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

IESE Business School
University of Navarra

Juan P. Gorostiaga

email: jgorostiaga@iese.edu

Summary

Departing from a traditional bilateral lender-borrower perspective allows to better understand how optimal loan contract terms of the marginal loan are determined by the pre-existing loan portfolio of the lender. Specifically, when exposed to competing borrowers in the same industry, the implementation of a pro-competitive growth strategy by one of the borrowers will affect industry peers to which the lender is also exposed.

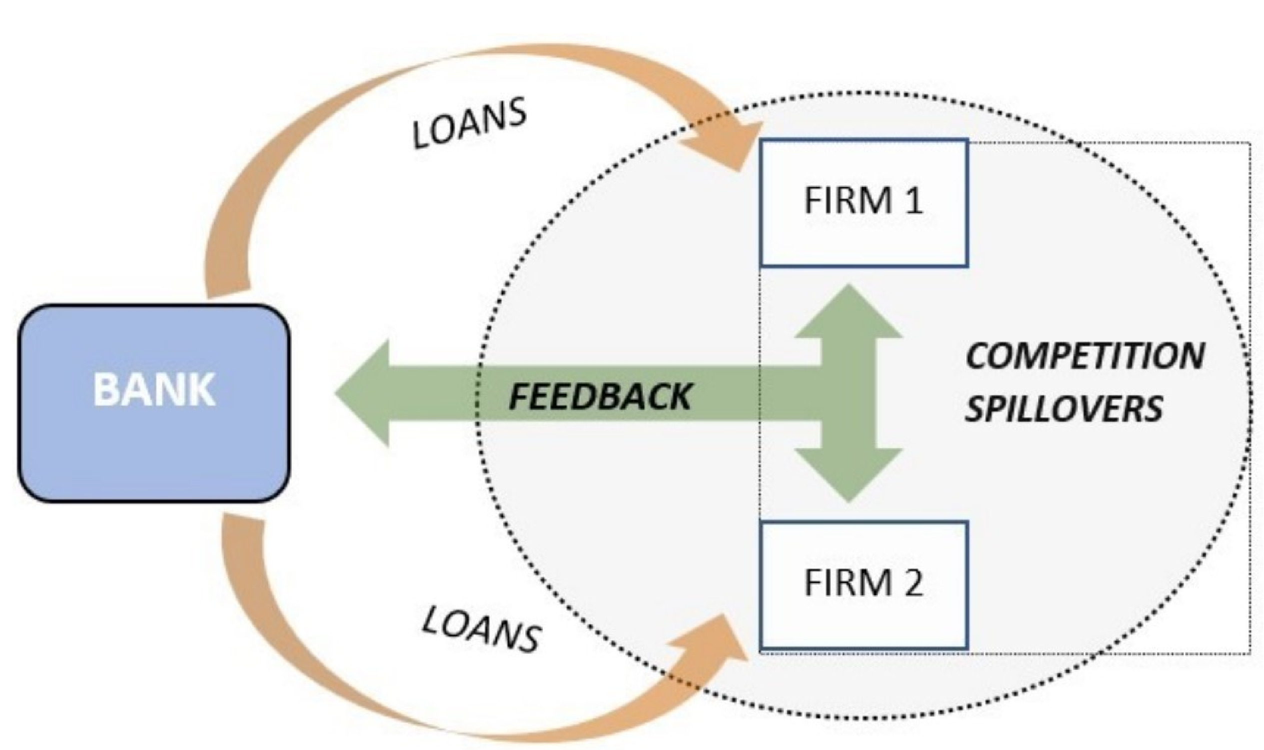
How do these banks mitigate the competition spillovers to their loan portfolio?

- Extending loans with stricter covenants to the firms in such industries, curbing growth appetite and taming product market competition.
- Stricter on capital covenants, which requires borrowers to put more 'skin-in-the-game' and aligns equity-debt incentives.

Stricter covenants allow for increased influence over corporate policy, even well outside default states. Lenders with an industry-wide exposure will prefer to increase the strictness of contract terms over and above to induce a conservative interaction between rival borrowers.

Internalizing competition spillovers

Figure 1. Industry-wide exposed lenders deter borrowers from taking 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).

Empirical model

Compare loan contract design from different bank-industry pairs, controlling for borrower risk and loan characteristics and accounting for unobserved time-varying heterogeneity at the bank (e.g., loan supply) or industry (e.g., industry credit demand).

$$\begin{aligned} Loan\ Contract\ Term_{b,l,i,t} = &\ Lending\ Share_{b,i,\overline{t-4}} \\ &+ firm\ controls_{l,i,t-1} + \delta Loan\ controls_{l,i,t} \\ &+ Bank * Quarter + Industry * Quarter + \epsilon_{b,l,i,t} \end{aligned}$$

- *Lending Share* (standardized): measured as dollar amount of outstanding loans extended by bank over total amount lent to the industry by all banks.
- *IV Approach* Exogenous additional increase in bank lending shares derived from bank mergers.

Stricter terms to prevent competition spillovers

	Covenant Strictness (p.p.)			
Lending Share	2.94^{***} (0.002)	0.14 (0.943)	2.32^{**} (0.021)	
Lending Share x Rivals default risk (Altman Z-Score)		3.99^{**} (0.32)		
Lending Share x Mature Industry			5.78^{**} (0.16)	
Lending Share IV Estimates				9.07^{***} (0.001)
N	4,373	3,412	4,360	4,377
R^2	0.693	0.689	0.692	0.052
F & L Controls	Yes	Yes	Yes	Yes
Bank-Time FE	Yes	Yes	Yes	Yes
Industry-Time FE	Yes	Yes	Yes	Yes

Complementary findings

Lenders with industry-wide exposure are...

1. Stricter when industry peers to which they have exposure are closer to default (Z-score).
2. 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,
3. Increased value accrues to the borrower in terms of lower debt cost and lower 'spreads-over-strictness' ratio (interest rate over covenant strictness). Lower industry risk (CDS Spreads).
4. Prone to include more capital-based covenants and require tangible net worth ('skin-in-the-game'). Shorter Maturity.
5. Lenders more likely to include payout restrictions and borrowers more likely to have a capex restriction, reducing incentives for investment-based growth and the reinvestment of earnings.

	Interest rate spreads	Spread over Strictness	Capital Covenants	Tangible Net Worth	Payout Restriction
Lending Share	-0.030^{**} (0.012)	-0.089^{***} (0.007)	0.063^{***} (0.005)	0.043^{**} (0.041)	-0.016^{**} (0.017)
F & L Controls	Yes	Yes	Yes	Yes	Yes
Bank-Time FE	Yes	Yes	Yes	Yes	Yes
Industry-Time FE	Yes	Yes	Yes	Yes	Yes
N	12,324	4,207	6,035	6,035	13,640
R^2	0.856	0.658	0.718	0.641	0.617

Main Contribution

- I highlight the importance of lender's pre-existing portfolio as a determinant of the loan contract terms for the marginal loan.
- I show lenders adjust loan covenant strictness over and above to tame competition and protect other firms to which they are also exposed, maximizing the value of their debt holdings at the industry level.
- This represents an explicit channel through which lenders with an industry-wide exposure reduce product market competition.

References

[1] Farzad Saidi and Daniel Streitz. Bank concentration and product market competition. *Review of Financial Studies*, 2021.

[2] Peter R Demerjian and Edward L Owens. Measuring the probability of financial covenant violation in private debt contracts. *Journal of Accounting and Economics*, 61, 2016.