Comment on

Lending Relationships and the Collateral Channel

by

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Review of this paper

- **Main question**
  - Strong bank-firm/CEO relationships → amplify or moderate collateral channel (CC hereafter)
    - CC: more (less) collateral ←→ more (less) financing and investment
- **Hypotheses**
  - H1: Relationships being substitutes for collateral → dampen CC
  - H2: Relationships being complements to collateral → amplify CC
- **Empirical model**

$$\begin{aligned} Investment_{i,t} = \; & \alpha_i + \delta_{j,t} + \mu_{k,t} + \phi \cdot Firm\,Controls_{i,t} \\ & + \beta \cdot Collateral_{i,j,t} + \kappa \cdot Relationship\,Length_{i,t} \\ & + \delta \cdot Collateral_{i,j,t} \times Relationship\,Length_{i,t} + \varepsilon_{i,t} \quad (2.1) \end{aligned}$$

  - α, δ, μ: Fixed effects (firm, region-time, bank-time)
  - β: CC ((+) expected)
  - δ: difference in CC depending on $RelationshipLength$
    - [Minor comment] two δs confusing
- **Test**: δ<0→H1, δ>0→H2

Review of this paper

- **Data**
  - Panel of UK firms, 2002-2013 from FAME (Bureau Van Dijk)
  - Uniqueness 1: "entire universe of UK companies" (Intro.)
    - [Comment] Misleading. I would specify "entire universe of UK incorporated companies" (no sole proprietorships)
  - Uniqueness 2: info on bank-firm (executive) relationships in terms of lending as well as personal mortgage
- **Findings**
  - 1) Support for CC: $\beta > 0$
  - 2) Support for the substitute hypothesis H1: $\delta < 0$
    - longer relationships → slower "accelerator" (narrower CC)
      - [Comment] "accelerator" --- misleading term
- **Additional findings**
  - 1) $\delta < 0$ only for long-term loans
  - 2) $\delta < 0$ only for private firms

Table 5: Corporate Relationships & the Collateral Channel

	(1)	(2)	(3)	(4)
Dependent Var.:			Investment	
Included Firms:		All		
Collateral	0.04***	0.04***	0.04***	0.04***
	(0.003)	(0.003)	(0.003)	(0.003)
R'ship Length		-0.03***	-0.02***	-0.05***
		(0.003)	(0.003)	(0.01)
Collateral × R'ship Length			-0.02***	-0.02***
			(0.002)	(0.002)
Land Prices × R'ship Length				-0.02***
				(0.002)

Review of this paper

- **Dealing with empirical challenges**
  - Endogeneity in collateral holdings? → *Collateral* defined as "Init… changes in prices" (A la Benmelch and Bergman 2009, Chaney et al. 2012)
  - Endogeneity due to correlation b/w collateral holdings and unobserved firm characteristics → Firm fixed effects
  - Effect of real estate price shock through demand channel… Opportunity, agglomeration) → Region-year fixed effects … 2016, Dougal, Parsons, and Titman 2015)
  - Effect of real estate price shock through banks' lending ca… → Bank-year fixed effects (Gan 2007, Flannery and Lin 2018)
  - Unobserved common determinan… Saiz (2010) measure to instrumen…
  - Correlation between investment and relationship length/collateral holding decisions due to confounding determinants ?
  - → Controlling firm size (Gertler and Gilchrist, 1994; Adelino, Scho… 2015), Firm age (Siemer, 2014), Credit score (Boot, Thakor, and Udell, 1991).
  - Triple interaction with Bank characteristics (w/ Relationship length and …llateral) (Schwert 2018)
  - Subsample of manufacturing firms (no non-tradable and real e… …at are sensitive to local economic conditions)
  - …nd more) Change base year for real estate holding, use commercial real estate …ices, use lagged *RelationshipLength*, investment excluding depreciatio… …fference in address in record and of operation, UK-based firms only

Variable choice (*)

Fixed effects: Maybe methodological contributions
← Already used in existing studies?

IV: Most convincing remedy for endogeneity
← Already used in existing studies?

