Why are firms with more managerial ownership worth less?

by

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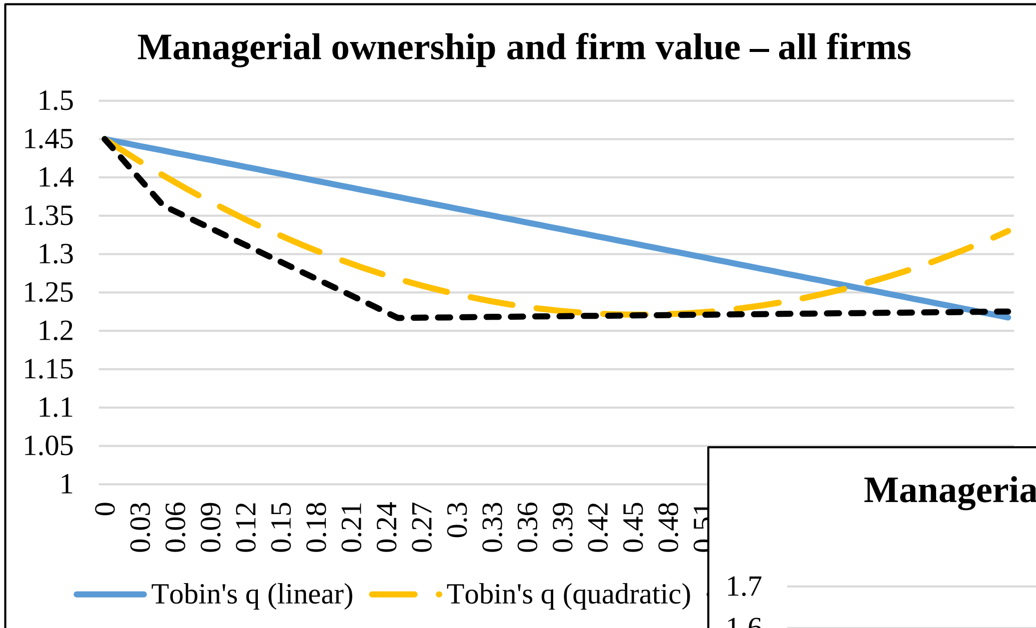
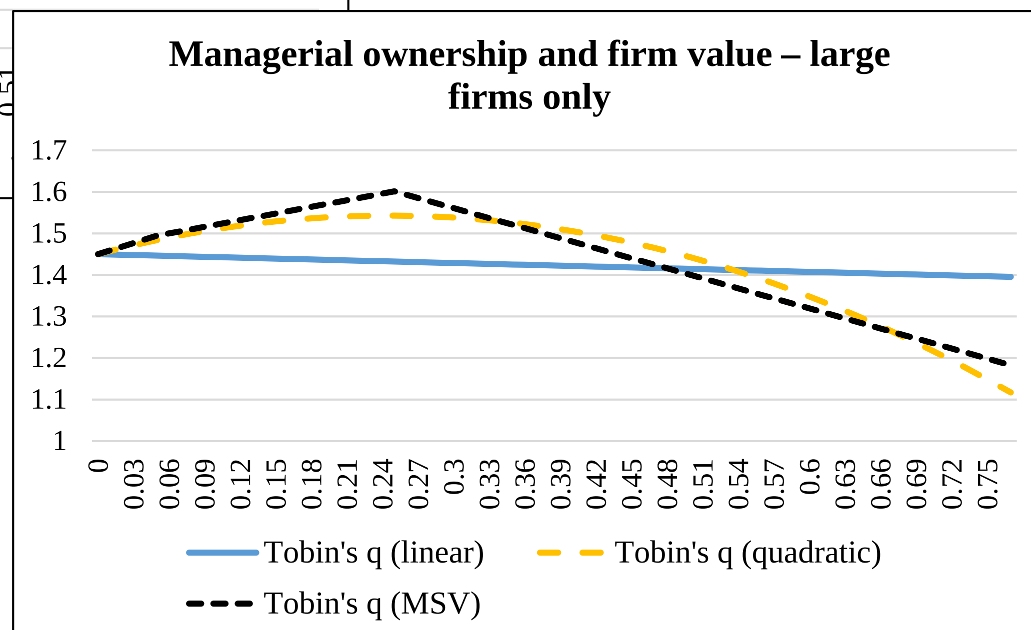
Motivation

