

**Manuscript version: Author's Accepted Manuscript**

The version presented in WRAP is the author's accepted manuscript and may differ from the published version or Version of Record.

**Persistent WRAP URL:**

<http://wrap.warwick.ac.uk/112761>

**How to cite:**

Please refer to published version for the most recent bibliographic citation information. If a published version is known of, the repository item page linked to above, will contain details on accessing it.

**Copyright and reuse:**

The Warwick Research Archive Portal (WRAP) makes this work by researchers of the University of Warwick available open access under the following conditions.

Copyright © and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable the material made available in WRAP has been checked for eligibility before being made available.

Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge. Provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

**Publisher's statement:**

Please refer to the repository item page, publisher's statement section, for further information.

For more information, please contact the WRAP Team at: [wrap@warwick.ac.uk](mailto:wrap@warwick.ac.uk).

# Why Do Large Shareholders Adopt a Short-Term versus a Long-Term Investment Horizon in Different Firms?

Onur Kemal Tosun\*

*Keywords:* short-term investment, long-term investment, blockholders, firm policies

*JEL Classifications:* C23, G11, G32

---

\* *Corresponding author:* Assistant Professor of Finance, Warwick Business School, University of Warwick, CV47AL, Coventry, United Kingdom; Phone: +44(0)2476524541; E-mail: [Onur.Tosun@wbs.ac.uk](mailto:Onur.Tosun@wbs.ac.uk).

I would like to thank John Thanassoulis, Alex Edmans, Stefano Rossi, Wolfgang Bessler, Richard Warr (editor), two anonymous referees, participants at the 7th International Conference of the Financial Engineering and Banking Society 2017, 22nd Conference of the Eurasia Business and Economics Society 2017, and seminar participants at the University of Warwick for their helpful comments, support, and guidance.

# **Why Do Large Shareholders Adopt a Short-Term versus a Long-Term Investment Horizon in Different Firms?**

## **Abstract**

I ask why the same large shareholders have different investment horizons. Using data for 1998–2013, I examine four fundamental firm policies for their potential influence on blockholders' investments with different time horizons. The panel OLS, difference-in-difference (using the Sarbanes-Oxley Act), logistic and dynamic GMM regression analyses reveal that blockholders adopt a short-term horizon in smaller firms with a less independent board, high leverage, and high dividends while the same blockholders keep their investments longer in firms with a more independent board and low dividends. Under various economic conditions, different firm characteristics gain importance in blockholders' decision on short-term versus long-term investments.

## 1. Introduction

Firms exert a lot of effort to keep the types of large shareholders and institutional investors they feel would give them a competitive advantage. To investigate this further, many studies have already looked at the relation between firm characteristics and large shareholders in last decades. Some of them have investigated the impact of blockholders on various firm policies including dividends, investments, governance, innovation, and operations (e.g., Appel, Gormley and Keim, 2016; Becker, Cronqvist and Fahlenbrach, 2011; Cronqvist and Fahlenbrach, 2009; Holderness, 2003; Santos, Moreira and Vieira, 2014; Tribo, Berrone and Surroca, 2007). A large body of literature has studied the potential influence of institutional investors on firm value, performance, and stock returns (e.g., Cai and Zheng, 2004; Clifford and Lindsey, 2016; Lakonishok, Shleifer and Vishny, 1992; Shome and Singh, 1995; Sias, Starks and Titman, 2006; Wermers, 1999). Interestingly, few studies have considered the opposite direction regarding the relation between firm attributes and investors. Dahlquist and Robertsson (2001), Dong, Uchida and Hou (2014), Mak and Li (2001), and Yan and Zhang (2009) have examined possible effects of firm size, dividends, cash, and board structure on institutional investors. Some of the prior studies have analyzed investor horizons and corporate policies (Derrien, Kecskés and Thesmar, 2013; Gaspar, Massa and Matos, 2005; Thanassoulis and Somekh, 2016; Yan and Zhang, 2009). However, to my knowledge, studies have always focused on investors but not explored the individual investments in their portfolios. It is only a generalization to classify a large shareholder as a short-term or a long-term investor because that blockholder may have both types of investments in the portfolio. In other words, the same large shareholder can be a short-term blockholder in one firm while a long-term investor in another one.

Thus, an open question exists for researchers: under what circumstances the same large shareholder adopts a short-term versus a long-term investment horizon in different firms? I

believe this is an important question to understand the factors associated with blockholders' choice of investment horizon. I aim to determine whether certain firm characteristics and policies may potentially influence the same large shareholder to keep his/her stakes shorter versus longer in different companies. In particular, I analyze firm characteristics, such as firm size and leverage, as well as policies on dividend payouts and corporate governance through board independence. I also explore various conditions under which firms operate and provide stylized facts about short-term and long-term blockholding investments. This study is innovative as I categorize each *individual investment* rather than *investors* as either short term or long term. This has crucial importance because this method enables me to overcome potential difficulties and misspecification caused by generalization of all investments associated with one investor. By categorizing individual investments, I can correctly model and so estimate the relation between firm attributes and the hold and sell decisions of short-term and long-term blockholding stakes of the same large shareholder. The analyses succeed in passing a battery of goodness-of-fit and robustness tests addressing potential empirical issues such as endogeneity, survivorship, and omitted variable bias. Therefore, I can offer robust statistical insights. Particularly, analyzing the connection between blockholder investments and firm characteristics is challenging, because causality may run from the former to the latter. I try to mitigate this reverse causality issue by lagging the explanatory variables of firm characteristics by one year. More importantly, I use a dynamic panel generalized method of moments (GMM) model and also exploit the passage of the Sarbanes-Oxley (SOX) Act and the associated changes by the Securities and Exchange Commission (SEC) in a difference-in-difference (DID) model setup to alleviate the reverse causality concerns. Last, I conduct further analyses with specific subsamples to address potential issues related to identification of investor horizon.

Using data for 1998–2013, I examine U.S.-based firms and blockholders' investments

in panel ordinary least squares (OLS), logistic and dynamic GMM regression analyses. A blockholder is defined as an investor with at least 5% ownership of a particular firm. A blockholding investment has short-term (long-term) horizon if it stays with the firm less than three (more than seven) years. In the OLS and GMM models, I regress the number of retained blockholding investments with short-term (long-term) horizon on board independence, dividend ratio, leverage, and firm size. Using firm-investor-year observations in logistic regression analyses, I define a dummy variable that equals one for a blockholder with a short-term (long-term) investment in a particular firm in at the end of year  $t$ , as well as year  $t+1$ . I regress this dummy variable on those four fundamental firm policies and characteristics. Different from the literature, first I consider blockholders adopting a short-term over a long-term investment horizon. I begin with a surprising insight: board independence is a deterrent to this type of investment. The results suggest that the same large shareholders adopt a short-term horizon in firms with a less independent board. This finding favors the hypothesis that blockholders have short-term investments in firms with weak management who are therefore more inclined to acquiesce to and implement the blockholder's policies. I further find that the same blockholders choose to keep their investments shorter in smaller firms with high leverage and high dividend payouts. These results could be rationalized by the view that short-term investors like dividends as a source of cash flow and they would like to see firms they own increasing firm risk through leverage before they sell out of the stock.

Next, I study under what conditions the same blockholders adopt a long-term horizon in firms. The statistical analysis demonstrates that increasing board independence increases the probability of attracting and retaining such investments. This suggests that investors planning a long-term investment value an independent board; and this is consistent with the idea that an independent board will be best placed to take value-enhancing decisions into the future. Moreover, the same large shareholders keep their stakes in firms longer when these firms are

smaller in size, pay less dividends, and have high leverage. These findings could be explained by the view that long-term blockholders support growth in leverage as a consequence of an expanding and successful firm, and prefer cash invested in growth projects as opposed to paid to shareholders.

The findings are consistent with the hypothesis that the same blockholders may adopt different investment horizons based on different firm policies and attributes. Smaller firms with a less independent board, higher than average dividend ratio, and high leverage are more likely to have short-term blockholding investments. This is compatible with the view that blockholders with short-term investments are often “activist,” having stakes in smaller firms with weak governance that are less resistant to the blockholders changing firm policies. In their short holding period, such investors on average benefit from high dividend payments as well as profitable share buybacks. Supporting the results, Strobl and Zeng (2017) show that activist investors usually have a shorter planning horizon. Furthermore, Andreou, Fiordelisi, Harris and Philip (2017) suggest that transient institutional investors intervene and exert pressure on managers to generate immediate high profit. Considering long-term investments, I find that smaller firms with higher than average board independence, high leverage, and low dividends are more likely to have long-term blockholding investments. These results support the hypothesis of such investments being “passive,” and such investors hold shares of firms with strong governance along with evidence of growth. Similarly, Appel, Gormley and Keim (2016) also associate long-term investors with passive shareholders.

This study contributes to the firm policy and large shareholder ownership literature by providing insight into how fundamental firm policies and characteristics are related to the decision on a short-term versus a long-term investment strategy in different firms by the same large shareholders. The paper also reveals which firm attributes gain importance in blockholding investments under various economic conditions. The other studies in the

literature focus on an investor by considering investments in the portfolio altogether to classify that shareholder's overall investment horizon. Unlike those papers, I use a new classification approach regarding blockholders' individual investments with different holding periods in their portfolios. Hence, this paper will present further explanation to the relation between firms and blockholding stakes.

The external validity of my findings can be tested in further extended research. I consider all investors relying on electronic data that may not be complete. Hand-collecting data from various databases will mitigate this potential concern. Also, a cross-country examination may bring further explanation to the relation between firms and investments by blockholders considering their different investment agendas under different country-specific conditions.

The rest of the paper proceeds first by discussing the related literature and developing the hypotheses to be tested in Section 2. Section 3 describes the data selection and variable construction. The empirical methodology is then explained in Section 4. There follows the main results in Section 5, then in Section 6 I conduct robustness checks and further analyses. I conclude in Section 7.

## **2. Literature Review and Hypotheses**

### *2.1. Related Literature and Hypothesis Building*

Previous contributions have examined the relation between institutional investors, blockholders and various firm attributes. Cronqvist and Fahlenbrach (2009) examine mutual funds and other institutional investors separately. They use a blockholder fixed effects approach to investigate the influence of blockholders on firm policies and performance. Becker, Cronqvist and Fahlenbrach (2011) instrument the existence of an individual large shareholder via the density of wealthy individuals near a firm's headquarters. They study the effect of those instrumented large shareholders on leverage, dividends, CEO pay, governance,

liquidity, investment, and firm performance. Gugler, Ivanova and Zechner (2014) examine the determinants and effects of individual investor control in Central and Eastern European countries. In their model, they consider Tobin's Q, performance, governance, size, leverage, risk, and intangibility in relation to large individual investors. Cai, Hillier and Wang (2016) study the cost of multiple large shareholders and suggest that conflicting incentives induce a nonlinear relationship between the relative size of large shareholdings and firm value. Tribo, Berrone and Surroca (2007) present that impact of large shareholders on the research and development (R&D) investment is negative when blockholders are banks, but it is positive when blockholders are nonfinancial corporations. Few other studies including Shome and Singh (1995), Wright, Ferris, Sarin and Awasthi (1996), Steiner (1996), Edmans (2009), Gregoric, Masten and Zajc (2011), and Dhillon and Rosetto (2015) examine the effect of blockholders on firm performance, risk, and growth.

In this paper, I consider four fundamental firm policies and characteristics: corporate governance, capital structure, dividend policy, and firm size. I examine how these factors are related to short-term versus long-term investment decisions by the same large shareholders in different firms. In the literature, Mak and Li (2001) and Burton, Gunasekarage and Kumarasiri (2013) examine the relation between corporate ownership and board composition of firms in Singapore and New Zealand, respectively. Fernandez and Arrondo (2005) show that large blockholder ownership decreases board independence in Spanish firms. They suggest a substitution among internal controls. Miletkov, Poulsen and Wintoki (2014) examine the effect of board independence on the firm's ability to attract foreign equity capital. They show that there is a positive relation between board independence and foreign institutional ownership. Appel, Gormley and Keim (2016) classify passive institutional investors as long-term shareholders and find that passive mutual funds influence firms' governance choices, resulting in more independent directors. Black (1992, 1998) suggests that passive shareholders might

not have sufficient enough resources necessary to monitor the detailed policy choices of every firm in their diversified portfolios and hence rely on low-cost monitoring of firms with best governance practices. Further, Bhide (1993) argues that the liquidity of the U.S. equity market reduces blockholders' incentives to monitor firms for a long term because selling the shares of poorly managed firms is substantially cheaper than the overall cost of monitoring such firms for a long period. Therefore, blockholders may adopt a long-term investment horizon in well-governed firms with a more independent board that may be able to take more objective business decisions and so grow faster while such firms also lower monitoring cost for these large shareholders.

*Hypothesis 1.A. Board independence is attractive to long-term blockholding investments.*

Contrary to that, a firm with a less independent board and hence a weak governance may be easier to influence and therefore more beneficial to activist blockholders who have a short-term view and aim to implement their policies. Black (1992), Pound (1992), and Karpoff, Malatesta and Walkling (1996) argue that activist investors target firms with a poor governance structure and influence corporate policy using proposals. Indeed, Figure IA.2 in the Online Appendix shows that about 90% of the activism proposals are associated with short-term blockholding investments. Alternatively, firms with insider-dominated boards exhibit higher managerial myopia, which is in line with the interest of blockholders who have a short-term investment horizon and aim high return in that short period of time (Graham, Harvey and Rajgopal, 2005). Consequently, blockholders may adopt a short-term investment horizon in firms with a less independent board.

*Hypothesis 1.B. Board independence is a deterrent to short-term blockholding investments.*

Considering leverage, Santos, Moreira and Vieira (2014) focus on 694 firms from 12 Western European countries and show a link between firm leverage and blockholder ownership. Sulaeman (2011) investigates the revealed preferences of institutional shareholders

as determinants of corporate policies and shows that firms decrease leverage if their current leverage is higher than the aggregated preference of their institutional investors. Derrien, Kecskés and Thesmar (2013) argue that long-term investors mitigate the effect of stock mispricing on corporate policies. They show that undervalued firms have more equity (than debt) financing when long-term investors have higher ownership. Contrary to them, Brailsford, Oliver and Pua (2002) examine Australian firms over the period 1989–1995 and argue that self-interested managers have incentives to reduce corporate debt because the occurrence of bankruptcy or financial distress will result in loss of employment, impairment of future employment, and lower earnings capacity of managers. However, the decrease in corporate debt is avoided if a firm has high blockholder ownership, which acts as a monitoring mechanism over managers. Large shareholders not only prevent the decrease in debt but also may favor high leverage because the adverse feature of leverage increases firm value by preventing managers from taking poor projects (Jensen, 1986; Stulz, 1990). Moreover, leverage increases risk level of the firm, and more importantly, it induces growth. Consistent with Fama and French (1993), Shin and Stulz (2000) provide evidence for high-growth firms having higher risk, and they show that high growth translates into higher firm value. Considering the firm value increasing features of leverage, large shareholders may find companies with high leverage more attractive. They adopt a short-term horizon in such firms if they aim for high stock prices through increased firm risk before they sell out of the shares. Meanwhile, the same blockholders choose to keep their stakes longer in a firm with high leverage if they support growth through leverage leading to an expanding and successful firm with high value in the long run.

*Hypothesis 2.A. Leverage is positively related to short-term blockholding investments.*

*Hypothesis 2.B. Leverage is positively related to long-term blockholding investments.*

Barclay, Holderness and Sheehan (2008) investigate the relation between dividend

payments and corporate blockholders and cannot find any significant connection between them. Contrary to that, Dahlquist and Robertsson (2001), in their study of foreign ownership in Swedish firms, show that foreign institutional investors prefer large firms paying low dividends. Similarly, Desai and Jin (2011) suggest that dividend-averse institutions are significantly less likely to hold shares in firms with larger dividend payouts. Yan and Zhang (2009) research the relation between firm attributes (e.g., firm size, age, dividends, stock price, return, and volatility) and short-term and long-term institutional investors. They find that short-term investors prefer firms with lower dividend yield while dividend is not consistently related to long-term institutional ownership. Derrien, Kecskés and Thesmar (2013) show that for undervalued firms, payouts to shareholders are decreasing in investor horizons. Firms with larger dividends offer investors a steady stream of cash flow. This is attractive for investors especially if they have a short-term investment horizon. Such large shareholders can enjoy high dividend payments because their intention is to sell out of the stocks sooner than later when dividends are still high. Short-term blockholders prefer to maximize their profit through dividends before they leave the firm rather than to allow the firm to reduce dividends and invest the cash into growth projects, which will pay off in the long run.

