Distracted Institutional Investors and Bank Liquidity Creation

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Motivation

- Increasing trend in institutional ownership in public firms in the U.S.
  - ➢ As of end 2017, hold 72% of 10,000 largest listed U.S. firms (OECD Report, 2019).
- Institutional investors are important players in corporate governance.
- They monitor and discipline the firm.
- However, their monitoring may be imperfect.
- Their distraction may yield some problematic consequences.
- For nonfinancial firms,
  - ➢ Kempf, Manconi and Spalt (2017): managerial entrenchment
  - ➢ Liu, Low, Masulis and Zhang (2020): poor board oversight

Motivation

- It is important to analyze the effects of institutional investors' distraction on financial firms.
- Financial firms are different than nonfinancial firms.
  - ➢ They are highly regulated.
  - ➢ They have access to safety net that may cause moral hazard.
  - ➢ They have crucial roles in the financial system and real economy.
- Institutional investors as one of the largest shareholders may or may not have an impact besides the supervisory authorities.

Motivation

- The effect is unclear *ex-ante.*
- Distraction may lead to an increase or a decrease in bank liquidity creation.
- Bank liquidity creation is one of the primary function of banks.
- It is shown to boost real GDP (Berger and Sedunov, 2017).
- It helps investors to plan their future investments and the public to make purchases (Boot et al., 1993; Berger and Bouwman, 2017).

Motivation

- Distraction may result in banks being less careful in their portfolio choices, lowering their credit standards, increasing lending, and creating excessive liquidity for the nonbank public.
- Loan growth may lead to an increase in loan loss provisions (Foos, Norden, and Weber, 2010).
- Excessive bank liquidity creation
  - ➢ may create asset price bubbles, which increase the odds of a systemic event (Acharya and Naqvi, 2012).
  - ➢ especially off-balance sheet, is an early warning signal of financial crises (Berger and Bouwman, 2017).

Research Question and Answer

- **Q:** Do distracted institutional investors lead to more or less bank liquidity creation for nonbank public?

- **A:** Distracted institutional investors result in more on- and off-balance sheet liquidity creation and this results in higher nonperforming loans ratio.

Hypotheses

- **H1a ("Distracted Shareholder Hypothesis"):**
  - As institutional investors become more distracted, banks increase their liquidity creation, *ceteris paribus.*

- **Evidence from the nonfinancial firm literature:**
  - Distracted institutional investors may use less voice and threat of exit

    (Kempf, Manconi, Spalt, 2017; Liu, Low, Masulis, Zhang, 2020)
  - More managerial entrenchment

    (Kempf, Manconi, Spalt, 2017; Liu, Low, Masulis, Zhang, 2020)
  - Lower board oversight

    (Keys, Mukherjee, Seru, and Vig, 2009; Mehran, Morrison, and Shapiro, 2011; Muller-Kahle and Lewellyn, 2011; Yeh, Chung, and Liu, 2011; Fahlenbrach, Prilmeier, and Stulz, 2017; Liu, Low, Masulis, Zhang, 2020)

Hypotheses

- **H1b ("Quiet-life Hypothesis"):**
  - As institutional investors become more distracted, banks decrease their liquidity creation, *ceteris paribus.*

- **Evidence from the literature:**
  - Bank managers may prefer to live the quiet life with lower monitoring intensity

    (Hicks, 1935; Bertrand and Mullainathan, 2003)
  - Lower shareholder-friendly boards, and risk alignment between managers and shareholders, less risk

    (Pathan, 2009; Gropp and Köhler, 2010; Conyon, Judge, and Useem, 2011; Fahlenbrach and Stulz, 2011; Beltratti and Stulz, 2012; Iqbal, Strobl, and Vähämaa, 2015; Díaz and Huang, 2017; Anginer, Demirguc-Kunt, Huizinga and Ma, 2018)