- Are corporations with more insider ownership worth more?
- Theory states that insider ownership has a positive impact on incentives but can have a negative impact by facilitating entrenchment (Morck, Shleifer, Vishny; Harris and Raviv; Stulz)
- Best known empirical evidence (Morck, Shleifer, Vishny; McConnell and Servaes): Firm value is positively correlated with managerial ownership over some range of ownership and, beyond that range, becomes negatively correlated
- Limitation of evidence is that it uses databases with a few cross-sections that have few small and young firms
- We examine the relation using a dramatically larger database both in the cross-section and the time-series: 28 years, on average 2,500 firms per year

Main result of our paper





Why is the relation between firm value and ownership negative?

- Managers own more shares at IPO than they want
  - Face frictions when reducing ownership
  - Frictions especially large if stock is illiquid
- If stock is liquid after IPO, managers sell
- Firms with liquid stock are successful, i.e. have high q

➢ High q firms tend to have low managerial ownership

➢ Managerial ownership depends on a firm's past history

Outline

- Introduction
- Data
- Firm value and managerial ownership
- Firm value, managerial ownership, and liquidity history
- Managerial ownership and liquidity – towards a causal statement
- Conclusion

Data

- Section 16(a) of the Securities Exchange Act of 1934 requires directors and executive officers to file reports of their ownership with SEC

- Data from 1988 – 2003 from CompactDisclosure
- Data from 2004 – 2016 hand collected, using our own python script crawling proxy statements
- Exclude dual class firms, financial firms, utilities

- Large sample of min 1,450 and max 2,500 firms per year

Main dependent and independent variables

Definitions

- **Tobin's q as a proxy for firm value**
  - Follow Kaplan and Zingales (1997)
  - Tobin's q = market value of assets / book value of assets

- **Two proxies of illiquidity of a stock**
  1. Amihud (2002) illiquidity measure
  2. Fong, Holden, and Trzcinka (2017) percent-cost illiquidity measure

Liquidity and performance history

- Classify stocks each year
  - Liquidity is categorized as “high” if value is in the bottom quartile of the respective illiquidity measure relative to the entire CRSP universe of firms
- Normalize the number of years in a high liquidity state by number of years in CRSP
- Same procedure for performance history

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Firm value and managerial ownership (Table 2, Fama-MacBeth)

	All firms			500 largest firms		
	(1)	(2)	(3)	(4)	(5)	(6)
Ownership	-0.302***		-1.005***	-0.071		0.757***
	(-5.70)		(-6.84)	(-0.79)		(2.99)
Ownership^2			1.103***			-1.545***
			(5.14)			(-3.29)
Ownership 0% to 5%		-1.738**			0.892**	
		(-2.48)			(2.28)	
Ownership 5% to 25%		-0.731***			0.533**	
		(-6.12)			(2.11)	
Ownership over 25%		0.016			-0.805***	
		(0.018)			(-3.08)	
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm controls as in Himmelberg et al.	Yes	Yes	Yes	Yes	Yes	Yes
Observations	49,972	49,972	49,972	12,632	12,632	12,632
R-squared	0.23	0.23	0.23	0.46	0.46	0.46

Firm value and managerial ownership - summary

- Firm value and managerial ownership in a large sample of firms is negatively correlated
- Opposite to what the literature found and opposite to 40 years of agency research
- Very robust to a variety of regression techniques

- Rest of the paper: Why?

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Firm value, managerial ownership and liquidity history

- Liquidity tends to be higher for firms that are
  - larger
  - more mature
  - better performing
  - have less volatility
  - fewer information asymmetries

- Or, if you want, liquidity is higher if a firm “has made it”
- Liquidity is also of first order importance for a manager to be able to sell his own company’s shares

Firm value, managerial ownership and liquidity history

H1: The negative relation between Tobin's q and managerial ownership is concentrated in firms with a history of stock illiquidity.

H2: Firms whose managerial ownership fell more since the IPO / initial sample observation have a higher Tobin's q.

H3: If a firm had more years of high liquidity in the past, its current managerial ownership is lower.

