

Blockholders, Market Efficiency, and Managerial Myopia

Alex Edmans, Wharton

Wharton Accounting Seminar

January 10, 2008

Introduction

- This paper addresses two questions:
 - How can myopia be attenuated?
 - What role do U.S. blockholders play?
- Exploiting growth opportunities is critical to the success of many firms, and the overall economy: Zingales (2000), Porter (1992), Thurow (1993)
 - But stock price concerns deter intangible investment
- Porter (1992): *“The nature of competition has changed, placing a premium on investment in increasingly complex and intangible forms – the kind of investment most penalized by the U.S. [capital allocation] system”*
- Graham, Harvey and Rajgopal (2005): 78% of CEOs would sacrifice long-run value to meet short-term earnings targets
- Narayanan (1985), Stein (1988, 1989) on causes of myopia

Introduction (cont'd)

- This paper: blockholders as a solution
 - Blockholders gather costly information about fundamental value
 - * But information guides exit vs. loyalty (“voting with your feet” / “Wall Street Rule”), not voice
 - Trade with liquidity investors, so prices reflect fundamental value rather than current earnings
 - Therefore, managers take long-term decisions that maximize fundamental value

The Role of Blockholders

- Blockholders are prevalent in the U.S. and around the world (Holderiness (2007)). What role do they play?
 - Shleifer and Vishny (1986), Burkart et al. (1997), Maug (1998), Kahn and Winton (1998), Bolton and von Thadden (1998), Faure-Grimaud and Gromb (2004): intervention to overcome an effort conflict
- This paper identifies a role for blockholders who cannot intervene, and absent an effort conflict
- Many U.S. blockholders lack significant control rights
 - La Porta et al. (1999): 80% (90%) of large (medium) U.S. firms do not contain a 20% shareholder
 - Substantial legal and institutional barriers to activism (e.g. Becht et al (2006))
- Hirschman (1970): exit, voice and loyalty
- Admati and Pfleiderer (2006): exit as a disciplinary mechanism to induce effort

Outline of Presentation

- Analyze relationship between block size and financial market efficiency
- Introduce managerial decisions and study effect on real efficiency
- Endogenize block size
 - Social optimum
 - Private optimum
- Discuss empirical implications
 - Real
 - Stock price

Blockholders and Market Efficiency

- Blockholder (B) owns α , atomistic shareholders own $1 - \alpha$
- $t = 1$: public signal $s \in \{s_g, s_b\}$ about V
 - If $s = s_b$ ("bad signal"), $V = X$ w.p. $\frac{1}{2}$, $V = 0$ w.p. $\frac{1}{2}$
 - If $s = s_g$, $V = X$ w.p. 1
- $t = 2$: B exerts monitoring effort μ , cost $\frac{1}{2}c\mu^2$ to generate signal $i \in \{i_g, i_b\}$
 - $\Pr(i_g|X) = \Pr(i_b|0) = \frac{1}{2} + \frac{1}{2}\mu$
 - $\Pr(i_g|0) = \Pr(i_b|X) = \frac{1}{2} - \frac{1}{2}\mu$

Blockholders and Market Efficiency (cont'd)

- $t = 2$ continued:
 - B sells $0 \leq b \leq \alpha$
 - * $b = 0$ if i_g , β if i_b
 - Liquidity traders demand $u \sim \exp(\lambda)$ where $\lambda = \frac{1}{v(1-\alpha)}$
 - * $f(u) = \begin{cases} 0 & \text{if } u \leq 0 \\ \lambda e^{-\lambda u} & \text{if } u > 0, \end{cases}$
 - Market maker sees $d = b + u$ and sets $P = E[V \mid d, s_b]$ as in Kyle (1985)
- $t = 3$: V is realized
- Nash equilibrium:
 - Market maker's prices are optimal given B 's trading strategy
 - B 's trading strategy is optimal given market maker's pricing function

