"It's Not You, It's Them": Industry Spillovers and Loan Portfolio Optimization*

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Summary

Banks exposed to multiple firms in the same industry are affected by the externalities from competition between rival borrowers.

- **Finding I:** banks with a high presence in an industry maximize the expected returns of their loan portfolios by extending loans with stricter covenants to the firms in such industries, internalizing competition spillovers into their lending decisions.
- **Finding II:** Impose stricter capital-based covenants, aligning equity-debtholders incentives 'ex-ante' by demanding borrowers more 'skin-in-the-game', while requiring lower interest rates in exchange.

Stricter covenants allow them to influence corporate policy even well outside default states, deterring borrowers from excessive risk-taking and debt-funded growth strategies that could be detrimental to industry peers to which the bank is also exposed.

Data

Credit registry for relevant lender in U.S. syndicated loan market between 1990 and 2016. **Sources**: Dealscan, Compustat, Schwert (2018), Demerjian and Owens (2016) and Nini, et. al (2009).

Feedback Effect on Lending Decision

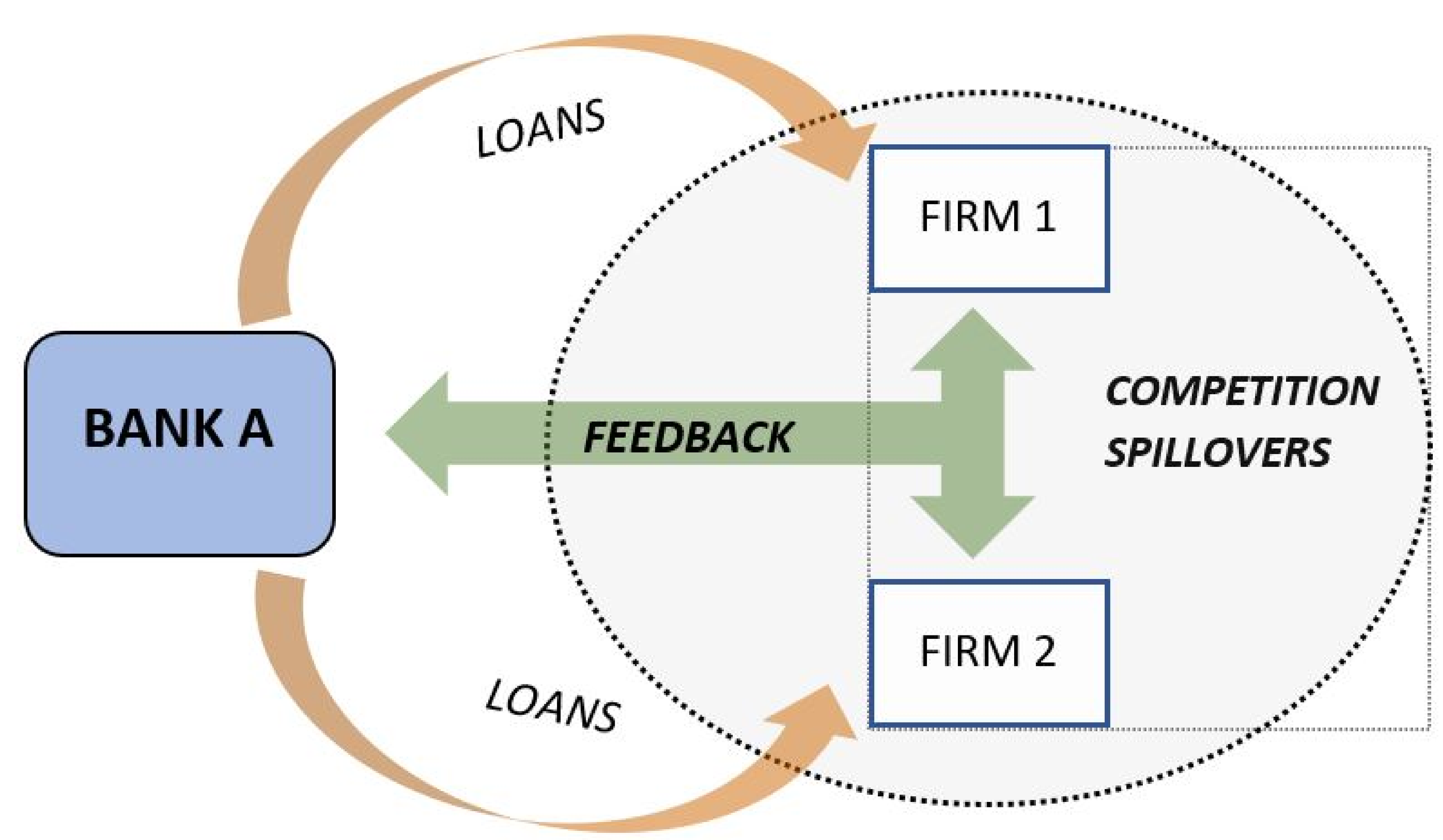

Figure 1. Banks with larger lending shares are more prone to internalize the spillovers of their own credit decisions.

Empirical model

Idea: Compare loan contract terms between bank-industry pairs, conditional on bank's presence in the industry. Accounting for selection differences using industry-time FE and controlling for borrower risk and loan characteristics.

$$Loan\ Contract\ Term_{b,i,t} = \beta Bank\ Industry\ Presence_{b,i,\overline{t-4}}$$
$$+\gamma_f * risk\ controls_{i,\overline{t-1}} + \delta_L * Loan\ controls_{b,i,t}$$
$$+Bank * Quarter + Ind * Quarter + \epsilon_{b,i,t}$$

- *Loan Contract Term*: Loan covenant strictness (p.p.), average rate spread (bps.), capex or dividend restriction and count of capital-based covenants.
- *Bank Industry Presence* is measured as the lending share, i.e., dollar amount of outstanding loans extended by bank over total amount lent to the industry by all banks. I also use a firm-level HHI measure in the paper.

Main Results: Stricter Terms to Deter Competition

	Covenant Strictness	Average Drawn Spreads	Capital Strictness	Performance Strictness
Lending Share	1.950**	-0.018**	1.365**	0.666
	(0.031)	(0.014)	(0.020)	(0.476)
N	6,021	15,106	6,008	6,008