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Measures

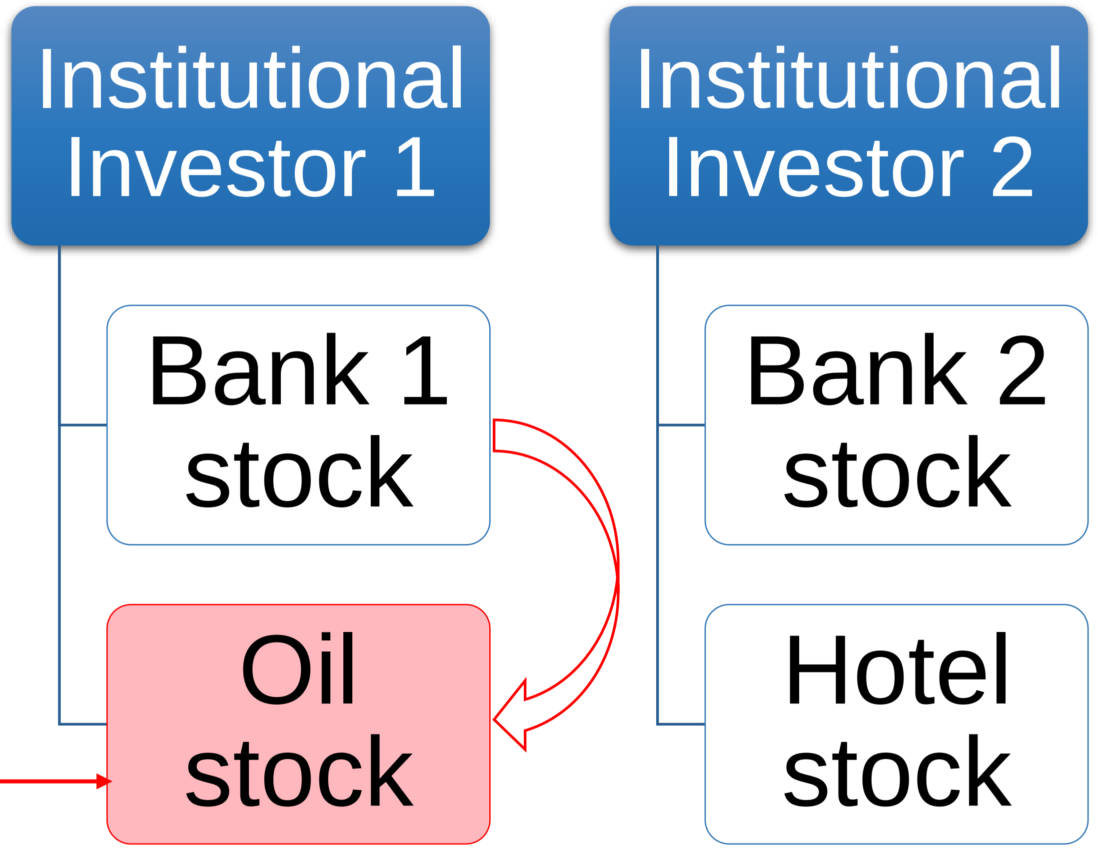
- *Liquidity creation* measures by Berger and Bouwman (2009) normalized by gross total assets (*GTA*).
  - Total, asset, liability, off-balance sheet side liquidity creation

- All bank activities (assets, liabilities, equity, and off-balance sheet activities) are classified according to their liquidity.
  - *LC(total) = LC(asset) + LC(liab) + LC(off)*
  - *LC(asset)* = (+1/2) x illiquid assets + (-1/2) x liquid assets
  - *LC(liab)* = (+1/2) x liquid liabilities + (-1/2) x illiquid liabilities and equity
  - *LC(off)* = (+1/2) x illiquid guarantees + (-1/2) x liquid derivatives

Portfolios of Two Institutional Investors

- Institutional Investor 1
  - Bank 1 stock
  - Oil stock
- Institutional Investor 2
  - Bank 2 stock
  - Hotel stock

Shock Occurs In An Unrelated Industry



IS_q^{IND}=1

Shock

Measures

- *Distraction* measure by Kempf, Manconi, and Spalt (2017).

$$D_{fq} = \sum_{i \in F_{q-1}} \sum_{IND \neq IND_f} IS_q^{IND} \times w_{iq-1}^{IND} \times w_{ifq-1}$$

  - IS_q^{IND} whether an attention-grabbing event occurs in other industries,
  - w_{iq-1}^{IND} whether institutional investor *i* considers this shock as important,
  - w_{ifq-1} whether affected institutional investors are significant monitors of a specific bank *f*.