*Hypothesis 3.A. Dividend is positively associated with short-term blockholding investments.*

On the other hand, the same large shareholders may adopt a long-term horizon in firms that minimize cash flowing from the firm to shareholders and invest in the long-term growth projects instead. Alti (2003) confirms that firms with high growth rates pay little or no dividends and use their cash flow primarily for funding investment. This is in line with a life-cycle approach to investment targets: Firms at the beginning of their long-term growth trajectory pay less dividends. Such long-term growth projects help the firm to grow, and subsequently, firm value increases in the long term. Hence, this would imply that moving cash away from dividends into these growth projects aligns with investment strategies of

blockholders with a long-term view.

*Hypothesis 3.B. Dividend is negatively associated with long-term blockholding investments.*

Collins, Gong and Hribar (2003) show that firms with low institutional ownership are smaller and less profitable. Similarly, Yan and Zhang (2009) argue that both short-term and long-term institutional investors prefer larger stocks. Unlike them, Dong, Uchida and Hou (2014) investigate block trades in China and discuss that firm size is negatively related to investments by blockholders. However, their study focuses only on the Chinese market and also does not consider any potential effect due to the differences in investor horizons. Holderness (2009) suggests that investors' wealth constraints may force them to invest in smaller firms. There exists a shadow cost to blockholders seeking to raise funds. Since investing in small firms should require less funds, such firms can be more attractive to both short-term and long-term large shareholders. Furthermore, Dunne and Hughes (1994) show that smaller firms indeed grow faster compared to larger companies. This trend in rapid growth translates into higher firm valuations (Maury and Pajuste, 2005) in the short run as well as long run. Therefore, both short-term and long-term blockholders may consider investing in smaller firms.

*Hypothesis 4.A. Firm size is negatively related to short-term blockholding investments.*

*Hypothesis 4.B. Firm size is negatively related to long-term blockholding investments.*

## *2.2. Closely Related Literature and Incremental Contribution*

This paper is closely related to a few studies on investor horizon and institutional investors. Dahlquist and Robertsson (2001) focus on Swedish firms and analyze foreign investors' preferences. They examine mutual funds and other institutional investors separately and find that foreigners prefer large firms with low dividend payments and high cash holdings. Building on this study, I introduce investor horizon in the analyses and explore whether

investors' preferences for different firm characteristics change according to their investment horizon. This new angle enriches the discussion on the relation between institutional investors and firms.

Yan and Zhang (2009) investigate the relation between various firm characteristics (e.g., firm size, age, dividends, stock price, return, and volatility) and short-term and long-term institutional investors. Their study shows that short-term investors prefer younger firms with less dividends while dividend is not consistently related to long-term institutional ownership. Both types of investors prefer large firms with high price volatility. Yan and Zhang (2009) discuss that short-term institutions' trading predicts future stock returns, especially for small and growth stocks. Different from this study, I consider the individual investments in blockholders' portfolios with different time horizons rather than just the types of investors. This enables me to explore a new dimension of blockholder ownership and examine accurately under which fundamental firm policies the same large shareholders adopt a short-term versus a long-term horizon. Moreover, I study which firm characteristics gain more importance in blockholders' decision under various economic conditions: dot-com bubble and subprime mortgage crisis times, high bankruptcy risk, high stock price volatility, low liquidity of shares, busy board, high CEO ownership, conglomerate firms, industry concentration, as well as different industries preferred by blockholders (i.e., manufacturing, construction, wholesale and retail, electronics and telecommunication, and service).

Sulaeman (2011) analyzes the revealed preferences of institutional investors for firm policies. The study particularly focuses on leverage. The findings show that a firm is more likely to increase (decrease) leverage if its current leverage is lower (higher) than the aggregated preference of its institutional shareholders. Extending this study, I examine dividend ratio, firm size, and board independence in relation to blockholding investments. More importantly, I contribute to the literature by focusing on different investment horizons of

large shareholders.

Cella, Ellul and Giannetti (2011) analyze the impact of market shocks on shareholders with different investment horizons. They show that stocks held by short-term investors experience more severe price drops than those held by long-term investors, and short-term investors also sell significantly more than long-term investors around the negative market shocks. Similar to this paper, I study investor horizon. However, I analyze various firm characteristics that influence blockholders' investment horizon. Moreover, I can also identify individual investments in large shareholders' portfolios regarding different time horizons. These nuances provide additional understanding in shareholders' investment behavior.

Gaspar, Massa, Matos, Patgiri and Rehman (2011) examine how investment horizon affects payout policy choices. They find that the amount of share repurchases increases with ownership by short-term investors to the detriment of dividends. Their study also shows that the market reacts less positively to repurchase announcements made by firms held by short-term institutional investors. In this paper, I extend the study by Gaspar et al. (2011) and explore the potential influence of not only dividends but also leverage, firm size, and board independence on large shareholders' decision on investment horizon. I contribute further by analyzing this relation under various economic conditions.

Derrien, Kecskés and Thesmar (2013) investigate the impact of investor horizons on corporate behavior. They discuss that long-term investments weaken the effect of stock mispricing on corporate policies. They find that for undervalued firms, long-term investor ownership is related to less payout to shareholders, more investment, and more equity financing. Building on their research, I explore the flipside of this relation and study the influence of firm attributes on short-term and long-term blockholding investments. Moreover, I use a battery of tests and methods including a DID regression and a dynamic system GMM model to mitigate endogeneity concerns and establish causality. These additional analyses

strengthen the paper's contribution.

Dong, Uchida and Hou (2014) investigate block trades in China. Particularly, they analyze firm characteristics associated with the likelihood of firms becoming targets for blockholders. They discuss that firms with high free-cash flow are likely to be block trade targets, while ownership concentration, director ownership, and firm size are negatively related to investments by blockholders. Extending their study, I consider the horizon of investment strategies by large shareholders. In addition to these factors, I contribute by examining the payout policy, board structure, firm growth, and risk in relation to blockholders' investment horizon.

Appel, Gormley and Keim (2016) consider passive institutional shareholders as long-term investors. They examine whether and by which mechanisms these investors influence firms' governance. They show that passive mutual funds promote board independence and increase firm value and long-term performance. Building on their paper, I analyze both short-term and long-term investments. Different from their study, I explicitly research the individual investments in blockholders' portfolios rather than just the types of investors. I contribute to the literature by studying which firm attributes become more important in blockholders' decision under crisis times, high risk, low liquidity, and different industry sectors and conditions.

### **3. Data Selection and Variable Construction**

In this study, I use data from FactSet, ISS, Compustat, and CRSP databases covering the 16 years running from 1998 through 2013. The initial data set has observations of firm investment years: thus, if investor  $i$  owns a proportion of firm  $f$  in year  $t$ , then this represents a data point as an investment. I use electronic ownership data that may have caveats (Holderness, 2009). Hence, I check the data and exclude firms with total investor ownership

over 100%. I correct the data set for any instances of ownership double counting (Dlugosz, Fahlenbrach, Gompers and Metrick, 2006). I exclude blockholding investors if they are index funds, top managers, and their representatives on the board. Blockholders in this sample obtain their stakes via public placements. Finally, I check that the sample corresponds to those of previous work. Cronqvist and Fahlenbrach (2009) base their study on the hand-collected data by Dlugosz, Fahlenbrach, Gompers and Metrick (2006). They have 361 unique blockholders for a sample between 1996 and 2002. In this sample, I have 306 unique blockholders for the period 1998–2002.<sup>1</sup> This sample of investors include private equity firms, venture capital, professional investors, corporate investors, hedge funds, mutual funds, pension funds, trust companies, and insurance firms without any restrictions on the level of ownership. Panel A in Figure 1 shows that 83% of the blockholders in the sample have ownership of 5%–10% in a firm, while 14% of them have 10%–15% ownership. Only 3% of the blockholder sample have more than 15% of firm ownership. Panel B in Figure 1 shows that average firm ownership by a blockholder is between 7.5% and 8.5% per year. Total number of blockholdings in firms increases throughout the years, especially after 2006. These statistics are in keeping with those of other analyses, and so I conclude that this sample is valid for my analyses.

[Insert Figure 1 about here]

The final sample has firm-investment-year observations and other firm characteristics. From the universe of data points, I exclude firms classified as financial firms or utilities. I then winsorize the remaining variables with extreme values at 1% and 99%. I drop firms that do not receive investment in any of the sample years from a blockholding investor. I drop any observations for which the sum of long-term and short-term debt was recorded as being greater than total assets. The remaining sample consists of 3,337,912 firm-investment-year

---

<sup>1</sup> I provide a more detailed comparison in Table IA.1, Online Appendix. The Online Appendix is available at the journal web page (<https://financialreview.poole.ncsu.edu>).

observations with 5,146 investors and 1,836 firms.

### 3.1. Blockholding Investment Variables

Given a firm-investment-year observation I define  $BH_{f,i,t}$  to take the value one if investor  $i$  has a material stake in firm  $f$  (meaning at or over 5% of the equity) in year  $t$ , and zero otherwise. In other words, investor  $i$  is a blockholder of firm  $f$  at time  $t$  if  $BH_{f,i,t} = 1$ . The vast majority of blockholders in the sample have firm ownership between 5% and 10%. Since the difference between the levels of ownership among blockholders is not big, I can use dummy variables to represent investments by blockholders.<sup>2</sup>

Next, I characterize whether an investment in a given firm is realized to be of short-term or long-term duration. This focus on the type of investment is a distinguishing feature of this analysis. Previous studies including Gaspar, Massa and Matos (2005) and Yan and Zhang (2009) calculate average churn rate of each institution and sort investors accordingly. Those with high (low) scores are classified as short-term (long-term) investors. In a similar logic to these studies, I calculate the holding period for each blockholding investment. It is the period of time through which a blockholder holds the shares of that particular firm. After I sort blockholding investments accordingly, I determine the cutoff roughly as the bottom quintile (2 years) and the top quintile (8 years) for short-term and long-term horizon, respectively. I define a short-term investment by creating the dummy variable  $ST BH_{f,i,t}$  to equal one if the investment by blockholder  $i$  remains above 5% of the firm's equity only for at most two consecutive years, and zero otherwise. Then I define:

$$Stay ST BH_{f,i,t+1} \equiv \begin{cases} 1 & \text{if } ST BH_{f,i,t}=1 \text{ and } ST BH_{f,i,t+1}=1 \\ 0 & \text{otherwise} \end{cases} \quad (1)$$

$Stay ST BH_{f,i,t+1}$  takes the value one if investor  $i$  will keep at least 5% of ownership of firm

---

<sup>2</sup> I also use ownership (in %) by blockholders in the main analysis. Table 2 shows robust results.

$f$  in year  $t$  and year  $t + 1$ , and if this investment will be short term and so last for at most two years. This variable will allow me to study the attributes that encourage the same large shareholders to adopt a short-term investment horizon.

Analogously, I capture long-term investment by creating the dummy variable  $LT\ BH_{f,i,t}$ , which takes the value of one if ownership by a blockholder  $i$  remains above the 5% level for eight or more consecutive years, and zero otherwise. Similar to Equation (1), I define and analyze  $Stay\ LT\ BH_{f,i,t+1}$  to establish the features of firms that the same blockholders consider while deciding on a long-term investment in those firms.

In the main analysis, I define *Number of ST BH* as the number of short-term blockholding investments in that year in that particular firm. Similarly, I define *Number of LT BH* to be the number of long-term blockholding investments in that firm. For robustness, I also use *ST BH (%)* and *LT BH (%)*. These variables represent a short-term and a long-term blockholding investment as the ownership in a particular firm in that year, respectively.

### 3.2. Firm Variables

I focus on four fundamental firm policies: corporate governance, capital structure, dividend policy, and firm size. I examine how these factors are related to short-term versus long-term investment decisions by the same large shareholders in different firms. Following the literature (e.g., Yan and Zhang, 2009; Sulaeman, 2011; Derrien, Kecskés and Thesmar, 2013; Appel, Gormley and Keim, 2016), I define the firm variables the following way. *Board Independence* is the percentage of outsider directors on the board. These directors are not associated with the firm. *Leverage* is the sum of current liabilities and long-term debt over total assets. *Dividend Ratio* denotes the ratio of the total dividend payment in the year to the market value of the firm. *Firm Size* is the natural logarithm of the total assets of the firm in \$ millions.

### 3.3. Summary Statistics

Table 1 presents the summary statistics for all these variables. Panel A presents the variables on investment characteristics. Of the investment-firm-year observations, 16.5% belong to blockholding investments—that is, their ownership stake exceeds 5%. The holding period of firms' shares by blockholding investors is, on average, approximately four years. Of the investment-firm-year observations that correspond to blockholders, 25.3% are short-term investments where the investment duration is only for one or two years, and 17.6% of blockholding investments are long-term investments for eight or more years. Per firm on average, there are one and two blockholders with a long-term and a short-term investment horizon, respectively. While the maximum number of short-term investments is eight, there are at most four long-term blockholding investments in a firm.

[Insert Table 1 about here]

Panel B of Table 1 focuses on the characteristics of firms that are held by at least one blockholder. These firms have three quarters of their board composed of outsiders. The mean leverage for the, in part, blockholder-owned firms in the sample is 21.7%. Those firms pay dividends equivalent to 0.014% of their market value on average. The average firm size owned by blockholders is \$9.8 billion.

Panel C of Table 1 displays statistics on firms with at least one short-term blockholding investment. On average, board independence is 74.7% and leverage is 21.7%. Furthermore, statistically significant mean differences imply that these firms are mainly not similar to the companies chosen by long-term blockholding investments. For those companies with at least one long-term blockholding investment, 75.6% of their boards are composed of independent directors, the average dividend payments are 0.016% of their market value.

The correlation values between variables of the main model are presented in Panel D of Table 1. The matrix suggests that variables are only weakly correlated to each other with

most having correlation coefficient below 0.250. This suggests that collinearity is not a problem, which is discussed in later robustness checks in detail.

Having divided the data into long-term and short-term blockholder ownership, I can identify what proportion of each type of investments are in which industries. Figure 2 shows the distribution by industry sector of short-term and long-term blockholdings. Compared to short-term blockholdings, long-term blockholdings have greater weight in Manufacturing and Wholesale & Retail industries. By contrast, short-term blockholdings show greater weight than long-term ones in the Healthcare, Telecommunication, and Nondurable Goods (e.g., food, tobacco, textile, toys) sectors. Overall, more than 50% of a blockholder's investment portfolio is concentrated on three main industries: Manufacturing, High-Tech, and Wholesale & Retail.

[Insert Figure 2 about here]

Figure 3 displays the distribution of blockholders in the sample according to the difference between the total percentage by value of long-term versus short-term investments in their portfolios. Figure 3 shows at least three subgroups of blockholder portfolios. The first group is distributed around -60%. It represents blockholders with portfolios of more short-term investments than long-term ones. The next subgroup is at the 0% level: these are investors who have a balanced portfolio (50% LT - 50% ST = 0%). The last subgroup is smaller, and it is distributed around the 50% level representing blockholders who have more long-term investments in their portfolios. This figure indicates that blockholders in my sample have portfolios of investments with different horizons. The same large shareholder may have a long-term investment with one firm while having a short-term investment with another firm. Classifying a blockholder as the average of investment horizons in the portfolio would define inaccurately the relation of that large shareholder to some firms in the portfolio. Therefore, it is not the precise way to identify a blockholder-firm relation by averaging investment horizons. To overcome this issue, I examine each blockholding investment individually in this paper.

