Screening and Monitoring by Inattentive Corporate Loan Officers

Janet Gao and Joseph Pacelli
Indiana University (Kelley)

Stephen A. Karolyi
Tepper School of Business, Carnegie Mellon University

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Motivation

- Fixed loan officer characteristics affect loan allocations and terms – Gao et al. '17; Herpfer '17
  - Heterogeneity in ability, relationships, or information
- **This paper:**

  Does this vary over time for the same loan officer?
- **Our idea:**
  - Loan officers acquire/process private information – Gao et al '17; Herpfer '17
    - Depends on costly attention and effort
  - Sharing information within bank reduces human capital – Petersen '17

  → Amplification of attention constraints for one loan officer

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→ *Distracted loan officers are deficient at screening, pricing, and monitoring their borrowers...*

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    - Inelastic supply of loan officer human capital means distractions amplify credit cycle
    - Spillover effects of distracting events on *other* borrowers via loan officer connections

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  - General inference about limited attention in capital allocation

Data

- Dealscan
  - Loan terms, borrower/lender identifiers, bank portfolio size...
- Compustat
  - Borrower controls (i.e., *Size*, *Age*, *Profitability*, *Tangibility*, *M/B*, *Leverage*, *Rated*)
- Loan officers:
  - Extract signatures from SEC filings (i.e., exhibit attachments to 8-K, 10-K, or 10-Q), cross-validate with LinkedIn
    - 4,761 loans by 2,285 loan officers (from lead bank only)
    - >$7.3 trillion between 1992–2012
  - Loan officer's portfolio is loans from the same bank to borrowers in officer's primary industry/state

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Data

Section 7.13 QUALIFIED CREDIT FACILITY. The parties hereto acknowledge and agree that by virtue of duly authorizing, executing and delivering this Agreement, the Existing Credit Facility shall constitute a Qualified Credit Facility as defined in the Indenture.

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IN WITNESS WHEREOF, the parties hereto have caused this Intercreditor & Agency Agreement to be executed by their respective officers or representatives hereunto duly authorized as of the day and year first above written.

HEXCEL CORPORATION
as Company

By:/s/ Stephen C. Forsyth

Name: Stephen C. Forsyth
Title: Executive Vice President
and Chief Financial Officer

FLEET CAPITAL CORPORATION
as Intercreditor Agent and Security Trustee

By:/s/ Edgar Ezerins

Name: Edgar Ezerins
Title: Senior Vice President

FLEET CAPITAL CORPORATION
as Existing Facility Agent

By:/s/ Edgar Ezerins

Name: Edgar Ezerins
Title: Senior Vice President

HSBC BANK USA
as Joint Collateral Agent

By:/s/ Deirdra N. Ross

Name: Deirdra N. Ross
Title: Assistant Vice President

Borrower CFO

Loan Officer

What is distracting loan officers?

- Goal:
  - Identify events that (i) require significant time and energy from loan officers, and are (ii) relevant to all loan officers, but (iii) are not informative about *other* decisions

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  - Time intensive discussions with borrower, syndicate partners, legal team, etc.
- *Distraction* based on refinancing events taking place *elsewhere* in the loan officer's portfolio

Empirical design

- Baseline tests:

$$Y_{\mathrm{it}} = \beta_1 Distraction_{\mathrm{it}} + \beta_2 X_{\mathrm{ibnst}} + \beta_3 PortfolioSize_{\mathrm{it}} + u_{\mathrm{b\times t}} + u_{\mathrm{n}} + u_{\mathrm{s}} + u_{\mathrm{i}} + e_{\mathrm{ibnst}}$$

u_{i}: control for fixed differences across loan officers

$u_{\mathrm{b\times t}}$: control for time-varying bank policies/constraints

u_{n}: control for fixed borrower industry effects

u_{s}: control for fixed borrower state effects

Identification concerns

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$\rightarrow$ *Monitoring tests use RDD with covenant thresholds*

Loan pricing and performance

Dependent variable: *Spread*	
Distraction	-11.63**
	(-2.40)
Firm Controls	Yes
Fixed Effects:	
Bank × *Year*	Yes
Loan officer	Yes
Borrower Industry	Yes
Borrower State	Yes
R^2	0.72
Obs.	5,758

- Distracted loan officers issue loans with ***12 bps*** lower spreads

Loan pricing and performance

Dependent variable: *CreditEvent*	
Distraction	0.0495**
	(3.10)
Firm Controls	Yes
Fixed Effects:	
Bank × Year	Yes
Loan officer	Yes
Borrower Industry	Yes
Borrower State	Yes
R^2	0.55
Obs.	6,514

- Distracted loan officers issue loans that are **5 p.p.** more likely to have a negative credit event

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- Not compensated with ex ante differences in terms...

XS heterogeneity

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  - *More educated* – have degrees from top 10 institutions
  - *More mobile* – frequent promotions
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- Banks are less effected when banks are:
  - *Less hierarchical* – no subsidiary/parent companies
  - More likely to have *substitute* loan officers (i.e., same geographic/industry focus as the distracted officer)

Monitoring

- Control is transferred to lenders when borrowers breach a covenant (e.g., financial covenant threshold)
  - Lenders reduce borrower investment with control – Chava & Roberts '08

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- Do distracted loan officers monitor less efficiently?

$$Y_{jt} = \beta_1 Distraction_{it} + \beta_2 Violation_{jt} + \beta_3 Distraction_{it} \times Violation_{jt} + f(Slack_{jt}) + u_n + u_s + u_i + e_{ibnst}$$

- Y is contemporaneous investment or incidence of future credit events

- Expect $\beta_3 > 0$ if distraction reduces monitoring effects

Monitoring

Dependent variable: *Investment*	
Distraction	-0.001
	(-0.77)
Violation	-0.011***
	(-8.22)
Distraction × *Violation*	0.006**
	(4.31)
Controls	Yes
R^2	0.42
Obs.	38,717

- Borrowers with a violation reduce investment ***half*** as much with a distracted loan officer!

Monitoring

Dependent variable: *Default* (3yrs)	
Distraction	-0.001
	(-49)
Violation	-0.004
	(-1.55)
Distraction $\times$ *Violation*	0.010***
	(3.63)
Controls	Yes
R^2	0.42
Obs.	40,004

- Borrowers with a violation are ***1 p.p.*** more likely to default in the next 3 years

Summary

- Little attention paid to inattention in the context of decision-making inside the firm
  - Capital allocation and monitoring
- Distracting events affect loan officer performance in information-driven tasks of screening and pricing new loans and monitoring existing borrowers
  - XS evidence suggest that innate ability and bank organizational structure mediate these effects
- Even sophisticated decision-makers are impacted by inattention, may generalize to other contexts where discrete decisions are less observable, e.g., CEOs, divisional managers, etc.

Thank you!