Regression methodology

$$Y_{i,t} = \beta\, Distraction_{i,t-1} + \delta\, X_{i,t-1} + \theta\, W_{i,t-1} + \alpha_i + \tau_t + \epsilon_{i,t}$$

- Dependent variables (Y):
  - *LC(total)/GTA, LC(asset)/GTA, LC(liab)/GTA, LC(off)/GTA*
- Key exogenous variable:
  - *Distraction*
- Bank controls (X):
  - Institutional investor ownership, institutional investor ownership concentration, Ln(bank size) and its square, bank capital, and bank-level competition (HHI Deposits)
- Controls for demand-side effects (W):
  - State-level measures of firms' average Tobin's Q, and Ln(population)
- Bank fixed effects: α_i
- Time fixed effects: τ_t
- Standard errors are clustered at the bank level.

Sample and Data

- 3,860 publicly listed US banks from 1986:Q1 to 2016:Q4
- 70,233 bank-quarter observations
- Distraction data: Kempf’s website
- Liquidity creation data: Bouwman’s website
- Bank-specific variables: Call Reports
- Portfolio data at the investor level: CDA/Spectrum of 13-F filings
- Financial reporting data from Compustat
- Dollar values are adjusted to real 2016 values via implicit GDP price deflator.
- All controls are winsorized at 1% and 99% level.

Results

Summary Statistics

	N	Mean	StDev	25th Percentile	Median	75th Percentile
Dependent variables						
LC(total) / GTA	70,233	0.292	0.185	0.166	0.285	0.416
LC(asset) / GTA	70,233	0.007	0.130	-0.073	0.010	0.089
LC (liab) / GTA	70,233	0.202	0.065	0.162	0.203	0.244
LC (off) / GTA	70,233	0.076	0.060	0.029	0.060	0.107
Key independent variable (lagged)						
distraction	70,233	0.139	0.057	0.108	0.139	0.174
Control variables (lagged)						
Inst. Inv. Ownership (%)	70,233	0.375	0.203	0.228	0.368	0.505
Inst. Inv. Concentration	70,233	0.689	0.594	0.304	0.490	0.868
GTA ($ billions)	70,233	10.529	80.540	0.185	0.483	2.685
Capital ratio	70,233	0.058	0.027	0.040	0.051	0.065
HHI	70,233	0.118	0.103	0.046	0.101	0.157
Tobin's Q	70,233	2.074	0.780	1.645	1.878	2.265
Ln(Population)	70,233	1.817	0.832	1.421	1.786	2.439

Results

Effects of institutional investor distraction on bank total liquidity creation and its components

	Dep. = *LC(total) / GTA* (1)	Dep. = *LC(asset) / GTA* (2)	Dep. = *LC (liab) / GTA* (3)	Dep. = *LC (off) / GTA* (4)
distraction	4.1% **0.086*****	135.0% **0.068*****	**-0.006**	3.1% **0.017****
	(3.03)	**(2.91)**	**(-0.61)**	**(1.97)**
Inst. Inv. Ownership (%)	0.015	0.017	-0.004	0.004
	(0.81)	(1.30)	(-0.68)	(0.71)
Inst. Inv. Concentration	0.009*	0.002	0.000	0.003**
	(1.67)	(0.45)	(0.34)	(2.22)
Ln(GTA)	0.041***	0.026***	0.004	0.010***
	(3.42)	(3.69)	(1.03)	(3.09)
Sqr. Ln(GTA)	-0.001***	-0.001***	-0.001***	-0.000
	(-3.06)	(-3.00)	(-4.23)	(-1.47)
Capital ratio	-0.425**	0.489***	-0.831***	0.022
	(-2.33)	(4.50)	(-16.10)	(0.41)
HHI	0.018	-0.002	0.013**	0.007
	(0.96)	(-0.12)	(2.40)	(1.31)
Tobin's Q	0.001	0.001	0.000	0.001*
	(0.59)	(0.39)	(0.66)	(1.78)
Ln(Population)	0.032**	0.024**	0.002	0.004
	(2.19)	(2.02)	(0.49)	(1.32)
Bank FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Observations	70,233	70,233	70,233	70,233
Adj.R-squared	0.812	0.798	0.809	0.801