Use of control variable (*)

Sample split (*)

Others (*)

(*) Not novel enough to stress as contributi… on

Review of this paper

- Further analysis: Personal lending relationships
  - Data: **Identity of Firms' executives and shareholders + Identity of potential mortgage holder on the director's house**
  - → **(1)** ***DirectorR'ships*** **(dummy)**
    - = 1 for firms with common bank-firm and bank-director relationships
    - → add $Collateral \times RelationshipLength \times DirectorR'ships$
  - **Finding: (+) and cancel out (-) of** $Collateral \times RelationshipLength$
    - Interpretation: Personal lending relationships are substitute for corporate relationships
  - → **(2)** ***Shareholder*** **(dummy)**
    - = 1 when a common director-bank relationship is that of a shareholder of the firm
    - → further interact with the main variables
  - **Finding:** $Collateral \times Relationship\ Length \times Common \times Shareholder$ **insignificant**
    - Non-shareholder directors - most likely high-level company executives - cannot pledge their own house as guarantee for

General comment

- Contribution
  - Evidence for CC --- new in UK (minor contribution)
    - Replication of Chaney et al. (2012 AER) using UK data and a similar method
  - Evidence for a difference in the work of CC depending on lending relationships – new (major contribution) 
    - New in this paper using an interaction with lending relationships
- Main comments
  - More work needed for the completion 
    - Especially on:
      - Theory part
      - Differences between mortgages and C&I loans
    - (see below)

1. Theory

- **(1) The sign of δ and the substitution or complementarity**
  - Finding of longer relationships dampening CC:
    - --- Yes, indeed interesting!
  - But the authors go further to speak to substitution/complementarity of collateral and relationship
    - --- Adequate? Necessarily?
  - **(1-1) Basic assumption violated?**
    - Implicit assumption when arguing substitution/complementarity:
      - Regardless of whether they are substitutes or complements, collateral and relationship are individually beneficial
      - → then, it's reasonable to ask whether substitutes or complements
    - But this paper consistently finds that relationship is NOT beneficial: $\kappa < 0$

$$\begin{aligned} Investment_{i,t} = \; & \alpha_i + \delta_{j,t} + \mu_{k,t} + \phi \cdot Firm\,Controls_{i,t} \\ & + \beta \cdot Collateral_{i,j,t} + \kappa \cdot Relationship\,Length_{i,t} \\ & + \delta \cdot Collateral_{i,j,t} \times Relationship\,Length_{i,t} + \varepsilon_{i,t} \quad (2.1) \end{aligned}$$

    - (Not necessarily inconsistent with evidence on relationship lending)

1. Theory

- **(1) The sign of δ and the substitution or complementarity of collateral and relationship**
  - But the authors go further to speak to substitution/complementarity
    - --- Adequate? Necessarily?
  - **(1-2) Theoretical background (1): On substitution**
    - What the authors resort to:
      - Gertler (1992), Holmstrom and Tirole (1997), Boot (2000)
    - Do these papers really predict the substitution in this paper's sense?
      - Indeed **informational asymmetry** and **collateral** plays big roles in these theories, but their **focus** is different(?)
      - Gertler 1992: financial propagation mechanism
      - Holmstrom and Tirole 1997: characterization of capital constraints and their on real/financial outcome
      - Boot 2000 (survey) or the banking literature: relationship and collateral individually matter
    - → (Please at least provide more account)

1. Theory

- **(1) The sign of δ and the substitution or complementarity of collateral and relationship**
  - But the authors go further to speak to substitution/complementarity
    - --- Adequate? Necessarily?
  - **(1-2) Theoretical background (2): On substitution/complementarity**
    - What the authors also resort to:
      - Manove, Padilla, and Pagano, (2001) **Lazy bank** hypothesis
      - Rajan and Winton (1995)
        - "Presence of **collateral** → Incentives to screen/monitor borrowers →More/less **information production**"
      - --- indeed theory on the substitution/complementarity
      - But what the authors find is somewhat different:
        - Different causality: "Longer **relationships** (more soft **information**) → more **investment**, **even** with **smaller** amount of **collateral**"
      - Closer when interpreted this paper's finding from opposite direction: "when there is **collateral** → (-) effect of longer **relationship** on **investment** mitigated"
        - But this is not a **substitution** that the authors claim

1. Theory

- **(1) The sign of δ and the substitution or complementarity of collateral and relationship**
  - But the authors go further to speak to substitution/complementarity
    - --- Adequate? Necessarily?
  - **(1-2) Theoretical background (3): On substitution**
    - What the authors also resort to:
      - Sette and Gobbi, 2015; Bolton, Freixas, and Gambacorta, 2016; Jiangli, Unal, and Yom, 2008
    - But these studies focus on the effect of the crisis, not specifically on drops in the collateral value?
    - **Causality** is also different (as in (1-2) (2))

1. Theory

- **(1) The sign of δ and the substitution or complementarity of collateral and relationship**
  - But the authors go further to speak to substitution/complementarity
    - --- Adequate? Necessarily?
  - **(1-2) Theoretical background (4): On complementarity**
    - What the authors also resort to:
      - Sharpe, 1990; Rajan, 1992; Xu, Wang, and Rixtel, 2015
      - But the first two are on rent extraction by lenders due to long-term relationships (more soft information), and do **not** (at least directly?) examine **collateral** taking
      - The third paper does examine rent extraction in the form of collateral taking, but the **causality** is also different (as in (1-2) (2))