[Insert Figure 3 about here]

## 4. Empirical Methodology

### 4.1. Main Model: Fixed Effects Panel OLS Regression

The first multivariate analysis is conducted using a fixed effects panel OLS regression model. In the analysis, I try to explore how fundamental firm characteristics are related to a blockholder's decision on a short-term versus a long-term investment horizon. Using firm-year observations, I regress *Number of ST BH* and *Number of LT BH* on one-year lagged firm attributes: *Board Independence*, *Leverage*, *Dividend Ratio*, and *Firm Size*. Year and firm fixed effects are added to the model. The fixed effects approach controls for the omitted variables that differ between firms but are constant over time. I confirm, through the Hausman test, that the fixed effects approach dominates a random effects specification. Standard errors are clustered at the firm level. The model is specified as follows:

$$Y_{f,t} = \left\{ \begin{array}{l} \alpha + \beta * Board\ Independence_{f,t-1} + \gamma * Leverage_{f,t-1} \\ + \delta * Dividend\ Ratio_{f,t-1} + \theta * Firm\ Size_{f,t-1} + \mu_{f,t} \end{array} \right\} \quad (2)$$

where the measure for the number of short-term (long-term) blockholding investment is  $Y$ ; the firm observation is  $f = 1, \dots, N$ ; the entire period is  $t = 1998, \dots, 2013$ ; and  $\alpha, \beta, \gamma, \delta, \theta, \mu$  are the coefficients of the constant term, firm characteristics, and error term, respectively.

Edmans and Holderness (2017) discuss that it is extremely difficult to identify causal effects in the relation between blockholders and firms. They suggest that the research will be very narrowing if a clear identification for causality is strictly required for empirical analyses on blockholders. Following their view, I do not make strong claims on causality from firm characteristics to blockholder investments in this study. Instead, I try to show the relation between certain firm policies and the choice of blockholding investments with different horizons. I acknowledge the concerns for endogeneity and use several methods to mitigate, if not eliminate, the issues related to endogeneity and causality in this paper. For instance, testing

the link between blockholder investments and firm characteristics is challenging, because causality may run from the former to the latter. I follow Becker, Cronqvist and Fahlenbrach (2011), who advocate a time lag between dependent and independent variables as a mitigation to simultaneity bias. In my model, dependent variables refer to the ownership status of an investor in the current year, while the explanatory variables of firm characteristics are based on the preceding year.<sup>3</sup> In further analyses, I use a dynamic panel GMM estimator suggested by Wintoki, Linck and Netter (2012) to alleviate endogeneity concerns. The estimator incorporates the dynamic nature of firm policies to provide valid and powerful instruments that address unobserved heterogeneity and simultaneity. Since the dynamic panel GMM estimator relies partially on first-differencing, the regressions in the model are less subject to spurious correlations. It also mitigates any potential omitted variable bias as it eliminates the effects of time-invariant firm heterogeneity. Using these approaches, I can alleviate the concern for endogeneity by reverse causality even though I may not completely eliminate it.<sup>4</sup>

#### *4.2. Second Model: Logistic Regression*

I study whether fundamental firm characteristics are linked to blockholders' decision on short-term versus long-term investments. In addition to the panel OLS regression model, I explore this question through a different perspective using the probability of retaining the blockholding investments. The observation of interest is binary: either an investor keeps a (short-term or long-term) blockholding stake of more than 5% of the firm's equity or not. I take the approach of modeling the probability  $p$  of retaining a stake. Each firm-investment-year observation is then a realization from this modeled probability distribution. I analyze this using

---

<sup>3</sup> In further analyses, I also include multiple-year lags of the regressors in the models. I obtain mainly robust results.

<sup>4</sup> The models pass various validation tests. Details are given in Table A.2, Appendix and Figure IA.1, Online Appendix.

the logistic regression model. Standard errors are clustered at the investment-firm level. Let  $p_{f,i,t+1}$  denote the probability investor  $i$  stays as a blockholder with a short-term investment in firm  $f$  at time  $t+1$ , then I have

$$\ln\left(\frac{p_{f,i,t+1}}{1-p_{f,i,t+1}}\right) = \left\{ \begin{array}{l} \alpha + \beta * Board\ Independence_{f,t} + \gamma * Leverage_{f,t} \\ + \delta * Dividend\ Ratio_{f,t} + \theta * Firm\ Size_{f,t} + \mu_{f,i,t} \end{array} \right\} \quad (3)$$

where  $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\delta$ ,  $\theta$ ,  $\mu$  are the coefficients of the constant term, firm characteristics, and error term, respectively. A similar analysis is possible for the probability an investor stays as a blockholder with a long-term investment.

A one-unit increase in  $x_j$  in the model multiplies the initial odds by a factor of  $e^{\beta_j}$ , which is often referred to as the odds ratio. In the analysis, I report the coefficient estimates for both the estimated logit regressors  $\{\beta_j\}$  and the odds ratios,  $\{e^{\beta_j}\}$ . As a second aid to interpretation, note that if the variable  $x_j$  increases by one unit, the odds of an event occurring ( $p/(1-p)$ ) will increase by  $(e^{\beta_j} - 1)\%$ . Thus, if  $\beta_j = 0.41$ , then a one-unit increase in  $x_j$  will raise the odds of the event occurring by 50% as  $e^{0.41} - 1 = 0.5$ . The odds themselves are increased by a factor of 1.5 as  $e^{0.41} = 1.5$ . Whereas if  $\beta_k = -0.69$ , then a one-unit increase in  $x_k$  will *reduce* the odds of the event occurring by 50% as  $e^{-0.69} - 1 = -0.5$ . The odds themselves from a unit increase in  $x_k$  will change by a factor of 0.5 as  $e^{-0.69} = 0.5$ .

Similar to the fixed effects panel OLS regression model, I have a time lag between dependent and independent variables in the logistic regression model. In this way, I try to ensure that the decision to stay as a blockholder with a short-term (long-term) horizon is influenced by lagged firm characteristics but not the other way around.

## 5. Main Results on Hypotheses

### 5.1. Why Do the Same Blockholders Adopt a Short-Term Investment Horizon?

Table 2 presents the panel OLS regression results for the relation between firm policies

(i.e., corporate governance, capital structure, dividends, and firm size) and the same blockholders' decision to keep their stakes short term at or above the 5% ownership level in a company. In Panel A of Table 2, the number of blockholders with a short-term horizon is negatively related to *Board Independence* at the 1% level of significance. A one-standard deviation (about 14.4%) increase in board independence reduces the number of retained blockholders with short-term investment horizon by 5.6% ( $= -0.391 * 0.144$ ). Thus, Hypothesis 1.B is supported. From the investors' perspective, this result favors the view that the same blockholder keeps investments shorter term in a firm with a more compliant board. Such investors perhaps prefer firms with weak management who are therefore more inclined to acquiesce to and implement the blockholder's policies. Alternatively, these firms with an insider-dominated board may exhibit managerial myopia, which is in line with the interests of blockholders with short-term investments.

[Insert Table 2 about here]

The hypothesis on the value of dividends (Hypothesis 3.A) is supported. This result is consistent with the view that investors with a short-term horizon like dividends as a source of cash flow. Specifically, more blockholders adopt a short-term investment horizon (relative increase of about 3%  $= 1.235 * 0.024$ ) if firms increase dividend payouts by 0.024% (one standard deviation).<sup>5</sup>

The firm size hypothesis (Hypothesis 4.A) is also supported. Short-term blockholding investments leave larger firms; the number of blockholders deciding on a short-term investment in firms drops by 10.4% ( $= -0.068 * 1.527$ ) if those firms were to grow in size by one standard deviation.

Perhaps surprisingly, I reject Hypothesis 2.A. Leverage does not have a significant

---

<sup>5</sup> Additional analysis on outstanding firm shares reveals that total shares drop by 30.5 million (16.5%) on average during the short-term investment period for those companies. This may imply a profitable share buyback policy that convinces blockholders to invest for a short-term period in those firms.

effect on short-term blockholding investments. An indifference to current leverage levels may be consistent with a preference for a compliant board, as the latter may allow the investor to pursue the borrowing desires of the blockholder independently of the current leverage position.

The results using the ownership by blockholders with short-term focus—that is, *STBH* (%)—support the main findings. When firms increase size or board independence, the ownership by blockholders with short-term investment horizon is less the next year. Higher dividend payments are associated with an increase in blockholders' short-term stakes in those firms.

I study the firm characteristics and short-term blockholding investments also via a second model: the logistic regression analysis. Panel B of Table 2 provides the results for betas  $\{\beta_j\}$  (from the logit regression) along with their standard errors and odds ratios. The sometimes more easily interpretable odds ratio interpretation  $\{e^{\beta_j}\}$  is also reported.

The hypothesis on board independence (Hypothesis 1.B) remains supported. An increase in the independence of the board lowers the probability of a short-term blockholding investment staying for a second year, and this result is significant at the 1% level. This adds further support to the contention that the same blockholders adopt a short-term horizon in firms with a more compliant board. Turning to leverage (Hypothesis 2.A), whereas before no statistical result could be found, now the findings support the hypothesis that high leverage is positively related to short-term blockholding investments. This could be rationalized by the view that blockholders would keep their stakes in firms and sell out of the stock after a short term when those companies increase firm risk through leverage.<sup>6</sup> Interesting results are available on the dividend (Hypothesis 3.A). If the firm is delivering higher dividends, it

---

<sup>6</sup> In untabulated analyses, I examine the bankruptcy risk via Altman Z-score and find that on average an additional 2.1% of firms become financially distressed right before blockholders sell their short-term stakes in those firms. This finding implies that the strategy of higher leverage to increase the firm risk is associated with short-term blockholding investments.

significantly increases the odds of keeping the short-term investments into a second year, here by a factor of 10.67. The hypothesis on firm size (Hypothesis 4.A) is again strongly supported: it is less likely that short-term blockholding investments stay in large firms, which perhaps offer less room to grow in the future.

The findings reveal that the same large shareholders adopt a short-term investment horizon only in particular companies. Smaller firms with a less independent board, high dividend ratio, and high leverage are attractive to short-term investments. These findings are consistent with the hypothesis of an “active approach” by blockholders with short-term investments who perhaps have a “short-term profit” agenda. Such investors decide on a shorter investment period perhaps in more weakly governed smaller firms allowing them greater influence on firm decisions. In their short holding period, they benefit from high dividend payouts, profitable share buybacks, and once firm risk is high enough, they sell the stocks. Exploring this further, I examine the distribution of shareholder proposals with activism among long-term and short-term blockholding investments in this sample. Online Appendix Figure IA.2 shows that 10% of activism proposals belong to long-term blockholding investments on average, while 90% of them are brought up by short-term blockholders. These statistics support the implications here that blockholders with a shorter investment horizon actively engage in changing firm policies concerning governance and focus of the firm.

### *5.2. Why Do the Same Blockholders Adopt a Long-Term Investment Horizon?*

The results for long-term blockholding investments are contained in Panel A of Table 2. The hypothesis that independent boards are attractive to long-term blockholding investments (Hypothesis 1.A) is supported. Combined with the result above, this deepens the understanding of boards: whereas blockholders decide on short-term investments in firms with a compliant board, the same large shareholders adopt a long-term horizon in firms with an independent

board. Specifically, there are more blockholders with long-term investments by 8% ( $= 0.574 * 0.139$ ) as board independence improves by 14% (one standard deviation).

The hypothesis that high leverage is positively related to long-term blockholding investments (Hypothesis 2.B) is supported. The findings imply that one standard deviation increase in leverage is accompanied by 4.5% ( $= 0.279 * 0.162$ ) increase in the number of retained blockholders with long-term focus. This result could be explained by the view that blockholders with a long-term horizon support growth in leverage as a result of an expanding and successful firm.<sup>7</sup>

Similar to blockholders with short-term investments, investors with long-term focus also prefer smaller firms. Explicitly, their number decreases by 19.1% ( $= -0.126 * 1.518$ ) if the firm grows in size by one standard deviation. Hypothesis 4.B is thus supported.

Considering the results on dividends (Hypothesis 3.B), I reject the null hypothesis that dividend payouts would be negatively associated with long-term blockholding investments. I find no statistical effect from this variable on long-term investments. This suggests that cash flow considerations are less germane to the business case for a long-term investment.

The results using *LT BH (%)* back the main findings. When companies have more leverage or improve the board by increasing board independence, then blockholders with long-term investment horizon increase their ownership in those firms the next year. Focusing on core businesses and decreasing firm size have the same relation to those investments.

The findings from the logistic regression analysis in Panel B of Table 2 confirm that board independence (Hypothesis 1.A) for *Stay LT BH* is supported. A more independent board encourages long-term investments to continue to stay in the firm. This suggests that investors

---

<sup>7</sup> Further investigation reveals that approximately 6.4% of highly levered firms in the sample improve their status, become financially safe (measured by Altman Z-Score), and mitigate bankruptcy risk leading blockholders to decide on long-term investments in those firms. This finding implies that the strategy of higher leverage to induce firm growth but not the risk is associated with long-term investments. It is interesting because the results previously show that the same blockholders adopt a short-term horizon when firms follow a different strategy and increase firm risk through high leverage.

planning a long-term investment value an independent board; this is in line with the view that an independent board will be best placed to take value-enhancing decisions into the future.

Similar to the finding in Panel A, leverage is attractive to long-term blockholding investments. Hence, Hypothesis 2.B is supported. Particularly, the odds of the same blockholder decides on long-term investments in a firm increase by 1.076 ( $= 2.076 - 1$ ) times when that firm increases firm leverage by a factor of  $e$ .

Dividend growth is now discovered to have a negative effect on the decision of a long-term blockholding investment. Hence, Hypothesis 3.B is supported. This result is instead in keeping with a life-cycle approach to investment targets under which dividends grow as the business reaches maturity and the present value of growth opportunities declines.

Firm size has a negative and significant effect on the odds of keeping a long-term blockholding investment. Hypothesis 4.B is thus confirmed as being supported. One unit increase in firm size—that is, an increase in firm size by a factor of  $e$ —multiplies the odds ratio by 0.795. This is consistent with the hypothesis that investors adopt a long-term horizon in smaller firms with more room for growth in the future. A further explanation could be that firms downsize and reduce the number of markets they address. Thereby, they increase focus on their core competence and so look to grow stronger.

The findings show that the same blockholders adopt a longer term investment horizon only in certain firms. Companies with higher board independence, higher leverage, and low dividends have a higher probability of retaining long-term investments by blockholders. Interrogation of the data demonstrates that these firms downsize and reduce the number of markets they address. Thereby, they increase their focus on their core competence. These insights support the hypothesis of a “passive approach” by blockholders with a long-term horizon espoused by a “long-term profit” focus. These investors may not be confident of continuous engagement in firm decisions over many years; instead, they favor strong

governance in firms to deliver profitable firm policies over the long term.

## **6. Robustness and Further Analyses**

### *6.1. Different Investor Horizon Classifications*

One can argue that the current classification for blockholding investments that uses realized holding periods includes future information about blockholders' exit, and hence, it may suffer from bias. Regardless of the true intention to be the long or short term, when an investment turns extremely bad or extremely good, blockholders may exit much earlier than planned. Thus, it might be difficult to differentiate their original intention from such conditional exit. To alleviate the concern of conditional exit, I replicate the analyses for long-term blockholding investments excluding firms that perform extremely well (top 10 percentile) or extremely bad (bottom 10 percentile) in terms of the change in performance throughout the holding period.<sup>8</sup> By doing so, I keep only the investments in firms that are less likely to deviate from their initial intention due to firm performance. I use return on assets (ROA), Tobin's Q, and stock return to measure firm performance. ROA is net income over total assets. Tobin's Q is market value over book value of total assets. Stock Return is the annual stock return of the firm. The results in the Table IA.2, Online Appendix, are still consistent with the original findings in Table 2.

To show further robustness of the results, I use different investor horizon classifications in the literature to identify blockholding investments in this paper. Following Gaspar, Massa and Matos (2005) and Yan and Zhang (2009), I calculate the churn rate and classify blockholders as short term or long term if they are ranked in the top or bottom tertile of the churn rate, respectively. Finally, I construct the number and the ownership percentage of short-

---

<sup>8</sup> I obtain similar robust results with 15th and 20th percentile cutoff levels separately. The results also stay robust when I replicate the exercise for short-term investments to examine blockholdings with "true" short-term intention.

term and long-term blockholders in each firm. I replicate the main analyses using this classification, which should be free from the bias and can reflect the true intention of blockholders. The results in the Table IA.3, Online Appendix, are in line with the estimates in Table 2, and they strengthen the plausibility of the original findings.

