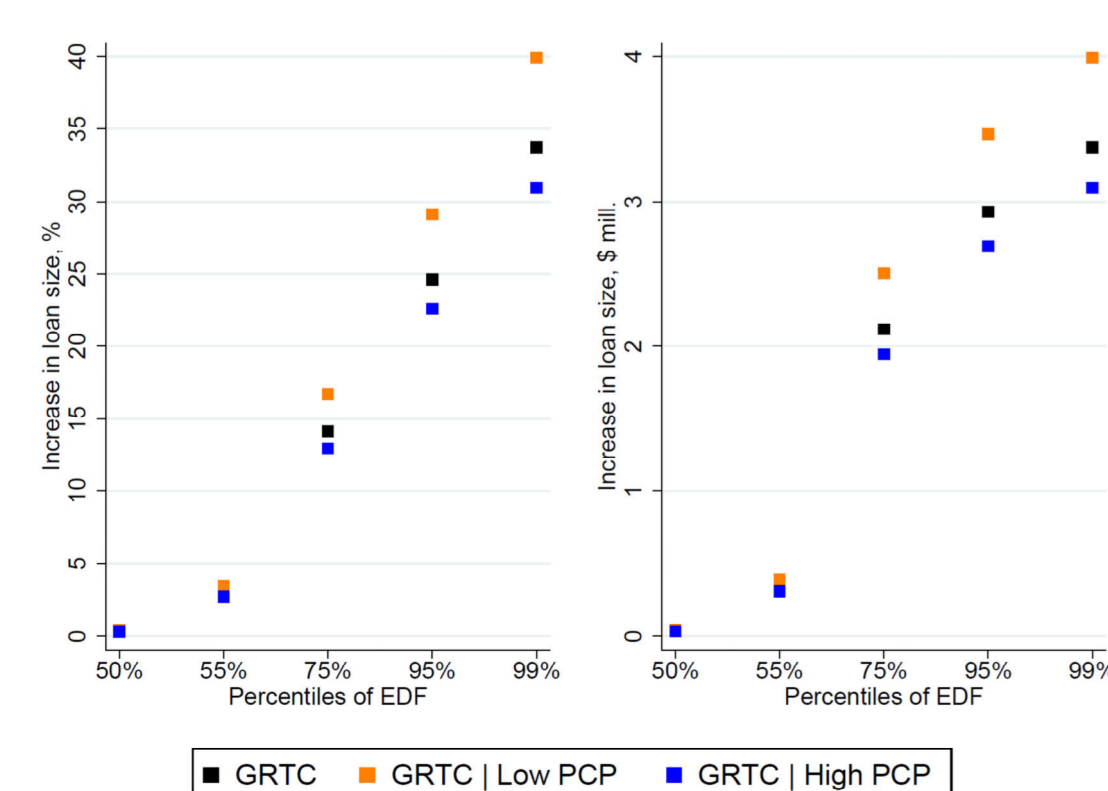
- Many candidates from Barth, Caprio, and Levine (2013).
- Mitigants of quantity-based **GRTC**: **PCP**, insolvency declaration power, bank financial statement transparency, and accounting standards (blue).
 - Statistically significant effect before and after the global financial crisis.
 - Not all “mitigants” are harmless: Supervisory forbearance power.
- Substitutability/complementarity of the mitigants: **PCP** the winner, then transparency.
- Price-based **GRTC**: **PCP** may re-enforce risk pricing.

log(loan)	Mitigants			
	PCP	Insolven.	Fin. Transp.	Acct. std.
log(EDF)	0.469 **	0.427 **	0.543 **	0.439 **
mitigant	-0.028 ***	-0.076 **	-0.033	-0.082 **
log(EDF) x policy rate	-0.176 ***	-0.167 ***	-0.207 ***	-0.192 ***
log(EDF) x policy rate x mitigant	0.007 ***	0.019 *	0.011 **	0.037 ***
Num. of obs.	2776	2757	2770	2460
RMSE	0.53	0.53	0.53	0.55

* p < .1, ** p < .05, *** p < .01

Quantity-based GRTC: Marginal effects

- Non-linear model, marginal effects at reference points.
 - 100 basis point decrease in the policy rate.
- Effects are economically significant (shown for the non-U.S. sample).



Finer prompt corrective powers

- **PCP** mitigates quantity-based **GRTC** b/c of these finer powers:
 - Automatic interventions, cease-and-desist orders, suspensions of capital payouts.
- Connection to stress testing: Capital payouts.

log(loan)	Finer PCP powers				
	Intervent.	Cease/desist	Susp. div.	Susp. bonus	Susp. mgt fees
log(EDF)	0.47 **	0.428 **	0.684 ***	0.533 ***	0.884 ***
log(EDF) x mitigant	-0.151 ***	-0.090 *	-0.338 ***	-0.189 ***	-0.195 ***
log(EDF) x policy rate	-0.176 ***	-0.167 ***	-0.221 ***	-0.193 ***	-0.277 ***
log(EDF) x policy rate x mitigant	0.036 ***	0.026 *	0.073 ***	0.049 ***	0.042 **
Num. of obs.	2777	2777	2777	2777	1976
RMSE	0.53	0.53	0.53	0.53	0.49

* p < .1, ** p < .05, *** p < .01

Overview of the other results

- Ineffective macroprud power: Capital regulation.
 - Originate to distribute: Banks quickly sell syndicated loans to shadow banks.
- Barth, Caprio, and Levine's index: Does not capture the level of required capital ratios & not correlated with capital ratios.
 - Basel III may have an effect, attributable to the largest U.S. banks.
 - Not because of higher capital requirements?
 - Overlapped with U.S. leveraged lending guidance, which was effective (Calem, Correa, and Lee (2019)).
- Small macroprud leakages b/c of shadow banks' participation in loan origination:
 - Shadow banks have larger stakes in a risky syndicate in response to lower U.S. interest rates when banks in the syndicate face higher **PCP**.

Conclusions

- **GRTC**: Lower U.S. policy rates \Rightarrow globally, larger risky loans, but not lower risk compensation.
- Macroprud powers & market discipline that banks face in home countries dampen sizes of such loans.
- Desirable global externalities of home-country supervision & discipline.
- **Top mitigants**: Prompt corrective power (automatic interventions, cease-and-desist orders, and suspension of payouts) & bank financial statement transparency.
- During the pandemic, temptation for a lighter touch.
- Don't lose vigilance: Money is back at chasing risky loans...