Results

The effects of institutional investor distraction on selected bank balance sheet and off-balance sheet categories

	(1)	(2)	(3)	(4)	(5)
Dependent Variables	*Cash/GTA*	*Securities/GTA*	*Loans/GTA*	*Deposits/GTA*	*Loan cmt./GTA*
distraction	7.2% **-0.031*** (-3.192)**	**0.012 (0.491)**	1.4% **0.040** (2.216)**	**-0.030 (-1.560)**	3.8% **0.037** (2.198)**
Controls	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes
Observations	70,233	70,233	70,233	70,233	70,233
Adj.R-squared	0.623	0.758	0.834	0.842	0.792

Results

The effects of institutional investor distraction on nonperforming loans ratio

	(1)	(2)	(3)	(4)
Dependent Variables	$(NPL/TL)_{t+1}$	$(NPL/TL)_{t+2}$	$(NPL/TL)_{t+3}$	$(NPL/TL)_{t+4}$
distraction	**-0.007**	**0.012***	**0.014****	**0.014***
	(-1.47)	**(1.96)**	**(2.21)**	**(1.73)**
Controls	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
Observations	65,365	62,767	59,601	56,601
Adj.R-squared	0.523	0.613	0.699	0.751

Regression methodology

- Endogeneity concerns
  - Corporate governance may be a driving force for both *distraction* and *LC*.
  - Increases in *LC* could create *distraction* for institutional investors, creating a reverse causality problem.

- Addressing endogeneity concerns
  - Lagged independent variables mitigate any reverse causality.
  - *Distraction* is likely exogenous because banks have well-diversified portfolios and generally not significantly affected by one industry.
  - Robust results after a horserace between proxies of weak corporate governance (Bennett, Sias, and Starks, 2003) and *distraction*.

Results

Alternative Explanation: Weak Corporate Governance Proxies by Bennett, Sias, and Starks (2003)

	LC(total) / GTA			LC(asset) / GTA			LC (liab) / GTA			LC(off) / GTA		
Dependent Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**
distraction	**0.086***	**0.090***	**0.085***	**0.068***	**0.069***	**0.067***	**-0.006**	**-0.006**	**-0.007**	**0.017**	**0.018**	**0.017***
	(3.03)	**(3.10)**	**(2.96)**	**(2.91)**	**(2.95)**	**(2.86)**	**(-0.61)**	**(-0.63)**	**(-0.68)**	**(1.97)**	**(2.00)**	**(1.95)**
Inst. Inv. Ownership (%)	0.015			0.017			-0.004			0.004		
	(0.81)			(1.30)			(-0.68)			(0.71)		
Ownership (Public Pension Funds)		-0.104			0.016			-0.002			-0.006	
		(-0.77)			(0.16)			(-0.05)			(-0.13)	
Long-term Inst. Inv. Ownership			0.048**			0.042***			0.007			0.006
			(2.44)			(2.65)			(0.96)			(0.96)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	70,233	70,233	70,233	70,233	70,233	70,233	70,233	70,233	70,233	70,233	70,233	70,233
Adj.R-squared	0.812	0.812	0.812	0.798	0.797	0.798	0.809	0.809	0.809	0.801	0.801	0.801

Results

Robustness

- **Controlling for**
  - types of institutional investors,
  - blockholders,
  - Bushee (1998) classification of institutional investors,
  - Institutional investor horizon by Yan and Zhang (2009) & Gaspar, Massa, and Matos (2005).