## 6.2. Board Independence, the SOX Act, and SEC Regulations

One potential way to mitigate the endogeneity issue regarding the relation between board independence and short-term (long-term) blockholding investments is to conduct a DID test based on SOX and following SEC rules. Recent studies including Bradley and Chen (2015) and Tosun (2018) exploit the passage of the SOX Act and the associated changes in listing standards as a natural experiment. Following those studies, I use DID regression to identify the causal effect of board independence on short-term and long-term blockholding investments. I examine whether, after the shock, board independence affects blockholding investments in noncompliant firms. This claim is represented by the interaction of *Post* and *Non-Compliant* dummies. *Non-Compliant* is equal to one for firms that did not comply with the “majority of board independence” rule by the SEC before 2003, and zero otherwise. *Post* is a dummy that is equal to one for years after 2003, and zero otherwise. Year and firm fixed effects are also added to the model along with *Leverage*, *Dividend Ratio*, and *Firm Size*. The model does not have indicators for the post-period or non-compliant firms because they are subsumed in the firm and year fixed effects. Standard errors are clustered at the firm level.

Table 3 reports the results consistent with the original findings. In particular, *Non-Compliant\*Post* has statistically significant and negative (positive) estimates for the number and ownership of short-term (long-term) blockholding investments. The results also confirm that smaller firms with a high dividend ratio and high leverage are attractive to short-term investments. The same blockholders adopt a longer term investment horizon in highly

leveraged companies when they downsize and increase their focus on their core competence.

[Insert Table 3 about here]

### 6.3. Endogeneity and Dynamic GMM Regression

To address the potential endogeneity issues in this study (e.g., simultaneity, reverse causality, unobservable heterogeneity), I use a dynamic panel GMM estimator suggested by Wintoki, Linck and Netter (2012). The basic estimation procedure consists of two essential steps. First, I construct first-differenced form of the dynamic model. First-differencing eliminates any potential bias that may arise from time-invariant unobserved heterogeneity. Second, I conduct GMM regression analysis using lagged values of the explanatory variables as instruments for the current explanatory variables. That is, I use historical values of the number of short-term (long-term) blockholding investment and four fundamental firm characteristics as instruments. This will account for potential simultaneity in the analysis. In the model, I regress *Number of BH with ST Horizon* on *Board Independence*, *Leverage*, *Dividend Ratio*, and *Firm Size*, as well as one-year lagged *Number of BH with ST Horizon*. Year dummies are added to the model. The model is specified as follows:

$$Y_{f,t} = \left\{ \begin{array}{l} \alpha + \beta * Y_{f,t-1} + \gamma * Board\ Independence_{f,t} + \delta * Leverage_{f,t} \\ + \varepsilon * Dividend\ Ratio_{f,t} + \theta * Firm\ Size_{f,t} + \rho * Year\ Dummies_t + \mu_{f,t} \end{array} \right\} \quad (4)$$

where the measure for the number of short-term blockholding investment is  $Y$ ; the firm observation is  $f = 1, \dots, N$ ; the entire period is  $t = 1998, \dots, 2013$ ; and  $\alpha, \beta, \gamma, \delta, \varepsilon, \theta, \rho, \mu$  are the coefficients of the constant term, lagged dependent variable, firm characteristics, year dummies, and error term, respectively. The model for long-term blockholding investments has a similar setup. Additionally, it includes two-year and three-year lagged *Number of BH with LT Horizon*. The instruments used in the GMM estimation for short-term investments are as follows: two- to five-year lagged variables of *Number of BH with ST Horizon* and four firm characteristics, along with  $\Delta$  *Number of BH with ST Horizon*  $_{t-1}$ ,  $\Delta$  *Firm Characteristics*  $_{t-1}$ ,  $\Delta$  *Year Dummies*  $_{t-1}$ , and *Year Dummies*  $_t$ . For long-term investments, they are four-year and five-

year lagged variables of *Number of BH with LT Horizon* and four firm characteristics, along with  $\Delta$  *Number of BH with LT Horizon*<sub>*t*-1</sub>,  $\Delta$  *Firm Characteristics*<sub>*t*-1</sub>,  $\Delta$  *Year Dummies*<sub>*t*-1</sub>, and *Year Dummies*<sub>*t*</sub>. The lags of variables as instruments have to start with two years and four years for the short-term and long-term investment models, respectively, because I include one lag and three lags of the dependent variable in the corresponding dynamic models. I choose the upper limit for lags as five years because it enables me to have two years of lagged instrumental variables for long-term investment model. To be consistent between models, I apply five-year upper limit for lags to the short-term investment model too. Finally, I assume that all the regressors in the GMM regression except the year dummies are endogenous.

Following Wintoki, Linck and Netter (2012), I conduct several tests to decide on the number of lags for the dependent variables and to analyze how strongly the present is correlated with the past. First, I estimate a regression of current number of short-term (long-term) blockholding investment on four lags of their past values, controlling for other firm-specific characteristics. Appendix Table A.3 shows that *Number of BH with ST Horizon* is significantly related to only one-year lag, while statistical significance disappears for two-year lag. Considering *Number of BH with LT Horizon*, the first three lags are statistically significant, while older lag is insignificant. Therefore, I include one lag and three lags of the dependent variable in the corresponding models. Next, I carry out a test of strict exogeneity using an OLS regression of current number of short-term (long-term) blockholding investment on current and future values of four fundamental firm policies. Under the null hypothesis of strict exogeneity, future realizations of firm variables are unrelated to current blockholding investments. The statistically significant coefficients of future firm characteristics in Appendix Table A.4 suggest that none of the explanatory variables are strictly exogenous. Last, I conduct a set of tests with OLS regressions of current firm policies on past number of blockholding investments and historical values of the firm-specific variables. The statistically significant findings in

Appendix Table A.5 show that the present and the past values of explanatory variables and the dependent variables are correlated and dynamically endogenous.

I examine the validity of exogeneity assumptions in the dynamic GMM model through several analyses. I carry out AR(1) and AR(2) tests for first-order and second-order serial correlation in the first-differenced residuals. By construction, the residuals in first-differences (AR(1)) should be correlated, but there should be no serial correlation in second-differences (AR(2)). The reported results in Table 4 confirm that. Last, I conduct a Hansen test of overidentification under the null that all instruments are valid because the dynamic panel GMM estimator uses multiple lags as instruments. I cannot reject the null hypothesis based on the reported  $p$ -values in Table 4, and that confirms the validity of the instruments.

[Insert Table 4 about here]

Table 4 presents the results from the dynamic GMM regressions that confirm my original findings in Table 2. In particular, more blockholders adopt a short-term investment focus in firms when they have fewer independent directors on their board, have high leverage, and pay out more in dividends. Firm size has the same negative relation to both types of blockholding investments. However, the same blockholders decide to keep their stakes longer in firms with a more independent board and low dividends.

#### *6.4. Endogeneity in Short-Term Blockholding Investments*

Another potential endogeneity issue is that a blockholder decides to become short- or long term after seeing the firm policies, and not entering the investment with a given horizon in mind. One can imagine a situation in which if blockholders with long-term investments are not content as the changes they desire are not implemented, or if the firm does not develop as initially expected, they may sell their shares within a couple of years although they initially had the intention of keeping the firm for many years. This would be an endogenous decision

by them; yet, these investors would count toward *Number of BH with ST Horizon* in the model along with the other blockholders with “true” short-term investments. In order to alleviate this endogeneity problem, I repeat the analysis using the investments by blockholders who have at least 90% of their portfolios only in short-term investments. To determine these investors, I rank blockholders according to the percentage by value of short-term investments in their portfolios. I select the blockholders having portfolios with at least 90% short-term investments.

Table 5 shows the findings from the fixed effects panel OLS regression using *Number of BH with True ST Horizon*. The original results captured in Table 2 are robust. More blockholders adopt a short-term horizon when firms are small, pay high dividends, have high leverage, and have a less independent board.

[Insert Table 5 about here]

#### 6.5. *Survivorship, Omitted Variable Bias, and Multicollinearity*

Long-term blockholding investments are classified as the holdings in a firm for strictly more than seven years. Given that the sample period is from 1998 to 2013, some of the long-term investments may not show the full length of their holding period starting in or after 2005. To control for this survivorship bias for those blockholding investments, I focus on only the long-term investments before 2005 in a separate sample while keeping other parameters the same. Using the main model and this new sample set, I obtain robust findings in Table 6.

[Insert Table 6 about here]

Using economic intuition, I identify the fundamental firm policies that would be critical in explaining the investment decisions of blockholders. Although I will certainly not have captured everything in the analysis, an econometric concern arises if there are omitted variables that are both correlated with one of the regressors and separately is determinative of investors’ investment decisions. The additional analysis using the dynamic GMM model already mitigates the omitted variable bias, as it eliminates the effects of time-invariant firm

heterogeneity. To address this concern even further, I expand the range of firm variables: *Tobin's Q* is market value over book value of total assets. *Firm Growth* is capital expenditures over total assets. *R&D Dummy* is a dummy variable that equals one if the firm has any R&D investments (missing values in the data are considered as zero), and zero otherwise. *Stock Price Volatility* is annual standard deviation of daily stock price. *Cash Ratio* is cash holdings over total assets. *P/E Ratio* is stock price over earnings of firm. *Firm Performance* is net income over total assets. *Sales Growth* is the difference in sales revenues between the current year and the prior year over the revenue in the prior year. *Tainted Board* is a dummy that equals one if the CEO is also a member of the board, and zero otherwise. *Board Ownership* is the total percentage of shares owned by directors on the board. *CEO Ownership* is the total percentage of shares owned by the CEO. *HHI* is the Herfindahl-Hirschman Index of industry concentration. I use a Wald test to individually examine each of these variables for any significant improvement of the models with *Number of ST BH* and *Number of LT BH* if that variable is included in the analysis. Appendix Table A.6 displays findings as chi-square and associated probabilities (in italics). I find that none of the changes are statistically significant. In further analyses, I include these additional variables in the main model. Table 7 provides a comparison between the main and the extended new model. None of the new variables can explain *Number of ST BH* and *Number of LT BH*. These findings indicate that none of these additional variables can improve the model.<sup>9</sup>

[Insert Table 7 about here]

It is important that the interrelationship among variables in the main model is not so strong that it causes a multicollinearity issue. Table 1 already shows that the variables are not strongly correlated, making multicollinearity unlikely. I proceed further by exploring the

---

<sup>9</sup> The analyses in Table 7 are also replicated using *Active BH (%)* and *Passive BH (%)*. I obtain similar robust results in Table IA.4, Online Appendix.

variance inflation factor (VIF) and tolerance measures. Appendix Table A.7 shows that interrelation among variables is very low. In particular, tolerance is above 85% for all variables, and they have a VIF of almost 1. These results imply that multicollinearity is unlikely to be a problem in my analyses.

#### *6.6. Investments by Blockholders with Different Portfolio Structures*

Figure 3 shows that same blockholders have various investments with different horizons in their portfolio. So far, I examine each investment by all blockholders. An interesting further analysis would be to consider only large shareholders with specific portfolios. In particular, I will focus on investments by blockholders having portfolios with at least 75% of the investments as short term (long term). These blockholders should then have “majorly” short-term (long-term) investment horizon. This analysis will further test the robustness of my original findings. In a separate analysis, I will consider only investments by blockholders who have portfolios with 50%–60% of the investments as short term (long term). These portfolios are almost balanced between short-term and long-term investments. Hence, such blockholders have “marginally” short-term (long-term) investment horizon. These investments with “marginally different horizons” will enable me to detect whether there are firm characteristics that affect the same blockholder similarly while choosing between a short-term and a long-term horizon.

Table 8 provides the findings from the fixed effects panel OLS regression using this new sample set. Considering investments by blockholders with majorly short-term (long-term) horizon, I obtain similar robust results to the ones in Table 2. Particularly, there are more majorly short-term (long-term) blockholding investments in smaller firms that have high dividends and a less (more) independent board. The analysis on investments in balanced portfolios reveals further interesting findings. Firm size and capital structure—that is,

leverage—are the two firm policies that have similar impact on blockholding investments. Confirming my main findings, blockholders regardless of short-term or long-term horizon invest in smaller firms with high leverage. In other words, large shareholders may sell their stakes after one or two years, or hold on to them for more than seven years when those firms have a potential to grow due to their small size and increase leverage for either high risk or high growth. These results may also indirectly imply that corporate governance—that is, the board independence—and dividend policy are the key firm attributes that shape blockholders’ decisions on different investment horizons.

[Insert Table 8 about here]

### 6.7. *Active versus Passive Blockholding Investments*

While justifying the relationship between the short-term (long-term) investment choice of blockholders and firm policies, I have suggested that the hypothesis of an active (a passive) approach by blockholders could explain those findings. A natural next step is to examine whether this hypothesis is supported. Clifford (2008) and Clifford and Lindsey (2016) research active and passive blockholders explicitly. Following these studies, I define blockholders in my sample active versus passive based on whether they file Schedule 13D or Schedule 13G, respectively. Then I calculate the number and the percentage ownership of active and passive blockholding investments in each firm.<sup>10</sup> I repeat the main regression analysis with the new dependent variables: *Active BH (Num)*, *Active BH (%)*, *Passive BH (Num)*, and *Passive BH (%)*.

In Table 9, statistically significant results for *Active BH (Num)* and *Active BH (%)* suggest that smaller firms with high leverage and high dividend ratio have more active blockholding investments. These findings are mainly in line with the short-term blockholding investments in Table 2. Overall, the hypothesis of such short-term investments being “active”

---

<sup>10</sup> Summary statistics for active and passive blockholding investments are given in Table IA.5.

is supported. Surprisingly, the results for *Passive BH (Num)* and *Passive BH (%)* do not support strongly the hypothesis that blockholders adopting a long-term horizon are passive. Firm policies do not have a significant association with investments by passive blockholders except firm size. Passive blockholding investments prefer smaller firms. These puzzling findings for passive blockholders need further investigation.

[Insert Table 9 about here]

#### 6.8. *Blockholding Investments under Different Economic Conditions*

The analysis studies which firm characteristics encourage investors to decide on a short-term versus a long-term horizon on average. However, it may be that refining the population of firms yields further insights into what blockholders find attractive in differing circumstances. I repeat the analysis on subsets of the firm-year variables using a number of different filters. I consider the dot-com bubble and subprime mortgage crisis times (2000, 2001, 2008, and 2009), firms that have high bankruptcy risk (Altman Z-score  $<1.81$ ), high stock price volatility (top quartile), low liquidity via the Amihud illiquidity measure (top quartile), a busy board which is the percentage of directors on the board that also serve on the boards of other firms (top quartile), high CEO ownership via the percentage of shares owned by the CEO (top quartile), single segment versus conglomerate firms, and firms operating in concentrated (HHI  $>0.20$ ) versus competitive industries (HHI  $<0.05$ ). Results are presented in Table 10.

[Insert Table 10 about here]

In Panel A of Table 10, firms retain more blockholding investments in crisis times, both short term and long term, when they downsize and focus on core businesses. Keeping leverage high for growth is attractive for short-term investments. If a firm has high risk of bankruptcy, having a more independent board helps the firm to keep more long-term blockholding investments as indicated with 1% level of significance. Conversely, the number of retained blockholders with a short-term horizon is higher for smaller firms with fewer outsiders on the

board. The difference between these investments could be explained by the view that blockholders with a short-term horizon keep their stakes in firms with low board independence due to higher managerial myopia and take advantage of the high risk before they sell out of the stock. Contrary to them, blockholders decide on long-term investments when they are convinced that the firm is well managed by the board with many independent directors because it is crucial especially when the firm has a risk of bankruptcy. I find similar and consistent results regarding board independence for firms with high stock price volatility as well as low liquidity. Blockholders with a short-term focus also favor high dividend payouts when the firm is risky. For firms with illiquid shares, small firm size gains importance for short-term blockholding investments. Considering firms with a “busy board,” they can attract both types of investments—that is, short term and long term—if they lever up using more debt for high risk and high growth. Results suggest that blockholders with long-term investments demand better governance through higher board independence. In particular, one standard deviation increase in board independence (about 14%) increases the number of blockholders with a long-term investment by 8.3% ( $= 0.598 * 0.139$ ). Differently from short-term focused investors, blockholders with a long-term horizon place importance on board independence when firms have potentially weak governance due to having a “busy board.” It is because their investments are kept in such firms for a long time and independent directors can substitute monitoring effort.