2. Variables

- **(2-1) Variable *Collateral***

$$Collateral_{i,t} = Land\,Holdings_{i,2002} \frac{Land\,Prices_{j,t}}{Land\,Price_{j,2002}} \times \frac{1}{Turnover_{i,t-1}} \quad (3.1)$$

  - **"To proxy for collateral values, we use monthly regional repeat-sales house price data for 204 regions in England"**
    - Residential properties only? (offices, plants, … commercial properties?)
    - Land price? Housing price? (We need **both**???)
    - "We scale our measure of Collateral using the Turnover of the firm in the previous year"
      - Definition of "turnover"? [minor]
      - Why not asset? [minor]

2. Variables

- **(2-2) Variable *RelationshipLength***

$$Relationship\,Length_{i,b,t} = log\,(1 + Months_{i,b,t}),\ (3.2)$$

  - **Clarification**
    - "UK companies are required to report charges and mortgages (hereafter "charges") to Companies House [: please explain] within 21 days of their creation date"
    - → "a textual algorithm to match registered charges to UK banks and building societies [: please explain]"
    - → *RelationshipLength*
      - "we use the charge creation date to proxy for the length"
        - [True?: = date of the analysis – date of the charge creation?]"
      - firms with multiple banks
        - average Relationship Length for all of the outstanding banking
      - [Minor] What is *Months* above?
    - "We exclude firms which do not have any outstanding bank charges" [Any bias?]
  - **Question**
    - Relationship length measured for mortgage relationships: Residential?
    - Even commercial mortgages: ordinary commercial & industrial Loans?

2. Variables

- **(2-3) Instrumental variable for land (house?) price**
  - **Saiz (2010) measure**
    - Estimated amount of developable land in U.S. metropolitan areas
      - As a measure of housing supply elasticity
    - Any better measure for commercial properties (properties for businesses)?

- **Common concern ((2-1) through (2-3))**
  - Difference between residential mortgage and commercial and industrial loans

3. Suggested references

- **Collateral channel** & **bank lending channel** with **strong** identification: Uesugi, Miyakawa, Hosono, Ono, and Uchida "Collateral Channel versus Bank Lending Channel: Evidence from a massive earthquake", mimeo. (focusing on the effect of the Tohoku **Earthquake**)
- "our paper adds to a nascent literature on lending relationships between **banks** and **individuals within firms**" → Karolyi (2018)
  - ← relatively richer literature on relationships between (**individuals** within) **firms** and **individuals within banks**
    - Indicated by Berger and Udell (2002 EJ)
    - **Loan officers** and firms: Uchida, Udell and Yamori (2012 JFI)
    - **Branch managers** and firms: Hattori, Shintani and Uchida (2015 JMCB)
    - **Trust** between **loan officers** and **managers** of the firms: Moro and Fink (2013 JBF)
- "bad-time "**insurance**" lenders" (top of p.7)
  - Berlin and Mester (1998): (implicit) interest rate **risk sharing** (insurance) provided by **relationship lenders**

4. Analysis on personal lending relationships

- **Further analysis: Personal lending relationships**
  - Data: **Identity of Firms' executives and shareholders + Identity of potential mortgage holder on the director's house**
  - → **(1)** ***DirectorR'ships*** **(dummy for common bank-firm and bank-director relationships**
    - →
  - **Finding:** ***Collateral* × *RelationshipLength* × *DirectorR'ships*** **(+) and cancel out (-) of** ***Collateral* × *RelationshipLength***
    - Interpretation: Personal lending relationships are substitute for corporate relationships
      - [Comment] What do you specifically mean? Economically?
  - → **(2)** ***Shareholder*** **(dummy for common director-bank relationship of a shareholder of the firm)**
  - **Finding:** ***Collateral* × *Relationship Length* × *Common* × *Shareholder*** **insignificant**
      - [Comment] Too complex a specification to interpret the results
      - [Comment] Sufficient number of obs. with = 1 for (1) and (2)?

Minor comments

- More **descriptive statistics** needed
- Investment "**dynamics**" (in different parts)
  - misleading term: the analysis is basically static (although the data are panel)
- "it is less clear whether this (= that lending **relationships** support lending during downturns) affects **real outcomes**" (p.5)
  - No studies on the real effects?
- It is not clear what the papers refereed to in **footnote 4** are for
- "We create a dummy ***Common Relationships***" (p.24)
  - An older label I guess (*DirectorR'ships* now?)
- P.25 "peldging" → "pledging"

End of discussion