Blockholder

- Trading: $\beta = \min\left(\frac{1}{\lambda}, \alpha\right)$
- Monitoring: $\mu = \frac{\beta X}{4c}$
- Trading and monitoring are maximized when $\beta = \alpha^* = \frac{v}{v+1}$
- Allowing purchases does not change the result

Market Efficiency

- A measure of market efficiency is $E[P | X] - E[P | 0]$

$$\frac{\partial(E[P | X] - E[P | 0])}{\partial \alpha} =$$

$$\underbrace{\frac{2X\mu^2 \lambda e^{-\lambda\alpha}}{(1 + e^{-\lambda\alpha})^2}}_{\text{trading effect}} + \underbrace{\frac{2X\mu^2 \frac{\alpha\lambda}{1-\alpha} e^{-\lambda\alpha}}{(1 + e^{-\lambda\alpha})^2}}_{\text{camouflage effect}} + \underbrace{2X\mu \frac{1 - e^{-\lambda\alpha}}{1 + e^{-\lambda\alpha}} \frac{\partial \mu}{\partial \alpha}}_{\text{effort effect}}$$

- *Proposition 1*: Market efficiency is maximized for $\alpha = \alpha^*$. Efficiency rises (falls) in α for $\alpha < (>) \alpha^*$
 - Optimal block size is finite, vs. Shleifer and Vishny (1986), Kahn and Winton (1998)
 - * What matters is not block size *per se*, but the associated trading volume: $\min(\frac{1}{\lambda}, \alpha)$

Blockholders and Long-Term Behavior

- Manager places weight ω on $t = 2$ price and $1 - \omega$ on $t = 3$ value
 - $\omega > 0$ as takeover threat (Stein (1988)), reputational concerns (Hirshleifer and Thakor (1992), Scharfstein and Stein (1990)), manager sells at $t = 2$ (Stein (1989))
- At $t = 0$, manager of a high-quality firm chooses $\theta \in [0, 1]$
 - At $t = 3$, $V = X + g\theta$
 - W.p. $y\theta^2$, the firm emits s_b at $t = 1$; else s_g
- Interpretations of θ : intangible investment, observable investment, earnings management
- *Proposition 2*: If $\alpha < \alpha^*$, θ is increasing in α
 - Effect is stronger for high y

Blockholders and Long-Term Behavior (cont'd)

- Liquidity encourages investment, contrary to
 - Intervention models: liquidity facilitates exit vs. intervention (Bhide (1993))
 - Conventional wisdom: liquidity encourages selling upon weak earnings, rather than loyalty
- Investment rises even though B is not “long-term” and is only motivated by (private) informed trading profits
- Optimal ν is bounded at $\frac{\alpha}{1 - \alpha}$
 - Optimal liquidity is finite, vs. Holmstrom and Tirole (1993), Maug (1998), Faure-Grimaud and Gomb (2004)
 - Effort vs. camouflage effects

Social and Private Optima

- Social optimum $< \alpha^*$, owing to monitoring costs
 - If $\frac{\partial \theta}{\partial \alpha}$ is low, financial efficiency does not affect real efficiency, echoing Stiglitz (1981)
- Private optimum: shareholder
 - Cannot trade anonymously: Grossman and Hart (1980)
 - Only enjoys $\alpha\%$ of rise in firm value: Shleifer and Vishny (1986)
 - * Consistent with Bhidé (1993), government should not always promote dispersed ownership
 - Considers informed trading profits
- Privately optimal α may be too high or too low

Empirical Predictions

- Prediction 1: Blocks are higher in firms with abundant long-term opportunities that exhibit information asymmetry
 - Cross-sectional: R&D-intensive firms with low analyst coverage
 - Life-cycle: start-ups
 - Cross-country: countries with inefficient capital markets
- Prediction 2: Stock price reaction to block accumulations is increasing in investment opportunities and information asymmetry
 - Time-series analog of Prediction 1

Empirical Predictions (cont'd)