In Panel B of Table 10, findings show that more blockholders adopt a short-term horizon in firms with lower board independence when the CEO owns a higher stake of the firm. This is consistent with the view that insider-dominated boards exhibit higher managerial myopia, which is in line with short-term-focused investors. Turning to long-term blockholder investments, such investments are related to firms with a smaller firm size. For single-segment firms, investment by short-term blockholders is encouraged with fewer outsiders on the board, while long-term blockholding investments are associated with improved governance through

more directors who are outsiders. Specifically, the number of blockholders with a short-term (long-term) investment drops by 9% (increases by 7.9%) as board independence increases by one standard deviation (about 14%). The results for conglomerate firms suggest that different firm policies gain importance for short-term and long-term investments. Particularly, blockholders keep their shares shorter in conglomerates when these firms pay out more dividends. However, the same blockholders adopt a longer horizon when conglomerates have stronger governance with a more independent board, high leverage, and focus on their core competence. This can be rationalized by the view that blockholders with long-term investments prefer strong and growing conglomerates for consistent high performance in the long run. They appreciate conglomerates having their management monitored internally by a strong board, as external monitoring requires high effort due to their complicated business structure.

Comparing firms operating in concentrated to competitive industries, blockholders consider different firm policies for their decisions on investment horizon. Specifically, corporate governance through board independence is essential for investors regarding concentrated industries. More blockholders with a short-term investment are associated with firms having a less independent board, while the same investors choose a long-term horizon for their investments in firms with more outsiders on the board. For firms operating in competitive industries, the strategy is different. Due to high competition, large shareholders with a long-term horizon prefer firms focusing on core businesses and keeping blockholding investments safe in the long run. Firms operating in competitive industries have more short-term investments when they have high leverage and pay out more dividends. This is consistent with the idea that blockholders with a short-term focus favor high risk through high leverage that is aggravated further in a competitive business environment.

Blockholders have certain preferences for specific industries as displayed in Figure 2. Hence, an interesting extension to the analysis could be to examine which firm policies step

forward in blockholders' decisions on investment horizon considering their preferred industries. Using Fama-French 49 industry classification, I construct the following five major industry groups: Manufacturing, Construction, Wholesale & Retail, Electronics & Telecommunication (High-Tech), and Service (personal, business, healthcare, restaurants, entertainment, transportation, etc.). I repeat the fixed effects panel OLS regression model for each of these five subsamples. Results are presented in Table 11.

[Insert Table 11 about here]

The findings in Table 11 suggest that corporate governance through board independence is the only essential policy for both short-term and long-term investments considering manufacturing firms. Specifically, a blockholder has a short-term horizon in a manufacturing firm with a less independent board, while the same blockholder decides to keep the stakes longer in another manufacturing firm with more independent directors on the board.

Turning to the construction industry, results show that higher leverage is the influential firm attribute to keep short-term blockholding investments, while more blockholders with a long-term focus invest in firms with a more independent board. Surprisingly, none of the firm policies have a significant relation to short-term blockholding investments in wholesale or retail firms. Industry characteristics in general rather than firm attributes might be the factors that are attractive to blockholders with a short-term horizon. Contrary to them, more long-term blockholding investments are related to smaller firms with a strong board in these industries. A potential explanation might be that blockholders plan investments to be safe in the long run and prefer wholesale or retail firms to focus on their core competence and have their management monitored well given the high cyclicity and business risk in these industries. Companies in high-tech industries (e.g., electronics and telecommunication) should know that investors with a short-term focus prefer smaller firms with weaker corporate governance through lower board independence, and higher dividend payouts. Along with capital structure

policy, board independence is also an important firm characteristic for large shareholders with a long-term horizon. Considering that high-tech industries are highly volatile, these investors prefer well-managed high-tech firms with a steady long-term growth through high leverage that matches their long-term focus. Service companies can keep more short-term blockholding investments when they have low board independence and high dividend ratio. In particular, a one-standard deviation (14.4%) drop in board independence corresponds to an increase in the number of short-term investments by 11.2% ( $= -0.775 * 0.144$ ) while that increase is about 10.9% ( $= 4.552 * 0.024$ ) for a jump of 2.4% in dividend ratio. For firms operating in service sector, higher leverage is the key policy for long-term blockholding investments.

#### *6.9. Short-Term versus Long-Term Investments by Small Investors*

The focus of the paper is on short-term and long-term investments by blockholders. However, it might be interesting to extend the study and consider the investments by small shareholders to see whether fundamental firm policies including corporate governance, capital structure, dividend policy, and firm size have similar associations with those investors as they have with large shareholders. I collect data on investments by small investors who own less than 5% of a particular firm's shares. The classification of the investment horizon remains the same. *Number of Small Investors with ST (LT) Investment Horizon*—that is, the new dependent variables—are numbers of retained small investors having an investment with a short-term (long-term) horizon in that year. I repeat the main analysis with this new sample set.

Table 12 provides interesting results. Board independence does not have any significance on investments by small shareholders. This finding could be explained by the view that small investors do not have the ability or the chance to influence firm management, and hence, corporate governance is not a significant policy in their investment decision. Contrary to board independence, *Leverage*, *Dividend Ratio*, and *Firm Size* have statistically significant

coefficients. However, these firm attributes cannot help small investors to choose between different investment horizons. They have the same relation to short-term and long-term investments by small shareholders. In particular, small investors prefer big firms that have low leverage and pay less dividends regardless of short-term or long-term horizon. These results could be rationalized by risk aversion. Small shareholders might want to avoid risk in their investments, and therefore, they choose to invest in big firms with established businesses and low leverage for low risk of financial distress or bankruptcy. Also, firms paying less dividends can keep more cash for safety against any future business risks.

[Insert Table 12 about here]

## **7. Conclusion**

Without making strong claims on absolute causality in the relation between firms and blockholding investments, this paper studies why the same blockholders adopt a short-term versus a long-term investment horizon in different firms. Blockholders decide to keep their shares shorter in smaller firms with a less independent board, a high dividend ratio, and high leverage, whereas firms have more long-term investments from those blockholders when they downsize and focus on their core businesses, improve governance with more outsiders on the board, pay out less dividends, and have higher leverage for growth.

While I try to mitigate the concerns for potential empirical issues such as endogeneity, causality, and omitted variable bias, I also aim to investigate further which firm characteristics gain more importance in relation to short-term and long-term blockholding investments under various economic conditions. I consider crisis times, high bankruptcy risk, high stock price volatility, low liquidity of shares, busy board, high CEO ownership, single versus conglomerate firms, industry concentration, as well as different industries preferred by blockholders. Finally, I show that those firm policies do not possess any significance in distinguishing between short-term and long-term investments when it comes to small shareholders.

This study is innovative, as I work at the level of the individual investment and examine its own time horizon—that is, I consider short-term versus long-term stakes. Now I can focus on a large shareholder’s individual investments with different horizons and correctly observe firm policies and characteristics that may attract the same blockholder to buy and hold the shares for a short- versus a long term. The extensive analyses on the relation between firm characteristics and different types of blockholding investments can offer firms guidance in making policy decisions designed to attract blockholders with different investment horizons.

## References

- Alti, A., 2003. How Sensitive Is Investment to Cash Flow When Financing Is Frictionless?, *Journal of Finance* 63, 707-722.
- Andreou, P. C., F. Fiordelisi, T. Harris, and D. Philip, 2017. Firms' Market Orientation, Institutional Ownership and Crash Risk, Working paper, Durham University.
- Appel, I. R., T. A. Gormley, and D. B. Keim, 2016. Passive Investors, Not Passive Owners, *Journal of Financial Economics* 121, 111-141.
- Barclay, M. J., C. G. Holderness, and D. P. Sheehan, 2008. Dividends and Corporate Shareholders, *Review of Financial Studies* 22, 2423-2455.
- Becker, B., H. Cronqvist, and R. Fahlenbrach, 2011. Estimating the Effects of Large Shareholders Using a Geographic Instrument, *Journal of Financial and Quantitative Analysis* 46, 907-942.
- Bhide, A., 1993. The Hidden Costs of Stock Market Liquidity, *Journal of Financial Economics* 34, 31-51.
- Black, B., 1992. Agents Watching Agents: The Promise of Institutional Investor Voice, *UCLA Law Review* 39, 811-893.
- Black, B., 1998. Shareholder Activism and Corporate Governance in the United States. The New Palgrave Dictionary of Economics and the Law. Palgrave Macmillan, New York.
- Bradley, M., and D. Chen, 2015. Does board independence reduce the cost of debt?, *Financial Management* 44, 15-47.
- Brailsford, T. J., B. R. Oliver, and S. L. H. Pua, 2002. On the Relation between Ownership Structure and Capital Structure, *Accounting and Finance* 42, 1-26.
- Burton, B., A. Gunasekarage, and J. Kumarasiri, 2013. The Influence of Blockownership Level and Identity on Board Composition: Evidence from the New Zealand Market, *Applied Financial Economics* 23, 1287-1299.

- Cai, F., and L. Zheng, 2004. Institutional Trading and Stock Returns, *Finance Research Letters* 1, 178–189.
- Cai, C. X., D. Hillier, and J. Wang, 2016. The Cost of Multiple Large Shareholders, *Financial Management* 45, 401-430.
- Cella, C., A. Ellul, and M. Giannetti, 2011. Investors' Horizons and the Amplification of Market Shocks, Working paper, European Corporate Governance Institute.
- Clifford, C. P., 2008. Value Creation or Destruction? Hedge Funds as Shareholder Activists, *Journal of Corporate Finance* 14, 323-336.
- Clifford, C. P., and L. Lindsey, 2016. Blockholder Heterogeneity, CEO Compensation, and Firm Performance, *Journal of Financial and Quantitative Analysis* 51, 1491-1520.
- Collins, D. W., Gong, G., and Hribar, P., 2003. Investor Sophistication and the Mispricing of Accruals, *Review of Accounting Studies* 8, 251-276.
- Cronqvist, H., and R. Fahlenbrach, 2009. Large Shareholders and Corporate Policies, *Review of Financial Studies* 22, 3941-3976.
- Dahlquist, M., and G. Robertsson, 2001. Direct Foreign Ownership, Institutional Investors, and Firm Characteristics, *Journal of Financial Economics* 59, 413-440.
- Derrien, F., A. Kecskés, and D. Thesmar, 2013. Investor Horizons and Corporate Policies, *Journal of Financial and Quantitative Analysis* 48, 1755-1780.
- Desai, M. A., and L. Jin, 2011. Institutional Tax Clienteles and Payout Policy, *Journal of Financial Economics* 100, 68-84.
- Dhillon, A., and S. Rosetto, 2015. Ownership Structure, Voting, and Risk, *Review of Financial Studies* 28, 521-560.
- Dlugosz, J., R. Fahlenbrach, P. Gompers, and A. Metrick, 2006. Large Blocks of Stock: Prevalence, Size, and Measurement, *Journal of Corporate Finance* 12, 594-618.
- Dong, L., K. Uchida, and X. Hou, 2014. Block Trade Targets in China, *Journal of Corporate*

- Finance* 25, 188-201.
- Dunne, P., and A. Hughes, 1994. Age, Size, Growth and Survival: UK Companies in the 1980s, *Journal of Industrial Economics* 42, 115-140.
- Edmans, A., 2009. Blockholder Trading, Market Efficiency, and Managerial Myopia, *Journal of Finance* 64, 2481-2513.
- Edmans, A., and C. G. Holderness, 2017. Blockholders: A Survey of Theory and Evidence, Working paper, European Corporate Governance Institute.
- Fama, E. F., and K. R. French, 1993. Common Risk Factors in the Returns on Stocks and Bonds, *Journal of Financial Economics* 33, 3-56.
- Fernandez, C., and R. Arrondo, 2005. Alternative Internal Controls as Substitutes of the Board of Directors, *Corporate Governance: An International Review* 13, 856-866.
- Gaspar, J. M., M. Massa, and P. Matos, 2005. Shareholder investment horizons and the market for corporate control, *Journal of Financial Economics* 76, 135-165.
- Gaspar, J. M., M., Massa, P., Matos, R. Patgiri, and Z. Rehman, 2011. Payout Policy Choices and Shareholder Investment Horizons, *Review of Finance* 17, 261-320.
- Graham, J., C., Harvey, and S. Rajgopal, 2005. The Economic Implications of Corporate Financial Reporting, *Journal of Accounting and Economics* 40, 3-73.
- Gregoric, A., A. B. Masten, and K. Zajc, 2011. From Social to Private Ownership: Multiple Blockholders in Slovenian Unlisted Firms, *Emerging Markets Finance & Trade* 47, 27-51.
- Gugler, K., N. Ivanova, and J. Zechner, 2014. Ownership and control in Central and Eastern Europe, *Journal of Corporate Finance* 26, 145-163.
- Holderness, C. G., 2003. A Survey of Blockholders and Corporate Control, *Economic Policy Review* 9, 51-64.
- Holderness, C. G., 2009. The Myth of Diffuse Ownership in the United States, *Review of Financial Studies* 22, 1377-1408.

- Jensen, M. C., 1986. Agency Costs of Free Cash Flow, Corporate Finance and Takeovers, *American Economic Review* 76 323-329.
- Karpoff, J., P. Malatesta, and R. Walkling, 1996. Corporate Governance and Shareholder Initiatives: Empirical Evidence, *Journal of Financial Economics* 42, 365-95.
- Lakonishok, J., A. Shleifer, and R. W. Vishny. 1992. The Impact of Institutional Trading on Stock Prices, *Journal of Financial Economics* 32, 23-43.
- Mak, Y. T., and Y. Li, 2001. Determinants of Corporate Ownership and Board Structure: Evidence from Singapore, *Journal of Corporate Finance* 7, 235-256.
- Maury, B., and A. Pajuste, 2005. Multiple Large Shareholders and Firm Value, *Journal of Banking and Finance* 29, 1813-1834.
- Miletkov, M. K., A. B. Poulsen, and M. B. Wintoki, 2014. The Role of Corporate Board Structure in Attracting Foreign Investors, *Journal of Corporate Finance* 29, 143-157.
- Pound, J., 1992. Raiders, Targets, and Politics: The History and Future of American Corporate Control, *Journal of Applied Corporate Finance* 5, 6–18.
- Santos, M. S., A. C. Moreira, and E. S. Vieira, 2014. Ownership Concentration, Contestability, Family Firms, and Capital Structure, *Journal of Management & Governance* 18, 1063-1107.
- Shin, H. H., and R. M. Stulz, 2000. Firm Value, Risk and Growth Opportunities, Working paper, National Bureau of Economic Research.
- Shome, D. K., and S. Singh, 1995. Firm Value and External Blockholdings, *Financial Management* 24, 3-14.
- Sias, R., L. Starks, and S. Titman, 2006. Changes in Institutional Ownership and Stock Returns: Assessment and Methodology, *Journal of Business* 79, 2869–2910.
- Steiner, T. L., 1996. A reexamination of the Relationships Between Ownership Structure, Firm Diversification, and Tobin's Q, *Quarterly Journal of Business and Economics* 35, 39-48.
- Strobl, G., and J. Zeng, 2017. Portfolio Size and Incentives for Shareholder Activism, Working

- paper, Frankfurt School of Finance & Management.
- Stulz, R. M., 1990. Managerial Discretion and Optimal Financing Policy, *Journal of Financial Economics* 76, 3–27.
- Sulaeman, J., 2011. Do Shareholder Preferences Affect Corporate Policies?, Working paper, National University of Singapore.
- Thanassoulis, J., and B. Somekh, 2016. Real Economy Effects of Short-Term Equity Ownership, *Journal of International Business Studies* 47, 233-254.
- Tosun, O. K., 2018. Changes in Corporate Governance: Externally Dictated vs Voluntarily Determined, Working paper, University of Warwick.
- Tribo, J. A., P. Berrone, and J. Surroca, 2007. Do the Type and Number of Blockholders Influence R&D Investments? New Evidence from Spain, *Corporate Governance: An International Review* 15, 828-842.
- Wermers, R., 1999. Mutual Fund Herding and the Impact on Stock Prices, *Journal of Finance* 54, 581–622.
- Wintoki, M., J. Linck, and J. Netter, 2012. Endogeneity and the Dynamics of Internal Corporate Governance, *Journal of Financial Economics* 105, 581-606.
- Wright, P., S. P. Ferris, A. Sarin, and V. Awasthi, 1996. Impact of Corporate Insider, Blockholder, and Institutional Equity Ownership of Firm Risk Taking, *Academy of Management Journal* 39, 441-463.
- Yan, X., and Z. Zhang, 2009. Institutional Investors and Equity Returns: Are Short-Term Institutions Better Informed?, *Review of Financial Studies* 22, 893-924.