Results

Subsample: Normal vs Crises Times (Berger and Bouwman, 2013)

Two banking crises: Credit crunch (1990:Q1–1992:Q4), subprime lending crisis (2007:Q3–2009:Q4).
Three market crises: Stock market crash(1987:Q4), Russian debt crisis and Long-Term Capital Management bailout (1998:Q3–1998:Q4), bursting of thedot.com bubble and September 11 terrorist attack (2000:Q2–2002:Q3).

Dependent Variables	***LC(total) / GTA***		***LC(asset) / GTA***		***LC (liab) / GTA***		***LC (off) / GTA***	
	(1) Normal	**(2) Crises**	**(3) Normal**	**(4) Crises**	**(5) Normal**	**(6) Crises**	**(7) Normal**	**(8) Crises**
distraction	**0.079****	**0.109*****	**0.053****	**0.086*****	**0.002**	**-0.004**	**0.011**	**0.028*****
	(2.28)	**(2.74)**	**(2.00)**	**(2.65)**	**(0.17)**	**(-0.26)**	**(1.06)**	**(2.77)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	45,768	24,465	45,768	24,465	45,768	24,465	45,768	24,465
Adj.R-squared	0.818	0.852	0.795	0.848	0.819	0.833	0.814	0.842

Results

Subsample: High vs Low Uncertainty Times (Baker, Bloom and Davis, 2016: financial regulation uncertainty)

Dependent Variables	***LC(total) / GTA***		***LC(asset) / GTA***		***LC (liab) / GTA***		***LC (off) / GTA***	
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
	Low	**High**	**Low**	**High**	**Low**	**High**	**Low**	**High**
distraction	**0.011**	**0.140*** **	**0.008**	**0.122*** **	**-0.002**	**-0.010**	**-0.005**	**0.028** **
	(0.41)	**(3.80)**	**(0.38)**	**(3.97)**	**(-0.17)**	**(-0.73)**	**(-0.59)**	**(2.48)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	35,519	34,714	35,519	34,714	35,519	34,714	35,519	34,714
Adj.R-squared	0.839	0.822	0.828	0.814	0.830	0.825	0.823	0.814

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Results

Subsample: Small vs Large Banks

Dependent Variables	***LC(total) / GTA***		***LC(asset) / GTA***		***LC (liab) / GTA***		***LC (off) / GTA***	
	(1) Small Banks	**(2) Large Banks**	**(3) Small Banks**	**(4) Large Banks**	**(5) Small Banks**	**(6) Large Banks**	**(7) Small Banks**	**(8) Large Banks**
distraction	**0.074***** **(2.74)**	**1.530**** **(2.10)**	**0.073***** **(3.13)**	**1.298**** **(2.68)**	**-0.009** **(-0.88)**	**0.031** **(0.13)**	**0.009** **(1.05)**	**0.326** **(1.37)**
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bank FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	62,496	1,205	62,496	1,205	62,496	1,205	62,496	1,205
Adj.R-squared	0.818	0.889	0.810	0.903	0.820	0.894	0.764	0.611

Conclusion

- As institutional investors become more distracted, banks create more total, asset-side and off-balance sheet side liquidity.
- Banks hold less cash, issue more loan and loan commitments when their institutional investors are distracted.
- It is likely a bad consequence as nonperforming loans ratio increases.
- These results are more pronounced for large banks, which may have important consequences in terms of potentially causing financial crises.
- Distraction may lead to more pronounced adverse outcomes during financial crises and highly uncertain times.

Policy Implications

- When institutional investors are distracted, supervisors could pay more attention to the financial institutions as this situation forecasts some unfavorable social consequences.
- Institutional investor distraction could be considered as one of the adverse scenarios in the stress tests.

Potential Future Research

- Analyzing the loans at the intensive margin via the loan contract terms.
- Examining the performance measures of the banks after the distracted periods.
- Investigating the interaction between internal corporate governance mechanisms (such as board independence, CEO duality, executive compensation, and insider ownership) and the distraction of institutional investors.

THANKS!

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