- Prediction 3: Investment is non-monotonically increasing in block size
 - Lee and O'Neill (2003), Baysinger et al. (1991): +ve correlation between α and R&D
 - Lee (2005): +ve correlation between α and patents
 - Bushee (1998): +ve correlation between IO and R&D, but -ve if institutions trade on earnings and have small stakes
 - Cross-sectional approach may have difficulty in assigning causality
 - Cronqvist and Fahlenbrach (2006): appearance of certain blockholders increases investment; relationship is causal

Empirical Predictions (cont'd)

- Prediction 4: Earnings management is non-monotonically decreasing in α
 - Burns et al. (2006): α reduces financial restatements
 - Cornett et al. (2007): EM is decreasing in institutional ownership
- Prediction 5: Price efficiency is non-monotonically increasing in α
 - Boehmer and Kelley (2007): causal +ve relationship between IO and price efficiency
 - Amihud and Li (2006): price reaction to dividend changes is decreasing in IO
 - Bartov, Radhakrishnan and Krinsky (2000): PEAD decreases with IO

Empirical Predictions (cont'd)

- Prediction 6: Blockholders have superior information, earn higher returns, and their sales lead to stock price declines
 - Many empirical papers use α or IO as a proxy for monitoring incentives:
 - * Boehmer and Kelley (2007): “institutions could engage in information production once their holdings exceed a certain threshold”
 - * Rubin (2007): “the probability that a particular institution will incur the costs to do so is higher if it enjoys a comparatively large ownership share”
 - But such an intuitive result is not generated by standard microstructure models. This paper introduces a SSC to deliver this result

Empirical Predictions (cont'd)

- Private information:
 - Bushee and Goodman (2007): private info content of trade is increasing in α
 - Rubin (2007): α depresses liquidity
 - Jiambalvo, Rajgopal and Venkatachalam (2002): extent to which stock prices reflect future (rather than current) earnings increases in IO
 - Boehmer and Kelley (2007): causal +ve relationship between IO and price efficiency
- Depress the stock price:
 - Scholes (1972), Mikkelson and Partch: stock price effect of secondary distributions is due to information, not supply effects
 - Sias, Starks and Titman (2006): IO changes cause changes in stock returns; due to information
- Earn higher returns:
 - Parrino, Sias and Starks (2003): sell in advance of forced CEO turnover, especially if high α
 - Chen, Harford and Li (2007): sell before bad mergers

Conclusion

- What is the role of a blockholder who cannot intervene, and if there is no effort conflict?
 - To encourage long-term investment, the first-order problem faced by many modern firms
- U.S. has not been defeated by Japan
- Limitations / extensions:
 - Paper focuses on blockholders as a solution to myopia. Causes of myopia ($\omega > 0$ and existence of s) are exogenous
 - * Endogenize s : analyze optimal disclosure laws set by the government, and discretionary disclosure policy set by firm
 - * Endogenize ω : analyze of optimal mix of short- and long-term compensation
 - Multiple blockholders: see next slide

Multiple Blockholders (Edmans and Manso (2007))

- What is the optimal blockholder structure for corporate governance?
- Traditional view: blockholders govern through intervention (“voice”)
 - Few, concentrated stakes are optimal to minimize free-rider problems and maximize intervention incentives
 - But most firms have multiple small blockholders (Zwiebel (1995), Barca and Becht (2001), Faccio and Lang (2002), Maury and Pajuste (2005), Holderness (2007))
- MBs increase the effectiveness of a second governance mechanism: trading (“exit”)
 - Managerial effort improves fundamental value, but manager is paid according to stock price
 - Trading causes prices to reflect fundamental value

Multiple Blockholders (cont'd)

- Dynamic consistency issues: once effort has been exerted, blockholders are only concerned with maximizing trading profits
 - A single blockholder will strategically limit her order, reducing price informativeness
 - Multiple blockholders trade competitively, as in a Cournot oligopoly
 - * Commitment device to reward the manager ex post
- Empirical implications:
 - Optimal number of blockholders > 1 , depends on effectiveness of voice vs. exit
 - Number of blockholders increases price efficiency