## Appendix

**Table A.1: Definition of Variables**

BH with Short-term (ST) Investment Horizon	Blockholders with an investment of at least 5% ownership of a particular firm for less than three years.
BH with Long-term (LT) Investment Horizon	Blockholders with an investment of at least 5% ownership of a particular firm for more than seven years.
Number of ST BH	The number of retained blockholding investments in that year with a short-term horizon.
Number of LT BH	The number of retained blockholding investments in that year with a long-term horizon.
Stay ST BH	Dummy variable that equals one for a blockholder with a short-term investment of at least 5% ownership in a particular firm in that and following year, and zero otherwise.
Stay LT BH	Dummy variable that equals one for a blockholder with a long-term investment of at least 5% ownership in a particular firm in that and following year, and zero otherwise.
Board Independence	Percentage of outsider directors on the board. These directors are not associated with the firm.
Leverage	The sum of current liabilities and long-term debt over total assets.
Dividend Ratio	The dividend payment over the market value of the firm.
Firm Size	Natural logarithm of total assets measured in \$ millions.

**Table A.2: Statistical Tests for Models**

This table shows statistical test results for the overall model evaluation. To test the validity of the models, Likelihood Ratio, Wald, and Goodness-of-Fit (Hosmer-Lemeshow) tests are conducted for fixed effects panel OLS regression (Panel A) and logistic regression models (Panel B). These models are examined for an improvement over their baseline model.  $\chi^2$ , degree of freedom “df”, and p-value are provided. In Panel A, the fixed effects panel OLS regression model has statistically significant  $\chi^2$  estimates for the likelihood ratio and Wald tests offering compelling support for the approach. Similarly, the logistic regression model passes both tests with statistically significant  $\chi^2$  estimates in Panel B. The Hosmer-Lemeshow goodness-of-fit test compares the realized event incidence to the predicted incidence, and so a model which is a good fit should see statistical values approaching zero. A typical requirement is that the p-value of this test should exceed 0.05, which is the case here. Taken together, therefore I conclude that I cannot reject the null hypothesis that the suite of logistic models I study are indeed a better fit than baseline models.

---

**Panel A: Statistical Validation Tests for Fixed Effects Panel OLS Regression Models**


---

Model for:	Likelihood Ratio Test			Wald Test		
	$\chi^2$	df	p-value	$\chi^2$	df	p-value
Number of BH with ST Horizon	10,338.350	4	0.000	3.250	4	0.011
Number of BH with LT Horizon	37.760	4	0.000	4.650	4	0.001

---

**Panel B: Statistical Validation Tests for Logistic Regression Models**


---

Model for:	Likelihood Ratio Test			Wald Test			Goodness-of-Fit (Hosmer-Lemeshow) Test		
	$\chi^2$	df	p-value	$\chi^2$	df	p-value	$\chi^2$	df	p-value
Stay as Short-Term Blockholder	12,521.380	4	0.000	1,482.430	4	0.000	0.790	4	0.375
Stay as Long-Term Blockholder	64.420	4	0.000	51.450	4	0.000	0.580	4	0.447

---

**Table A.3: Analysis on Lags of Dependent Variable for System GMM Regression**

This table presents the estimates for lagged values of number of blockholding investments with a short-term (ST) and a long-term (LT) horizon using OLS regression. The dependent variable is regressed on its lagged values along with board independence, leverage, dividend ratio, and firm size as the firm variables. Variable definitions are available in Table A.1, Appendix. Year dummies are included. Standard errors are clustered at the firm level. The \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Dependent Variable	Number of BH with			Number of BH with		
	ST Horizon	ST Horizon	LT Horizon	LT Horizon	LT Horizon	LT Horizon
Number of BH $t-1$	0.424*** (0.012)	0.357*** (0.014)	0.722*** (0.023)	0.605*** (0.035)	0.574*** (0.045)	0.631*** (0.052)
Number of BH $t-2$		0.009 (0.014)		0.149*** (0.038)	0.118** (0.051)	0.098* (0.058)
Number of BH $t-3$					0.067* (0.038)	0.075* (0.044)
Number of BH $t-4$						0.002 (0.047)
Constant	1.248*** (0.123)	3.507*** (0.071)	0.584*** (0.060)	0.596*** (0.073)	0.672*** (0.103)	0.531*** (0.124)
Firm Variables	YES	YES	YES	YES	YES	YES
Year Dummies	YES	YES	YES	YES	YES	YES
Adjusted R <sup>2</sup>	0.273	0.227	0.584	0.585	0.570	0.598
Observations	9,937	7,447	1,782	1,406	1,052	720

**Table A.4: Analysis on Past Blockholder Ownership Adjustment: Test of Strict Exogeneity**

This table presents the estimates from fixed effects panel OLS regression including forward values of four firm policies and characteristics. The analysis is to test whether firm policies and characteristics adjust to blockholders when they adopt a short-term versus a long-term investment horizons in those firms. The dependent variables are the following: Number of BH with ST and LT Horizon are numbers of retained blockholding investments with a short-term and a long-term horizon in that year, respectively. Board independence, leverage, dividend ratio and firm size are the main regressors. Variable definitions are available in Table A.1, Appendix. Year dummies and firm fixed effects are included in all models. Standard errors are clustered at the firm level. The \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

	Number of BH with ST Horizon $t$	Number of BH with LT Horizon $t$
Board Independence $t$	-0.200 (0.145)	0.213 (0.170)
Leverage $t$	0.334* (0.186)	0.379** (0.192)
Dividend Ratio $t$	2.158*** (0.712)	-0.349 (0.793)
Firm Size $t$	0.012 (0.063)	-0.189** (0.081)
Board Independence $t+1$	0.145 (0.156)	0.280* (0.170)
Leverage $t+1$	0.260* (0.153)	0.166 (0.181)
Dividend Ratio $t+1$	0.560 (0.800)	-1.332* (0.802)
Firm Size $t+1$	-0.138** (0.066)	-0.033 (0.077)
Year & Firm FE	YES	YES
Adjusted R <sup>2</sup>	9,937	1,782
Observations	0.065	0.149

**Table A.5: Relationship between Past Blockholding Investments with Short-Term and Long-Term Horizon, Firm Policies and Characteristics**

This table reports estimates from OLS regression of board independence, leverage, dividend ratio and firm size on historic values of these variables and past blockholding investments with a short-term versus a long-term horizon in those firms. Variable definitions are available in Table A.1, Appendix. Year dummies are included in all models. Standard errors are clustered at the firm level. The \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

	Board Independence <sub>t</sub> Leverage <sub>t</sub> Dividend Ratio <sub>t</sub> Firm Size <sub>t</sub>				Board Independence <sub>t</sub> Leverage <sub>t</sub> Dividend Ratio <sub>t</sub> Firm Size <sub>t</sub>			
Number of ST BH <sub>t-1</sub>	0.001 (0.001)	0.014*** (0.002)	-0.002*** (0.001)	-0.352*** (0.020)				
Number of LT BH <sub>t-1</sub>					0.024*** (0.009)	0.017 (0.011)	-0.001 (0.001)	0.008 (0.010)
Board Independence <sub>t-1</sub>		0.023 (0.025)	0.004 (0.003)	1.890*** (0.217)		0.080 (0.060)	0.011* (0.006)	-0.025 (0.034)
Leverage <sub>t-1</sub>	0.008 (0.015)		0.018*** (0.002)	1.914*** (0.195)	0.041 (0.044)		0.005 (0.006)	-0.097*** (0.029)
Dividend Ratio <sub>t-1</sub>	0.064 (0.091)	1.190*** (0.140)		9.444*** (1.316)	0.431 (0.390)	0.757* (0.408)		
Firm Size <sub>t-1</sub>	0.017*** (0.002)	0.026*** (0.002)	0.003*** (0.001)		0.012* (0.006)	0.038*** (0.006)	0.001 (0.001)	1.004*** (0.003)
Constant	0.497*** (0.027)	-0.022 (0.032)	-0.013*** (0.003)	7.621*** (0.216)	0.568*** (0.062)	-0.177*** (0.067)	-0.001 (0.007)	0.033 (0.040)
Year Dummies	YES	YES	YES	YES	YES	YES	YES	YES
Adjusted R <sup>2</sup>	0.203	0.106	0.091	0.240	0.213	0.137	0.042	0.987
Observations	9,937	9,937	9,937	9,937	1,782	1,782	1,782	1,782

**Table A.6: Analysis of Omitted Variable Bias**

This table presents Wald-Test results as Chi-square and associated probabilities (in italics) for the fixed effects panel OLS regression model. A list of additional variables is considered for any potential bias due to exclusion from the main model. Each of these variables is tested individually for any significant improvement of the model if that variable is included in the analysis. Tobin's Q is market value over book value of total assets. Firm Growth is capital expenditures over total assets. R&D Dummy is a dummy variable that equals one if the firm has any R&D investments (missing values in the data are considered as zero), and zero otherwise. Stock Price Volatility is annual standard deviation of daily stock price. Cash Ratio is cash holdings over total assets. P/E Ratio is stock price over earnings of firm. Firm Performance is net income over total assets. Sales Growth is the difference in sales revenues between the current year and the prior year over the revenue in the prior year. Tainted Board is a dummy that equals one if CEO is also a member of the board, and zero otherwise. Board Ownership is the total percentage of shares owned by directors on the board. CEO Ownership is the total percentage of shares owned by the CEO. HHI is the Herfindahl-Hirschman Index of industry concentration.

	Number of ST BH	Number of LT BH
Tobin's Q	0.720 <i>0.397</i>	0.040 <i>0.838</i>
Firm Growth	0.080 <i>0.778</i>	1.010 <i>0.319</i>
R&D Dummy	0.009 <i>0.770</i>	1.050 <i>0.306</i>
Stock Price Volatility	0.090 <i>0.769</i>	0.350 <i>0.553</i>
Cash Ratio	1.900 <i>0.168</i>	1.030 <i>0.312</i>
P/E Ratio	0.001 <i>0.995</i>	0.320 <i>0.572</i>
Firm Performance	0.550 <i>0.458</i>	0.460 <i>0.498</i>
Sales Growth	0.005 <i>0.982</i>	2.500 <i>0.115</i>
Tainted Board	2.220 <i>0.136</i>	0.070 <i>0.790</i>
Board Ownership	0.320 <i>0.572</i>	1.780 <i>0.184</i>
CEO Ownership	1.070 <i>0.301</i>	0.050 <i>0.853</i>
HHI	1.340 <i>0.248</i>	0.004 <i>0.989</i>

**Table A.7: Collinearity Diagnostics for the Variables**

This table presents the results for measures of the strength of interrelationships among variables. Variance Inflation Factor (VIF) is an indicator of how much inflation of the standard error can be caused by collinearity. Tolerance is an indicator of how much collinearity that a regression can tolerate. The tolerance for a particular variable is 1 minus the R-sq that results from the regression of the other variables on that variable. Variable definitions are available in Table A.1, Appendix.

	VIF	VIF-sqrt	Tolerance	R-sq
Board Independence	1.060	1.030	0.945	0.055
Leverage	1.110	1.050	0.903	0.098
Dividend Ratio	1.080	1.040	0.922	0.078
Firm Size	1.160	1.080	0.860	0.140
Mean VIF	1.110			

## Tables and Figures

### Table 1: Summary Statistics

This table provides descriptive statistics for the main variables. Variable definitions are available in Table A.1. The time span for this study is between 1998 and 2013. There are 5146 investors, 1836 firms, and 9972 firm-year observations in this study. Panel A presents statistics on investment characteristics. Panels B and C give statistics on characteristics of firms with all blockholders (BH), short-term blockholding (ST BH), and long-term blockholding (LT BH) investments, respectively. Panel D presents correlation between the variables used in analyses.

<b>Panel A: Characteristics of Investments</b>					
	Mean	Std. Dev.	Median	Min	Max
Percentage of BH Investments	0.165	0.371	N/A		
Holding Period	3.953	2.244	3.000		
% of ST BH Investments	0.253	0.478	N/A		
% of LT BH Investments	0.176	0.265	N/A		
Number of ST BH Investments	1.942	1.114	2.00	0.00	8.00
Number of LT BH Investments	1.023	0.570	1.00	0.00	4.00

<b>Panel B: Characteristics of Firms Invested by All Blockholders (BH)</b>			
	Mean	Std. Dev.	Median
Board Independence	0.750	0.143	0.778
Leverage	0.217	0.176	0.202
Dividend Ratio	0.014	0.024	0.006
Firm Size	7.872	1.520	7.744

<b>Panel C: Characteristics of Firms with Short-Term &amp; Long-Term Blockholding Investments</b>					
	Firms with ST BH Investments		Firms with LT BH Investments		<i>Mean Differences</i>
	Mean	Std. Dev.	Mean	Std. Dev.	
Board Independence	0.747	0.144	0.756	0.139	-0.009***
Leverage	0.217	0.177	0.219	0.162	-0.002*
Dividend Ratio	0.014	0.024	0.016	0.022	-0.002***
Firm Size	7.827	1.527	7.914	1.518	-0.087***

<b>Panel D: Correlation Matrix</b>				
	Board Independence	Leverage	Dividend Ratio	Firm Size
Board Independence	1.000			
Leverage	0.033	1.000		
Dividend Ratio	0.094	0.216	1.000	
Firm Size	0.227	0.264	0.219	1.000

**Table 2: Estimates from Fixed Effects Panel OLS, Logit and Logistic Regressions**

This table presents the estimates from fixed effects panel OLS regression in Panel A. The number and the ownership of retained short-term (ST) and long-term (LT) blockholding investments are regressed on four fundamental firm policies and characteristics. In Panel B, the estimates from both logit and logistic regressions of the odds of staying as a blockholding investment (ST and LT) on four firm policies and characteristics are given. The dependent variables are the following. In Panel A, ST and LT BH (Number and %) are numbers and percentage ownership of retained blockholding investments with a short-term and a long-term horizon in that year, respectively. In Panel B, Stay ST (LT) BH are the dummy variables that equal one for a blockholder with a short-term (long-term) investment of at least 5% ownership in a particular firm in that and following year and stays as a blockholder in that firm. Board independence, leverage, dividend ratio, and firm size are the regressors. Board independence is the percentage of outsider directors on the board. These directors are not associated with the firm. Leverage is the sum of current liabilities and long-term debt over total assets. Dividend Ratio is the dividend payment over the market value of the firm. Firm Size is the natural logarithm of total assets measured in \$ millions. All regressors are one year lagged for the OLS regression model, and firm fixed effects are included. Year dummies are included in all models. Standard errors are clustered at the firm and investment-firm level for OLS and logistic regression models, respectively. Betas, Odds Ratios (exponential of betas) and standard errors of betas are reported in Panel B. The \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