R^2	0.693	0.829	0.701	0.603
F & L Controls	Yes	Yes	Yes	Yes
Bank-Quarter FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes

IV Approach: Exogenous Variation in Lending Shares Derived from Bank Mergers

	Covenant Strictness	Average Drawn Spreads	Capital Strictness	Performance Strictness
Lending Share IV Estimates	4.433**	-0.037**	4.041***	2.735
	(0.048)	(0.031)	(0.156)	(0.005)
N	6,401	16,273	6,401	6,401
R^2	0.114	0.109	0.003	0.152
F & L Controls	Yes	Yes	Yes	Yes
Bank-Quarter FE	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes

Bank-Industry presence and loan terms could be jointly determined, or results may be drive by alternative explanations (e.g., bank specialization or relationship lending).

Complementary findings

Consistent with banks internalizing spillovers related to aggressive growth strategies taken by their borrowers, I find lenders with higher industry presence are...

1. Stricter with borrowers in more mature industries, where market growth potential is lower and firm gains in market share is more likely to be detrimental to its industry peers,
2. More likely to impose capex restrictions and less likely to include payout restrictions, reducing incentives for investment-based growth and the reinvestment of earnings,
3. Prone to include more capital-based covenants and require a higher equity stake.

	General Strictness	Capital Strictness	Capex Restriction	Payout Restriction	Capital Cov. Count
Lending Share	0.10	0.50	0.060**	-0.018***	0.024**
	(0.957)	(0.524)	(0.045)	(0.006)	(0.042)
Lending Share x Mature Industry	4.46**	2.09***			
	(0.36)	(0.001)			
F & L Controls	Yes	Yes	Yes	Yes	Yes
Bank-Quarter FE	Yes	Yes	Yes	Yes	Yes
Industry-Quarter FE	Yes	Yes	Yes	Yes	Yes
N	5,701	5,701	1,531	14,462	7,259
R^2	0.699	0.613	0.359	0.336	0.462

Main Contribution

- I present an explicit channel through which lenders with a high presence in an industry can reduce product market competition, complementing findings in Saidi and Streitz (2021).
- Covenants help limiting borrower's "action-contingent" risk (Demerjian, 2019), caused by risk-shifting incentives resulting from agency conflicts between equity and debtholders. I highlight that debt covenants are also used by lenders to protect their overall exposure at the industry level, preventing the consequences of borrower's pro-competitive actions on industry peers to which the bank also has a lending exposure.

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