Table 4: Tobin's q and ownership conditioning on past liquidity

	High liquidity		Low liquidity	
	Amihud	FHT	Amihud	FHT
Ownership	1.219***	0.325	-0.636***	-1.249***
	(4.39)	(1.51)	(-3.39)	(-4.89)
$Ownership^2$	-1.062**	-0.591	0.667**	1.147***
	(-2.14)	(-1.57)	(2.72)	(3.71)
Observations	13,521	13,758	11,493	10,702
HHP controls	Yes	Yes	Yes	Yes
Year FE	No	No	No	No
Industry FE	Yes	Yes	Yes	Yes

Summary of Table 4

- Firms with a poor liquidity history have a fundamentally different relation between Tobin's q and managerial ownership than firms with a good liquidity history (supportive of H1)

Table 5: The effect of the ownership wedge on Tobin's q

- Test whether firms whose managerial ownership fell more since the first sample observation or the IPO have a higher Tobin's q

- Create ownership wedge variable:

  wedge = initial ownership - ownership in period t-1

Table 5: The effect of the ownership wedge on Tobin's q

	All proxy statements			First post-IPO proxy statement
	All firms	Young firms	Mature firms	All firms
Ownership wedge	0.337***	0.355***	0.350***	0.543**
	(3.41)	(2.67)	(2.87)	(2.32)
Observations	39,478	15,774	23,704	2,957
HHP controls	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes

Economic magnitude: A decrease of managerial ownership from 30% to 10% is associated with an increase in Tobin's q by approximately 4% (supportive of H2)

Summary of Table 5

- Taken at face value, these results run counter to decades of agency research
  - Reducing managerial ownership and thus the alignment of incentives between managers and shareholders is associated with increases in firm value

- Will show next that a more plausible interpretation of the result is that liquidity and performance drive both Tobin’s q and managerial ownership

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Is managerial ownership lower for firms with greater past liquidity?

- Panel data evidence on our entire sample
- More focused approach looking at quasi-exogenous increases in liquidity to make progress towards a causal interpretation

Table 6: Managerial ownership and past stock liquidity

	D&O ownership	
Normalized high liquidity years (Amihud)	-0.125***	
	(-20.28)	
Normalized low liquidity years (Amihud)		0.192***
		(22.56)
Observations	53,302	53,302
HHP controls	Yes	Yes
Estimation approach	FM	FM
Industry FE	Yes	Yes

Firm-year observations are in “high liquidity” sample if they are in the top quartile of the normalized liquidity distribution
Firm-year observations are in “low liquidity” sample if thy are in the bottom quartile of the normalized liquidity distribution

Table 7: Nasdaq reforms as quasi-natural experiment

	D&O ownership		
	(1)	(2)	(3)
Treated x Post	-0.015***	-0.014**	
	(-3.35)	(-2.08)	
Treated x Year = t - 1			-0.003
			(-0.49)
Treated x Year = t			-0.005
			(-1.09)
Treated x Year = t + 1			-0.008*
			(-1.78)
Observations	15,639	6,985	6,985
Adjusted R^2	0.887	0.893	0.893
Post x Initial controls	No	Yes	Yes
Firm FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes

How does it fit together?

- We just showed:
  - Past liquidity history predicts ownership (supportive of H3)

- The next two tables will show:
  - Past performance explains liquidity
  - Past performance explains q

➢ So, ownership and q are related because past performance drives both q and liquidity and liquidity predicts the level of insider ownership

Table 9: Liquidity and past performance

	Illiquidity (Amihud)	
Normalized high performance years (sales growth)	-1.572***	
	(-6.85)	
Normalized low performance years (sales growth)		1.477***
		(6.72)
Observations	50,652	50,652
Estimation approach	FM	FM
Industry FE	Yes	Yes
Liquidity controls	Yes	Yes

- The better the cumulative past performance, the higher is the liquidity of the firm

Table 10: Tobin's q and cumulative past performance

	Tobin's q	
	All firms	500 largest firms
Normalized high performance years	1.100***	0.497***
	(23.42)	(5.95)
Observations	48,528	12,458
HHP control variables	Yes	Yes
Year FE	No	No
Industry FE	Yes	Yes

- The better the cumulative past performance, the higher is the Tobin's q of the firm

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Conclusion

- Relation between Tobin's q and managerial ownership is affected by frictions that affect the cost of trading
- Only for firms where frictions have been unimportant in past years is the observed relationship between firm value and managerial ownership positive and concave
- For illiquid firms, negative relationship between Tobin's q and high managerial ownership reflects information about the past, not the future

Conclusion

- Frictions that impede adjustments in managerial ownership have to be taken seriously in theories of firm value and managerial ownership