<b>Panel A: Estimates from Fixed Effects Panel OLS Regression Model</b>				
Lagged Regressors	ST BH (Number)	ST BH (%)	LT BH (Number)	LT BH (%)
Board Independence $t-1$	-0.391*** (0.129)	-0.032*** (0.007)	0.574*** (0.152)	0.037*** (0.013)
Leverage $t-1$	0.103 (0.154)	-0.004 (0.008)	0.279* (0.149)	0.042*** (0.015)
Dividend Ratio $t-1$	1.235* (0.688)	0.099*** (0.034)	0.012 (0.602)	0.037 (0.069)
Firm Size $t-1$	-0.068** (0.033)	-0.005*** (0.002)	-0.126*** (0.045)	-0.017*** (0.005)
Constant	1.483*** (0.279)	0.180*** (0.018)	1.508*** (0.365)	0.195*** (0.034)
Year & Firm FE	YES	YES	YES	YES
Adjusted R <sup>2</sup>	0.076	0.010	0.102	0.087
Observations	9,289	9,289	2,183	2,183
<b>Panel B: Estimates from Logit (Betas) &amp; Logistic (Odds Ratio) Regression Model</b>				
(Above 5%)	$\beta$		Odds Ratio ( $e^\beta$ )	
	Stay ST BH $t+1$	Stay LT BH $t+1$	Stay ST BH $t+1$	Stay LT BH $t+1$
Board Independence $t$	-0.443*** (0.077)	0.929** (0.456)	0.642***	2.533**
Leverage $t$	0.615*** (0.058)	0.730* (0.397)	1.850***	2.076*
Dividend Ratio $t$	2.367*** (0.471)	-5.800*** (2.174)	10.667***	0.003***
Firm Size $t$	-0.264*** (0.007)	-0.230*** (0.038)	0.768***	0.795***
Pseudo R-sq.	0.042	0.072	0.042	0.072
Observations	43,375	12,920	43,375	12,920

**Table 3: Difference-in-Difference (DID) Analysis regarding Board Independence**

This table reports panel OLS regression estimates for Post, Non-Compliant, Non-Compliant\*Post, as well as, Leverage, Dividend Ratio, and Firm Size. The number and the ownership of retained short-term (ST) and long-term (LT) blockholding investments are the dependent variables. Non-Compliant\*Post is the interaction variable of Post and Non-Compliant. Non-Compliant is equal to one for firms that did not comply with SOX and SEC regulation prior 2003, and zero otherwise. Post is a dummy that is equal to one for years after 2003, and zero otherwise. Variable definitions are available in Table A.1, Appendix. Year and firm fixed effects are included. The model does not have indicators for the non-compliant firms or the post-period because they are subsumed in the firm and year fixed effects. Standard errors are clustered at the firm level. The \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

	ST BH (Number)	ST BH (%)	LT BH (Number)	LT BH (%)
Non-Compliant*Post	-0.138** (0.062)	-0.009* (0.005)	0.188*** (0.053)	0.014* (0.008)
Leverage	0.620*** (0.134)	0.035*** (0.009)	0.164* (0.091)	0.034** (0.016)
Dividend Ratio	2.547*** (0.604)	0.068 (0.056)	-0.478 (0.534)	0.007 (0.066)
Firm Size	-0.148*** (0.032)	-0.011*** (0.001)	-0.125*** (0.028)	-0.016*** (0.004)
Constant	1.765*** (0.258)	0.208*** (0.010)	1.943*** (0.221)	0.219*** (0.035)
Year & Firm FE	YES	YES	YES	YES
Adjusted R <sup>2</sup>	0.107	0.083	0.156	0.096
Observation	9,289	9,289	2,183	2,183

**Table 4: Estimates from Dynamic GMM Regression Model Regarding Endogeneity Issue**

This table presents the estimates from dynamic GMM regression of Number of Blockholding Investments with Short-Term (Long-Term) Horizon on board independence, leverage, dividend ratio, and firm size, as regressors. Lagged values of dependent variables and regressors are included as a part of dynamic GMM model. The dependent variables are Number of BH with ST (LT) Horizon. They are numbers of retained blockholding investments with a short-term and a long-term horizon in that year, respectively. Variable definitions are available in Table A.1, Appendix. Year dummies are included. Standard errors are clustered at the firm level. The \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively. AR(1) and AR(2) are tests for first-order and second-order serial correlation in the first-differenced residuals, under the null of no serial correlation. The Hansen test of over-identification is under the null that all instruments are valid. P-values from these tests are provided.

	Number of BH with ST Horizon $t$	Number of BH with LT Horizon $t$
Board Independence $t$	-0.797* (0.444)	0.744* (0.439)
Leverage $t$	0.914*** (0.349)	0.451 (0.417)
Dividend Ratio $t$	6.897** (3.397)	-7.485** (3.579)
Firm Size $t$	-0.140** (0.071)	-0.070* (0.038)
Number of BH with ST Horizon $t-1$	0.269*** (0.020)	
Number of BH with LT Horizon $t-1$		0.438*** (0.081)
Number of BH with LT Horizon $t-2$		0.047 (0.080)
Number of BH with LT Horizon $t-3$		-0.064 (0.062)
Constant	2.544*** (0.714)	0.584 (0.456)
Year Dummies	YES	YES
Lags of Firm Variables	YES	YES
Observations	9,937	1,052
AR(1) Test (p-value)	(0.000)	(0.001)
AR(2) Test (p-value)	(0.802)	(0.578)
Hansen Test of Over- Identification (p-value)	(0.265)	(0.435)

**Table 5: Endogeneity Test through Refined Sample of Blockholders with Short-Term Horizon**

This table presents the estimates from fixed effects panel OLS regression. The number of retained blockholding investments with a short-term (ST) horizon is regressed on four fundamental firm policies and characteristics. For this analysis, the investments by blockholders who have at least 90% of their portfolios in short-term investments only are used. These are classified as blockholders with *true* short-term investment horizon. Number of BH with *true* ST horizon is the dependent variable that is the number of retained blockholding investments with a *true* short-term horizon in that year. Board independence, leverage, dividend ratio, and firm size are the regressors in the model. They are one year lagged. Variable definitions are available in Table A.1, Appendix. Year and firm fixed effects are included. Standard errors are clustered at the firm level. The \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Lagged Regressors	Number of BH with <i>true</i> ST Horizon
Board Independence $t-1$	-0.437*** (0.113)
Leverage $t-1$	0.266** (0.130)
Dividend Ratio $t-1$	0.922* (0.559)
Firm Size $t-1$	-0.051* (0.031)
Constant	1.285*** (0.297)
Year & Firm FE	YES
Adjusted R <sup>2</sup>	0.054
Observations	8,937

**Table 6: Survivorship Bias Test for Blockholding Investments with Long-Term (LT) Horizon**

This table presents the estimates from fixed effects panel OLS regression. The number of retained blockholding investments with a long-term (LT) horizon are regressed on four fundamental firm policies and characteristics. Among those long-term investments in the sample, only the ones that become blockholding investment up until 2005 are included in this analysis. Number of BH with LT Horizon is the dependent variable that is the number of retained blockholding investment with a long-term horizon in that year. Board independence, leverage, dividend ratio, and firm size are the regressors in the model. They are one year lagged. Variable definitions are available in Table A.1, Appendix. Year and firm fixed effects are included. Standard errors are clustered at the firm level. The \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Lagged Regressors	Number of BH with LT Horizon
Board Independence $t-1$	0.333** (0.162)
Leverage $t-1$	0.389** (0.185)
Dividend Ratio $t-1$	-0.360 (1.201)
Firm Size $t-1$	-0.079*** (0.024)
Constant	1.202*** (0.187)
Year & Firm FE	YES
Adjusted R <sup>2</sup>	0.082
Observations	766

**Table 7: Estimates from Fixed Effects Panel OLS Regression with Omitted Variables**

This table presents the estimates from fixed effects panel OLS regression including potentially omitted variables. The dependent variables, Number of ST and LT BH, are numbers of blockholding investments with a short-term and a long-term horizon in that year, respectively. Board independence, leverage, dividend ratio, and firm size are the main regressors. Omitted variables are the following: Tobin's Q is market value over book value of total assets. Firm Growth is capital expenditures over total assets. R&D Dummy is a dummy variable that equals one if the firm has any R&D investments (missing values in the data are considered as zero), and zero otherwise. Stock Price Volatility is annual standard deviation of daily stock price. Cash Ratio is cash holdings over total assets. P/E Ratio is stock price over earnings of firm. Firm Performance is net income over total assets. Sales Growth is the difference in sales revenues between the current year and the prior year over the revenue in the prior year. Tainted Board is a dummy that equals one if CEO is also a member of the board, and zero otherwise. Board Ownership is the total percentage of shares owned by directors on the board. CEO Ownership is the total percentage of shares owned by the CEO. HHI is the Herfindahl-Hirschman Index of industry concentration. All regressors are one year lagged. Variable definitions are available in Table A.1, Appendix. Year dummies and firm fixed effects are included in all models. Standard errors are clustered at the firm level. The \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Lagged Regressors & Omitted Variables	Number of ST BH <sub>t</sub>	Number of ST BH <sub>t</sub>	Number of LT BH <sub>t</sub>	Number of LT BH <sub>t</sub>
Board Independence <sub>t-1</sub>	-0.391*** (0.129)	-0.469** (0.183)	0.574*** (0.152)	0.641*** (0.215)
Leverage <sub>t-1</sub>	0.103 (0.154)	0.422* (0.245)	0.279* (0.149)	0.380* (0.230)
Dividend Ratio <sub>t-1</sub>	1.235* (0.688)	3.753* (1.940)	0.012 (0.602)	0.128 (0.649)
Firm Size <sub>t-1</sub>	-0.068** (0.033)	-0.198*** (0.056)	-0.126*** (0.045)	-0.108* (0.061)
Tobin's Q <sub>t-1</sub>		0.003 (0.024)		-0.026 (0.023)
Firm Growth <sub>t-1</sub>		-0.571 (0.527)		-0.757 (0.547)
R&D Dummy <sub>t-1</sub>		0.212 (0.183)		0.172 (0.112)
Stock Price Volatility <sub>t-1</sub>		-0.002 (0.004)		-0.005 (0.004)
Cash Ratio <sub>t-1</sub>		0.054 (0.295)		0.281 (0.233)
P/E Ratio <sub>t-1</sub>		0.001 (0.001)		-0.001 (0.003)
Firm Performance <sub>t-1</sub>		0.161 (0.161)		0.186 (0.225)
Sales Growth <sub>t-1</sub>		0.049 (0.076)		-0.094 (0.069)
Tainted Board <sub>t-1</sub>		-0.013 (0.063)		0.039 (0.060)
Board Ownership <sub>t-1</sub>		-0.362 (0.287)		-0.132 (0.279)
CEO Ownership <sub>t-1</sub>		-0.001 (0.006)		-0.001 (0.005)
HHI <sub>t-1</sub>		-0.001 (0.197)		0.059 (0.105)
Year & Firm FE	YES	YES	YES	YES
Adjusted R <sup>2</sup>	0.076	0.028	0.102	0.146
Observations	9,289	3,640	2,183	929

**Table 8: Analyses on Blockholders with Different Portfolio Structures**

This table presents the estimates from fixed effects panel OLS regression. The analysis in Table 2, Panel A is repeated for four groups of blockholders with specific portfolios only: Blockholders have “majorly” short-term (long-term) investment horizon if their portfolios have at least 75% of the investments as short-term (long-term). They have “marginally” short-term (long-term) investment horizon if 50% to 60% of their portfolios are short-term (long-term) investments, i.e. if their portfolios are almost balanced between short-term and long-term investments. The dependent variable in each regression analysis is the number of investments by blockholders belonging to one of those four groups, respectively. Board independence, leverage, dividend ratio, and firm size are the regressors in the model. They are one year lagged. Variable definitions are available in Table A.1, Appendix. Year and firm fixed effects are included. Standard errors are clustered at the firm level. The \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

	ST Investments at least 75% of BH's Portfolio	LT Investments	ST Investments 50% to 60% of BH's Portfolio	LT Investments
	Number of BH with “Majorly” ST Horizon <sub>t</sub>	Number of BH with “Majorly” LT Horizon <sub>t</sub>	Number of BH with “Marginally” ST Horizon <sub>t</sub>	Number of BH with “Marginally” LT Horizon <sub>t</sub>
Board	-0.397***	0.574*	-0.873	0.277
Independence <sub>t-1</sub>	(0.129)	(0.313)	(0.935)	(0.319)
Leverage <sub>t-1</sub>	0.152	0.288*	1.571*	1.380**
	(0.147)	(0.160)	(0.845)	(0.665)
Dividend Ratio <sub>t-1</sub>	1.066*	2.041	3.486	-0.171
	(0.638)	(1.280)	(2.216)	(0.984)
Firm Size <sub>t-1</sub>	-0.074**	-0.084*	-0.277*	-0.127*
	(0.037)	(0.050)	(0.163)	(0.075)
Constant	1.531***	1.199***	2.958*	1.463*
	(0.313)	(0.424)	(1.740)	(0.865)
Year & Firm FE	YES	YES	YES	YES
Adjusted R <sup>2</sup>	0.071	0.289	0.239	0.189
Observations	7,891	1,035	149	111

**Table 9: Analysis on Active and Passive Blockholding Investments**

This table presents estimates from fixed effects panel OLS regression of number and percentage of active (passive) blockholding investments on four fundamental firm characteristics. The dependent variables are Active BH (Num) or (%) and Passive BH (Num) or (%). Following Clifford (2008) and Clifford and Lindsey (2016), blockholders are active versus passive based on whether they file Schedule 13D and Schedule 13G, respectively. Board independence, leverage, dividend ratio, and firm size are the regressors in the model representing the fundamental firm policies and characteristics. They are one year lagged. Variable definitions are available in Table A.1, Appendix. Year and firm fixed effects are included. Standard errors are clustered at the firm level. The \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

	Active BH (Num) <sub>t</sub>	Active BH (%) <sub>t</sub>	Passive BH (Num) <sub>t</sub>	Passive BH (%) <sub>t</sub>
Board	0.101	0.006	-0.011	-0.002
Independence <sub>t-1</sub>	(0.213)	(0.018)	(0.008)	(0.002)
Leverage <sub>t-1</sub>	0.619***	0.067***	0.006	-0.001
	(0.232)	(0.020)	(0.012)	(0.002)
Dividend Ratio <sub>t-1</sub>	1.014*	0.122*	-0.007	0.001
	(0.602)	(0.066)	(0.033)	(0.004)
Firm Size <sub>t-1</sub>	-0.285***	-0.023***	-0.004***	-0.003**
	(0.070)	(0.006)	(0.001)	(0.001)
Constant	4.531***	0.337***	0.049***	0.004***
	(0.564)	(0.045)	(0.014)	(0.001)
Year & Firm FE	YES	YES	YES	YES
Adjusted R <sup>2</sup>	0.097	0.086	0.026	0.025
Observations	8,986	8,986	1,567	1,567

**Table 10: Analyses of the Effect of Firm Policies and Characteristics on Blockholders' Investment Horizon under Different Conditions**

This table presents the estimates from fixed effects panel OLS regressions. The impact of four fundamental firm policies and characteristics on the number of retained blockholding investments with a short-term (ST) versus a long-term (LT) horizon is examined under different conditions. In Panel A, the following conditions are considered: dot-com bubble and sub-prime mortgage crisis times (2000, 2001, 2008, and 2009), high bankruptcy risk (Altman Z-Score < 1.81), high stock price volatility (top quartile), low liquidity via Amihud Illiquidity measure (top quartile), busy board which is the percentage of directors on the board that also serve on the boards of other firms (top quartile). In Panel B, the following conditions are considered: high CEO ownership via the percentage of shares owned by the CEO (top quartile), single segment versus conglomerate firms, firms operating in concentrated (HHI > 0.20) versus competitive industries (HHI < 0.05). The dependent variables are Number of ST BH and Number of LT BH. They are numbers of retained blockholding investments with a short-term and a long-term horizon in that year, respectively. Board independence, leverage, dividend ratio, and firm size are the regressors in the model. They are one year lagged. Variable definitions are available in Table A.1, Appendix. Year and firm fixed effects are included. Standard errors are clustered at the firm level. The \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

<b>Panel A: Analyses for Crisis Times, High Bankruptcy Risk, High Volatility, Low Liquidity, and Busy Board</b>										
Lagged Variables	Crisis Times		High Bankruptcy Risk		High Volatility		Low Liquidity		Busy Board	
	Number of ST BH	Number of LT BH	Number of ST BH	Number of LT BH	Number of ST BH	Number of LT BH	Number of ST BH	Number of LT BH	Number of ST BH	Number of LT BH
Board Independence <sub>t-1</sub>	-0.355 (0.271)	0.076 (0.250)	-0.842** (0.341)	1.381*** (0.430)	-0.934*** (0.301)	0.549* (0.333)	-0.698** (0.318)	0.762*** (0.226)	-0.246 (0.230)	0.598** (0.278)
Leverage <sub>t-1</sub>	0.548* (0.310)	0.334 (0.225)	0.056 (0.370)	0.343 (0.343)	-0.528 (0.383)	-0.346 (0.306)	-0.0402 (0.396)	0.374 (0.301)	0.428* (0.250)	0.426* (0.223)
Dividend Ratio <sub>t-1</sub>	0.605 (1.243)	1.441 (0.946)	1.028 (1.026)	0.232 (0.649)	2.867* (1.476)	-0.303 (2.132)	1.132 (1.243)	1.028 (0.631)	0.024 (0.761)	-0.099 (0.675)
Firm Size <sub>t-1</sub>	-0.127* (0.074)	-0.212*** (0.077)	-0.199** (0.082)	-0.119 (0.088)	-0.059 (0.096)	0.026 (0.097)	-0.218* (0.125)	-0.139 (0.096)	-0.041 (0.061)	-0.326*** (0.084)
Constant	2.048*** (0.583)	2.608*** (0.604)	2.891*** (0.765)	0.969 (0.740)	2.189*** (0.746)	0.408 (0.706)	2.825*** (0.788)	0.580 (0.596)	1.072** (0.522)	3.087*** (0.671)
Year & Firm FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Adjusted R <sup>2</sup>	0.055	0.191	0.086	0.204	0.098	0.076	0.034	0.204	0.076	0.126
Observation	2,812	886	2,164	336	2,225	566	2,144	595	3,670	817

**Table 10: Analyses of the Effect of Firm Policies and Characteristics on Blockholders' Investment Horizon under Different Conditions (Continued)**

<b>Panel B: Analyses for High CEO Ownership, Single Segment vs Conglomerate Firms, and Concentrated vs Competitive Industries</b>										
	High CEO Ownership		Single Segment Firms		Conglomerate Firms		Firms in Concentrated Industries		Firms in Competitive Industries	
Lagged Variables	Number of ST BH	Number of LT BH	Number of ST BH	Number of LT BH	Number of ST BH	Number of LT BH	Number of ST BH	Number of LT BH	Number of ST BH	Number of LT BH
Board Independence $t-1$	-0.499** (0.204)	0.089 (0.199)	-0.645** (0.262)	0.562** (0.259)	-0.114 (0.171)	0.691*** (0.193)	-0.525* (0.278)	0.955*** (0.244)	-0.167 (0.225)	0.042 (0.285)
Leverage $t-1$	0.005 (0.236)	0.291 (0.223)	-0.136 (0.246)	0.208 (0.285)	0.248 (0.204)	0.353** (0.176)	0.329 (0.301)	0.094 (0.224)	0.373* (0.222)	0.294 (0.327)
Dividend Ratio $t-1$	-0.327 (1.282)	1.383 (0.887)	1.674 (1.068)	-1.267 (1.536)	1.205* (0.708)	0.550 (0.674)	0.877 (1.220)	1.039 (0.694)	3.046*** (0.913)	-1.181 (1.347)
Firm Size $t-1$	0.024 (0.066)	-0.164** (0.073)	-0.018 (0.078)	-0.085 (0.080)	-0.055 (0.045)	-0.139** (0.064)	0.063 (0.086)	-0.104 (0.076)	-0.101 (0.076)	-0.148* (0.089)
Constant	1.067** (0.517)	2.426*** (0.641)	1.609*** (0.591)	1.250** (0.523)	1.354*** (0.374)	1.499*** (0.481)	0.746 (0.705)	1.084* (0.573)	1.570** (0.651)	2.072*** (0.680)
Year & Firm FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Adjusted R <sup>2</sup>	0.045	0.144	0.077	0.120	0.073	0.114	0.077	0.105	0.033	0.091
Observation	4,023	1,044	3,218	591	6,101	1,592	4,146	832	2,617	489

**Table 11: Analyses of the Effect of Firm Policies and Characteristics on Blockholders' Investment Horizon in Different Industries**

This table presents the estimates from fixed effects panel OLS regressions. The impact of four fundamental firm policies and characteristics on the number of retained blockholding investments with a short-term (ST) versus a long-term (LT) horizon is examined in different industries. Using Fama-French 49 industry classification, the following five major industry groups are constructed: Manufacturing, Construction, Wholesale & Retail, Electronics & Telecommunication (High-Tech), and Service (Personal, business, healthcare, restaurants, entertainment, transportation, etc). These are the industries of firms which are preferred by short-term and long-term blockholders in their investment portfolios (see Figure 2). The dependent variables are Number of ST BH and Number of LT BH. They are numbers of retained blockholding investments with a short-term and a long-term horizon in that year, respectively. Board independence, leverage, dividend ratio, and firm size are the regressors in the model. They are one year lagged. Variable definitions are available in Table A.1, Appendix. Year and firm fixed effects are included. Standard errors are clustered at the firm level. The \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

Lagged Variables	Manufacturing		Construction		Wholesale & Retail		Electronics & Telecom		Service	
	Number of ST BH	Number of LT BH	Number of ST BH	Number of LT BH	Number of ST BH	Number of LT BH	Number of ST BH	Number of LT BH	Number of ST BH	Number of LT BH
Board Independence $t-1$	-0.772** (0.345)	0.621* (0.370)	0.654 (0.702)	0.916* (0.479)	-0.292 (0.398)	0.434* (0.253)	-0.559* (0.307)	0.591* (0.301)	-0.775** (0.325)	-0.149 (0.411)
Leverage $t-1$	0.679 (0.447)	0.039 (0.312)	1.519** (0.633)	0.350 (0.399)	-0.217 (0.451)	-0.464 (0.463)	0.413 (0.305)	0.654** (0.289)	-0.561 (0.476)	0.669* (0.369)
Dividend Ratio $t-1$	-0.760 (2.385)	0.741 (3.059)	0.094 (1.401)	0.265 (0.715)	1.030 (1.808)	0.781 (1.339)	1.503* (0.803)	0.548 (1.224)	4.552*** (1.580)	-0.436 (2.481)
Firm Size $t-1$	-0.094 (0.087)	0.121 (0.120)	0.157 (0.122)	-0.089 (0.109)	-0.003 (0.118)	-0.352*** (0.123)	-0.167** (0.068)	-0.062 (0.079)	0.021 (0.119)	-0.043 (0.154)
Constant	1.739*** (0.658)	-0.454 (0.942)	0.763 (1.000)	0.880 (0.866)	1.651* (0.931)	3.671*** (1.021)	2.652*** (0.574)	0.985* (0.518)	1.292 (0.828)	1.269 (0.981)
Year & Firm FE	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Adjusted R <sup>2</sup>	0.068	0.106	0.149	0.134	0.082	0.147	0.075	0.171	0.099	0.120
Observation	1,323	354	575	233	1,262	355	1,627	391	1,153	335

**Table 12: Analyses on Small Investors with Short-Term versus Long-Term Horizon**

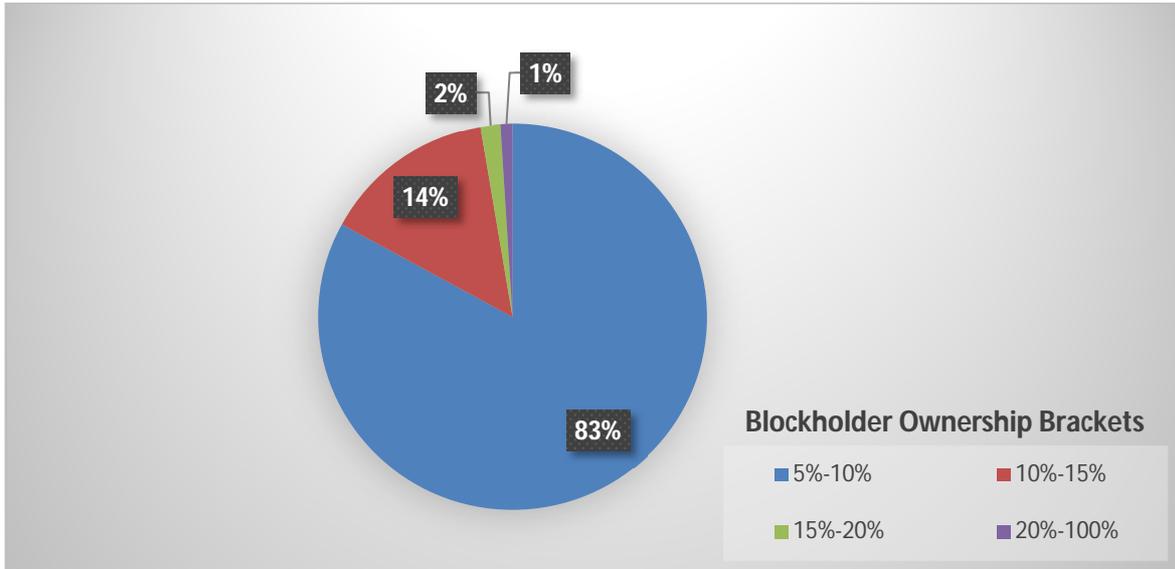
This table shows estimates from fixed effects panel OLS regression. The number of retained short-term (ST) and long-term (LT) investments by small investors are regressed on four fundamental firm policies and characteristics. Small investors are the investors who own less than 5% of a particular firm's shares. The dependent variables are Number of Small Investors with ST (LT) Investment Horizon. They are numbers of retained small investors having an investment with a short-term and a long-term horizon in that year, respectively. Board independence, leverage, dividend ratio, and firm size are the regressors in the model representing the fundamental firm policies and characteristics. They are one year lagged. Variable definitions are available in Table A.1, Appendix. Year and firm fixed effects are included. Standard errors are clustered at the firm level. The \*\*\*, \*\* and \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

	Number of Small Investors with	
	ST Investment Horizon $t$	LT Investment Horizon $t$
Board Independence $t-1$	3.237 (4.613)	4.941 (5.758)
Leverage $t-1$	-21.501*** (5.327)	-31.250*** (5.138)
Dividend Ratio $t-1$	-96.971*** (32.90)	-43.221*** (13.180)
Firm Size $t-1$	17.930*** (2.253)	20.380*** (2.734)
Constant	-95.681*** (17.390)	-124.410*** (23.291)
Year & Firm FE	YES	YES
Adjusted R2	0.472	0.359
Observations	11,567	8,246

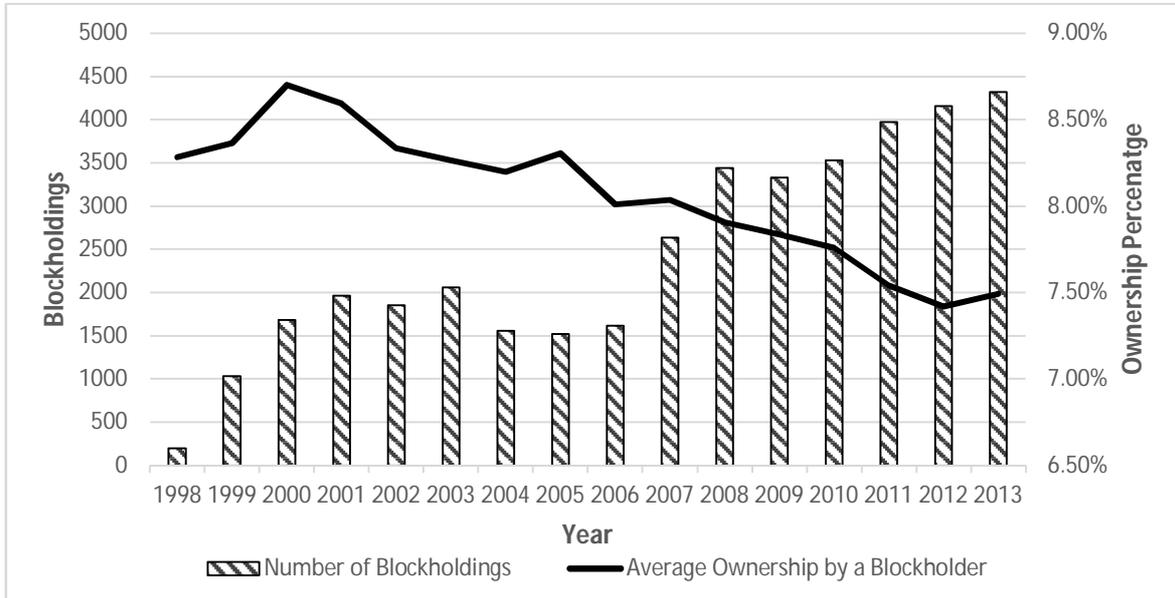
**Figure 1: Blockholder Characteristics**

This figure presents different characteristics of blockholders in the sample. Panel A shows the percentage distribution of all blockholders in the sample according to different ownership intervals. Panel B displays total number of blockholdings per year. Investments in different firms by the same blockholder are counted as separate blockholdings. Panel B also presents average firm ownership by a blockholder per year.

**Panel A: Distribution of Blockholders Regarding Ownership Intervals**

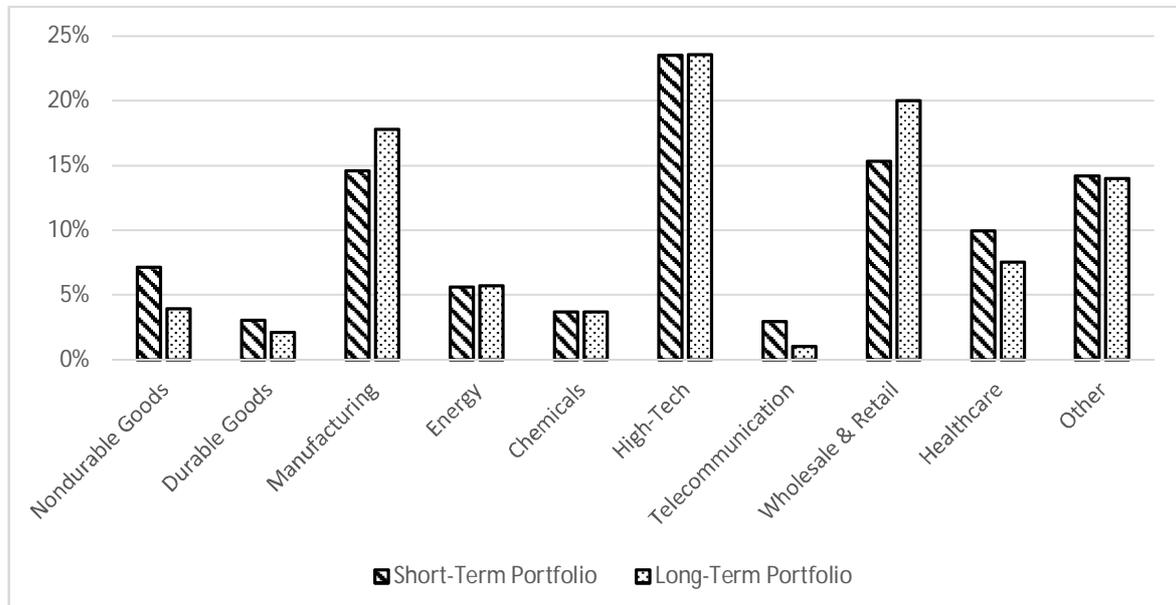


**Panel B: Number of Blockholdings and Average Firm Ownership by a Blockholder**



**Figure 2: Industry Sector Distribution of Firms in Short-Term and Long-Term Investment Portfolios**

This figure presents distribution of industry sector of firms in blockholders' short-term and long-term investment portfolios. The following industry sector groups are considered: Nondurable Goods (food, tobacco, textile, toys), Durable Goods (car, furniture, household appliances), Manufacturing (machinery, trucks, paper, printing), Energy, Chemicals, High-Tech, Telecommunication, Wholesale & Retail, Healthcare, Other.



**Figure 3: Distribution of Blockholders Based on Long-term and Short-Term Investments**

This figure displays the percentage distribution of blockholders in the sample according to the percentage difference between long-term and short-term investments in their portfolios. Long-term Blockholders hold their ownership in that particular firm for more than seven years, while the holding period for short-term blockholders is less than three years.

